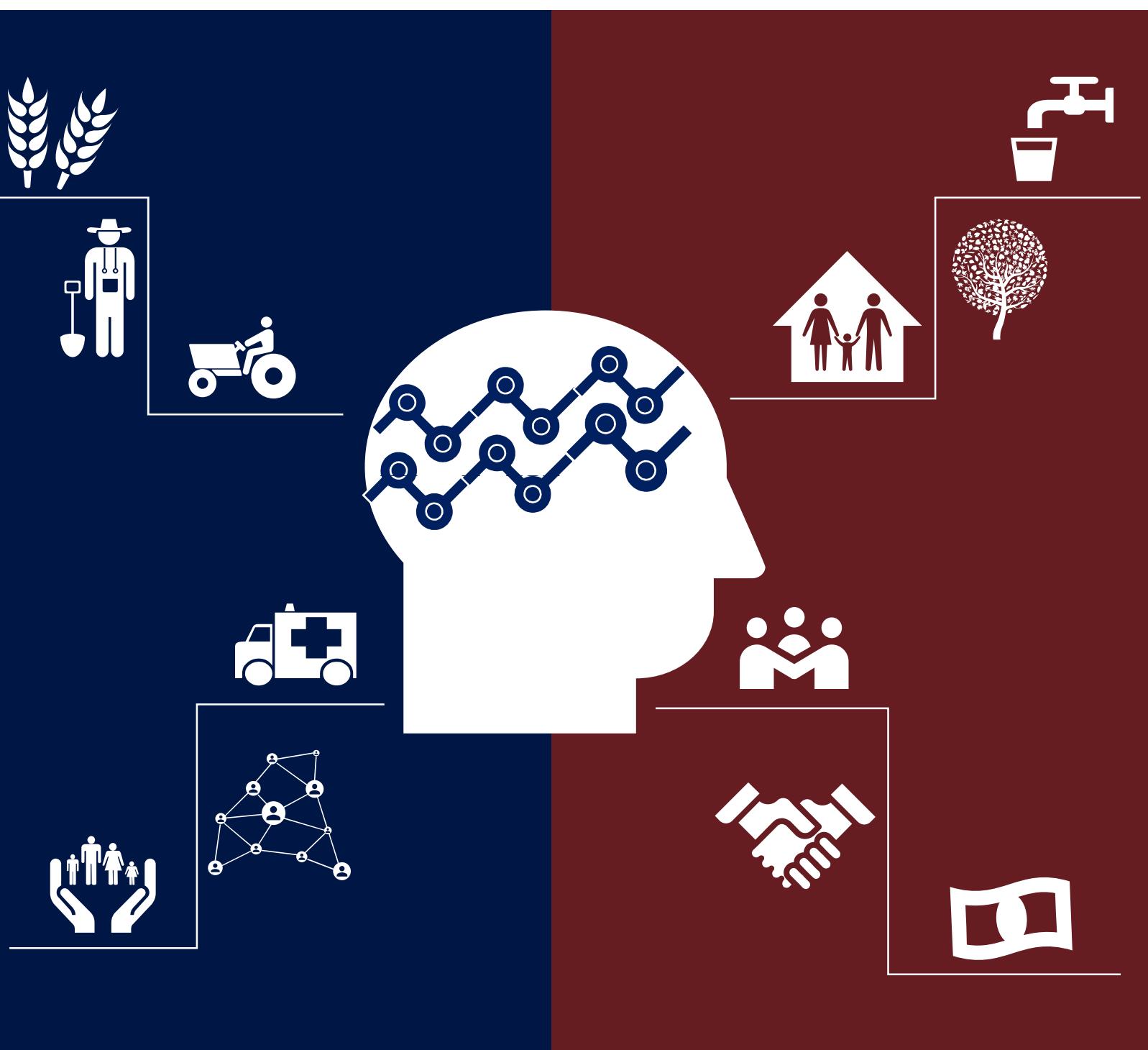


Learning Rural Management

- Cases and Caselets



**Ministry of Human Resource Development
Government of India**

सत्यमेव जयते

Editorial Board

Dr W G Prasanna Kumar

Dr K N Rekha

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About the Book

Rural development needs to be through rural economic development with rural financial inclusion. In this context, we have taken upon developing the curriculum for Rural Management with support from several universities and subject matter experts. Rural Management (Post Graduate) impacts the state and regional levels while Rural Management (Under Graduate) impacts the district and village levels. The Rural Management course developed by MGNCRE has three basic internship components - internship with NGOs, internship with rural economic organizations, and internship with rural governing and rural development agencies. It is apt that an exclusive study and compilation of caselets will add a practical edge to the course material.

The important contribution of academic fraternity in the field of rural management education is well recognised. Now MGNCRE opines that it is time for professionals across the country to synergise and expand the rural management pool extensively. There is an urgent need to rise above the odds and create an effective management of rural resources for an inclusive growth. Our Curriculum on Rural Management for Bachelor's and Master's Degree has been well received we look forward to its effective implementation across the country. Today, as the youth are facing job crunch and technology is making many of the traditional familial jobs redundant, the field of Rural Management opens many doors. It has the potential to provide fulfilling, well-paying livelihoods and holds the promise to a clean, liveable future. Students opting for a Rural Management career are not just making a career, but also making a healthy living for themselves and for the society.

India is predominantly a rural country with two third population and 70% workforce residing in rural India. Despite the rise in urbanization more than 50% of Indian population is projected to be rural. Rural Management is the process of improving the quality of life of the people residing in the rural areas in India. The backwardness of the rural sector would be a major impediment to the overall progress of Indian economy. Hence Rural Management is a subject of prime importance to be pursued by the present generation students to ensure economical social and political growth in the rural sector.

The concept of rural development is quite comprehensive and extensive. Often rural development has meant the extension of irrigation facilities, expansion of electricity, improvement in the techniques of cultivation, construction of school building and provision of educational facilities, and health care. This is considered to be a lop-sided view of understanding rural development. Of late, rural development signifies a complex and long term process involving fundamental transformation of rural society both at social and economic levels. It represents planned programmes to improve the quality of the life-style of the rural people.

The Book is a compilation of Cases/ Mini Cases and Caselets from different villages across India. The book will form a part of study curriculum for Rural Management. Each Case, Mini Case and Caselet showcases different problems faced by the rural people and how they have managed to overcome them. It also focuses on activities and experiments undertaken for rural development, challenges faced, actions taken for solving of the problems, observations and suggestions. The larger vision is to enable Higher Educational Institutions (HEIs) to recognise, promote and institutionalise rural community engagement as a field of study.

This book represents the collective efforts of accomplished individuals. We thank the contributors to this volume for their outstanding insights. I specifically thank Mr. Arkopal Saha, Mr. Avi Jain and Ms. Tanya Sinha students of IRMA for their co-ordination and support in compiling this book.

**Dr W G Prasanna Kumar
Chairman MGNCRE**

Part 1

Cases



Mahatma Gandhi National Council of Rural Education

Department of Higher Education

Ministry of Human Resource Development, Government of India

Hyderabad - 500004



Where there is Rural Wellbeing
there is Universal Prosperity

Contents

Cases

1. Implementation of Swachh Bharat Mission (SBM) in the Rural Areas
2. Making Computers Affordable
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4. Swachh Bharat Mission: Towards Better Sanitation and Health of Indians

Swachh Bharat Mission (SBM) in the Rural Areas

Deepa Gupta¹, Saswata Narayan Biswas² IRMA

Sanitation: At a Glance

Swachh Bharat Mission was launched on 2nd October 2014 on the Occasion of Gandhi Jayanti - the 150th Birth Anniversary of Mahatma Gandhi to achieve "Clean India" by 2nd October 2019. Swachh Bharat Mission is subdivided into categories as Swachh Bharat Mission Rural and Urban. It provides detailed guidelines and measures for the improvement of sanitation and cleanliness in India. "Swachh Bharat Mission" has been introduced to address the serious issues of toilets shortage in rural as well as in urban areas. It focuses on both qualitative (usage) and quantitative (construction) improvement in sanitation in India. (Mohapatra, 2015). Sanitation Policy focuses on shortages and inaccessibility to safe and hygiene defecation system both in rural as well as urban areas. According to Census 2011, 53% of the total HHs in India do not have any access to toilet facilities within their premises. Further, the facts reveal that 63.3% and 18.6% of rural and urban HHs respectively do not have any access to toilets facilities within their premises (Mohapatra, 2015). It was also reported that open defecation (OD) has come down from 78.1% in 2001 to 69.3% in 2011 in rural areas and, 26.3% in 2001 to 18.6% in 2011 in urban areas, which clearly throws light on the fact that there are still a large number of people who defecate openly. Further, it can also be interpreted that 66 crores of the total population defecate in open every day in India which is 60% of total defecation in the world. 33 crore women and children openly defecate and constantly facing issues of health, shame, and safety.

As per the census, it is analyzed that there is only a 10% increase in the construction of toilets within premises in the last decade which can further be said that it may take more than 53 years to achieve the status of OD free country. One of the main objectives of the Millennium Development goal under the agenda of global health and development is to have the proportion of people without sustainable access to sanitation by 2015 (O'Reilly, 2014). In such a case, it is really questionable to achieve one of the main objectives of providing 100% toilet facilities to people by 2025 of the Millennium Development Goal.

The Fund for Swachh Bharat Mission-Rural comes from the Ministry of water and sanitation while Swachh Bharat Mission-Urban comes from the Ministry of Urban Development. The unit cost of toilet construction has been increased from Rs. 10000 to Rs. 12000 under restructured Swachh Bharat Mission. Cost-effectiveness and sustainable technology is the base of successful implementation of Swachh Bharat Mission at grassroots. Swachh Bharat Mission also gave equivalent importance on behavioral and attitudinal issues through spreading awareness, supporting the community financially as well as technologically. The government has also appealed to the corporate sector and Non-Government Organizations to come forward and support and fund the program as corporate social responsibility. Open defecation free society and maintenance of hygiene and sanitation in the community is not only the responsibility of the government but also a collective duty that needs to be shared by all citizens.

Planning at Chandanpur District

Rughuwendra Raghav, the District Magistrate of district Chandanpu, after the announcement made by Prime minister for open defecation free country, called a district-level meeting of all the authorities heading the local, national and international development organizations. In those meetings Block development officers and District Rural Development Agency officials were also invited. The main agenda of this meeting was to achieve the goal of open defecation free status at the district level. Mr. Raghav has motivated all the government and non-government officials to work in coordination to achieve the goal of the ODF district. He appealed to work hard and plan well to become the first open-defecation free district. In the meeting, the targets of toilet construction were finalized and instructed to work accordingly. Everyone in the meeting shared their issues and challenges of working in the field and Mr. Raghav had ensured the full support, cooperation and immediate solutions to the challenges. He appealed to work hard and plan well to become the first open-defecation free district.

Structure and Profile of Prarambh NGO

Prarambh is a National Level Non-Government Organization that has marked its active presence and contribution at state in various domains of development such as education, health, livelihoods, and microfinance. Prarambh is a well-recognized organization that was awarded and felicitated at various national and international forums in the last decade. Tez Bahadur Singh is the Chief Executive Officer of the Organization for the last 5 years. He is associated with the organization from the initial phase. He had recently celebrated his completion of 15 years in the organization. Tez Bahadur earlier worked for 6 years as State Program Manager and then 4 years as Project Director in the organization Prarambh. The total strength of the organization across the project area is 1500 including the state-level officials.

Prarambh is working in the Chandanpur district with 18,500 households. The organization has formed 12000 self-help groups (SHG) in the villages. These SHGs regularly conduct weekly meetings and have monthly savings in the group. The SHG members also save for the health-related requirement separately in the SHGs. With the help of these savings, they regularly rotate the money among themselves for income-generating activities, education, health, and household consumption. On average, each SHG has 10-15 members and accordingly 10-15 SHG together form a Village Organization (VO). The purposes of the village organization differ from the purpose of SHGs. The office-bearers of SHGs meet fortnightly to discuss the socio-economic issues of the village. SHGs as a member of the VO saves separately in the VO. Village organizations help SHGs in liaising with government departments and to fetch the benefits of social schemes at their doorstep. Village organizations also have the power to negotiate and access in the markets as well as to the various institutions and organizations.

Planning and Implementation at State

Implementation of Swacch Bharat Mission becomes the national agenda and Sustainable Development Goal-6 defines the global agenda to ensure accessibility and availability of water and sanitation for all. Tez Bahadur Singh, CEO of Prarambh, felt the need to be focused on the issues of water and sanitation in the current scenario. He called a meeting of the staff and discussed the idea of working on the sanitation facility in the project area. For the pilot phase implementation of the

sanitation program, the team of Prarambh NGO selected the Chandanpur district. In this regard, they planned a meeting with District Magistrate Mr. Raghuwendra Raghav. Tez Bahadur along with his state and district team met Mr. Raghav to plan the implementation process. Mr. Raghav who is very enthusiastic about this project ensured the Prarambh team for all kinds of support and coordination. Further, Tez Bahadur has conducted another internal meeting with his team to discuss and finalize the plan of action. Mr. Tez has emphasized on the goals and targets of the sanitation program. In his speech, he mentioned that we have to work in coordination with government officials and put maximum efforts to achieve the targets. At the same time, he also motivated his team to not to compromise with the quality of work. At the end of the meeting, he also asked his team to share their feelings about the plan or if they have any issues and concerns. Ajit Prakash, who is working as a health and nutrition expert in Chandanpur District raised his hand and expressed that it will be difficult to initiate the work at first go as we do not have sufficient trained staff. He also mentioned the implementation of SBM in the community will require lots of funds and delay in disbursement of funds may lead to disastrous implementation at grassroots. Ajit shared that the community is not much aware of the challenges and issues of open defecation. Thus, it is very important to work on community awareness and behavior change towards the adopting sanitation facility at the household. Also, awareness campaign and community mobilization may take lots of time, thus it is important to plan in phases. Tez Bahadur appreciated his ideas and concerns and after lots of discussion in the team, they have arrived at the conclusion that for the pilot phase of implementation they will select one block of Chandanpur district. District team of Chandanpur district has suggested to select Bhawanipur Block as the geographical coverage is less challenging and equipped with sufficient staff at the block level. Bhawanipur block has 20 village organizations. Tez Bahadur further said that let's pilot the implementation through Village Organization (VO). The criteria for selection of VO were: 1. The village organization must be of 3 years or more. 2. it must be implementing all the programs of the project. 3. Must have completed all the training at SHG and VO level. Furthermore, the district team recommended the *Nari Shakti gram Sangathan* (Village Organization) of piloting the implementation of SBM in the villages. Tez Bahadur asked the intention of recommending the name of Nari Shakti VO when there are other VOs in the block too. Ajit in response mentioned that Nari Shakti VO is the oldest VO of the district, it has the experience to manage the fund of more than 3 crores at a time. The purpose of recommending the name of this VO is that it fits in all the criteria of selection VO decided by the team. The team has confidence that the member of the Nari Shakti VO will take up the challenge of implementation with enthusiasm and members of the VO will ensure their efforts through participation. Nari Shakti VO and all its members are trained in program implementation, SHG formation, community mobilization, and financial literacy. Thus, it would be great to select this VO for piloting the implementation. Tez Bahadur was convinced with the analogy and finalized the plan for pilot implementation will be done through Nari Shakti VO. Further, Mr. Tez has formed the task force of 6 members at the state for better implementation of SBM and offered Ajit Prakash to head the team.

An Awareness Campaign, Initiatives, and Community Participation

The Nari Shakti Village Organization has prepared the list of requirements of the toilet for the member SHGs. A total of 200 households have responded that they need a toilet and are ready to construct it in their dwelling. VO has taken lots of initiatives for behavioral and attitudinal change through awareness creation, supporting the community financially as well as technically. Initiatives like whistleblowing, Prabhat pheri, tatti-par-matti, meetings, workshop, and rallies have been taken for triggering, community mobilization, awareness, and behavioral change. Nari Shakti VO has

decided to hire a contractor for the construction of the toilet while the social mobilization has been done with the help of community resource persons (CRPs). CRPs were the trained community cadre as well as the members of SHGs. For the construction of the toilet, mason has been trained at the local level to ensure community participation and community contribution in the form of labor in the implementation process. It also helped in creating employment opportunities at the local level. With the help of the savings of SHGs at VO level including the fund available for other livelihood purposes, the leaders of VO decided to procure materials, construct toilets, and conduct awareness campaigns in the villages. Nari Shakti VO was working in coordination with panchayats. It was ensured by the government officials that after the construction of toilet and submission of application with photographs of the toilet, the motivational amount of Rs. 12000/per toilet will be reimbursed to the beneficiaries' bank account. VO has prepared the budget for the construction of the toilet with the help of mason, contractors, suppliers, and community members. And, this bifurcation of amount and budget helped the VO to plan the requirement and distribution of construction material at the household level.

Monitoring and Evaluation of Program

Nari Shakti VO had constructed 200 toilets at the household level and submitted all the applications with photographs to the panchayat office for the reimbursement. It was almost six months and the VO has not received the amount for toilet construction for the single household. All the members and SHGs keep asking about the disbursement in every fortnightly meeting. The office-bearers of Nari Shakti Village Organization have visited multiple times to panchayat and block office to get an update about their application and disbursements. The panchayat office has ensured the members of VO that they are working on it and soon they will be transferring the amount to the beneficiaries' account. VO leaders visited the panchayat office next month and they have communicated that somehow some of the applications have been lost and they need to resubmit the applications again. The members of the VOs got worried and angry too as it is more than seven months they didn't receive any money and spent their maximum savings on the construction of the toilet. A year later, Tez Bahadur visited the Chandanpur district and planned meetings and interviews of SHG members of Nari Shakti VO. During the meetings, he got to know that the members have not received the amount of construct from the government departments yet and this is the huge dissatisfaction among the community. Tez also realized that the households have constructed the toilet and but not using it. Rather the toilets are in the use for other cleaning and storing purpose. He was surprised that even after having the toilet within a dwelling, some members of the household are not ready to use it and still defecating in open. Tez Bahadur was keen to know the major reason for the low usage of sanitation facilities in rural areas. Therefore, any state or district cannot be declared as Open Defecation Free until unless all the members of the community do not start using and maintaining the sanitation facility.

Tez Bahadur's Dilemma

Tez Bahadur decided to share his problem with his old friend Naina Singh. Naina had also worked with Prarambh NGO earlier and had an amazing experience of working with the team. She was also part of the founding team and faced lots of challenges in the initial stage of establishment. Two years ago she decided to leave the organization and decided to work as an independent researcher. Tez Bahadur mentioned that his team and village organization have done an amazing job and achieved all the targets of toilet construction. Tez also mentioned his recent field visit to Chandanpur district and interactions with SHG members. He mentioned that the SHG has spent their savings in construction and it is a year they have not received a single penny as reimbursement for

construction. Tez shared that though the toilet has been constructed due to bureaucratic pressure and targets of toilet construction, it is difficult to understand why the households are still defecating in open. Tez expresses his concerns to explore the factors influencing the usage of sanitation facilities at the households. Furthermore, he requested Naina to conduct the research study in Chandanpur districts to understand the issues and challenges of implementation of the program as well as the acceptance of the program at grassroots.

Tez shared with Naina that the team really performed well and took many initiatives to create awareness against open defecation and the benefits of using toilets. But somehow he had a feeling that in spite of having toilets people are not using it and still defecating in open. Naina during the conversation asked Tez Bahadur that did he think that poor management, lack of funds, sudden scaling up of the project, untrained staff, corruption, over-ambitious targets, lack of planning and monitoring could be some of the reason for the failure of the project. Tez Bahadur said that we tried our best and he is unable to understand the reason behind this poor implementation.

Tez Bahadur was a little sad and said that "we failed as a team". Naina thought for a while and said don't be so pessimistic and don't worry we will work together to identify the issues and fix it. Naina then accepted his offer to conduct a research study in the project area. Furthermore, she expressed that before starting anything she just wants to visit the project area. Tez Bahadur felt very happy with the idea and ensured all kinds of support in the study. He introduced her to the District and Block project manager for better coordination and communication. In the meeting, Naina asked Rajeev Kumar, Block Project Manager of Bhawanipur block of Chandanpur district to brief her about the village and Nari Shakti Village Organization. Rajeev said he does not have much ideas about the villages and the project work as he joined only 3 months ago. He suggested her to be in touch with field staff for the information. Naina decided to get in touch with the members of the Taskforce which Tez Bahadur has mentioned in the conversation. Tez mentioned that the purpose of that task force was effective implementation and monitoring of SBM in the project area. Ajit Prakash was heading the task force at the state and it was a group of six members. Naina decided to travel to the block Bhawanipur with Ajit and meet the members of Nari Shakti VO first to understand their work and concerns. Ajit was a humble person and also associated with the organization from the initial phase. Ajit, Nilotpal (members of the task force) and Naina traveled to the field to meet the members of SHGs and VOs.

Design of the Study

After visiting the project area and round of interviews with the office bearers of Nari Shakti VO, SHGs and Panchayat representatives, Naina decided to design a research study with the help of task force and members of VO. Thus, six villages of the Bhawanipur block of Chandanpur district have been selected for the research study. Informal and semi-structured interviews, focused group discussions, participatory rural appraisals, and household surveys have been planned to understand the structural and non-structural barriers of usage of sanitation facilities. 30 households have been selected from each village and in total 180 households from six villages have been selected for the household survey and semi-structured interviews.

Tools of Analysis

- Secondary Data Analysis at District, Block and Panchayat level
- Primary Data Analysis with the help of questionnaire and interviews of 180 households
- A qualitative study with the help of ethnological survey which has included the six extensive focus group discussions
- Modified Zaltman metaphor elicitation technique (ZMET) has been used to conduct the study to understand all physical, socio-cultural and psychological realities of households as individual reality.

Zaltman Metaphor Elicitation Technique

Zaltman metaphor elicitation technique (ZMET) process will enable to understand both conscious and especially unconscious thoughts and feelings by exploring people's non-literal or metaphorical expressions. The use of modified ZMET as a tool helped a lot to explore and understand emotions, preferences, attachments and certain belief sets. A community has its own priority set which is influenced by many tangible or intangible factors. ZMET facilitates a lot in building a concrete understanding of such reasons and preferences.

Households have been interviewed in order to understand thoughts & feelings about open defecation and the initiatives they have taken for the construction of toilets using the ZMET process. Respondents broadly compared the program of Swachh Bharat Mission with pride, celebration, community mobilization, and participation. They relate temples, Yagya or ceremony as an integral part of spiritual or mental well-being and in the same way, household associate construction of toilets is essential for their physical and social well-being. They have also some negative emotions about the construction of toilets as it may pollute groundwater and can raise several issues of proper disposal of human waste. Emotions like pride, ownership, safety, asset creation, development are connected to the construction of toilets and infrastructure in the villages.



With the help of this photograph household conveyed that "we need temples, spiritual thoughts to

clean our mind and heart and also for mental health". In a similar way, we need toilets to clean our bodies, for physical and personal well-being.



Privacy and Safety are important for survival. We close the doors of this temple especially when the priest is taking rest and not around. We need to maintain the privacy and safety at the temple and hence we need doors. Similarly, we need toilets with proper doors to maintain our privacy and safety.



Household referred to this image as the woman and man also go for defecation at commonplace. We usually go for defecation within a small distance. During the rainy season, it is so difficult to find a place as sometimes men and women defecate in the same place. It is so shameful and disgusting that we cannot face each other so we look into different directions.



This picture is depicting that for any good work such as for *Pooja*, *Bhajan* and *kirtan* we search for clean places. But we are the only ones who are polluting the environment. *Yagya* cannot be performed without the help of the community. It is also a kind of *Yagya* and we are now happy to share our participation, money, and material.

Discussion between Naina and Tez Bahadur

Naina discussed with Tez Bahadur after conducting the research study and analysis of field findings. She further shared that it is not only the negative emotion about the toilet but there is a positive response too. People understand the importance of toilets and other sanitation facilities. But at the same time, it is very important to explore the invisible factors that has overpowered all the initiatives and awareness of the household. Nari Shakti VO has experienced lots of challenges in the implementation of the sanitation program at the community level. Members were not ready to construct the toilet within the dwelling. The availability of construction materials on time was another challenge for the construction of the toilet. Leakage in the toilets and other structural issues created lots of discomfort to members of the households. Misperception, social belief and lack of information and awareness were the non-structural issues that proved to be the essential barriers of using the toilet. Too much bureaucratic pressure and over-ambitious targets of toilet construction affected the quality of construction. Lack of sufficient water was also an essential factor in convincing the community to use the toilet. Carrying water from community tap, well, pond and other water sources could be time-consuming and needs lots of physical effort. Women of the household faces lots of water burden and are thus less likely to use the toilet. Children were most enthusiastic about using the toilet and can be a great source of mobilizer and influencer to ensure usage and maintenance of toilets at the household. Naina mentioned that Swachh Bharat Mission helped a lot in providing the sanitation facility at the household but still we need to put effort towards enhancing the usage of toilets by all the members of the household.

Questions for Discussion

1. What is the main problem of the case?
2. Why Tez Bahadur failed to ensure the usage of the toilet?
3. What should be the role of Raghuwendra Raghav?

4. What should be the role of Tez Bahadur, Ajit Prakash, Rajeev Kumar?
5. Is there any problem with the design of the toilets? Why the households were not ready to use it?
6. What could be a strategy to enhance the usage of the toilets?
7. What could be the reason for the delay in the reimbursement of the amount to be beneficiaries?
8. What could be the best alternative strategy for the implementation, monitoring, and evaluation of the project in the villages?

Annexures

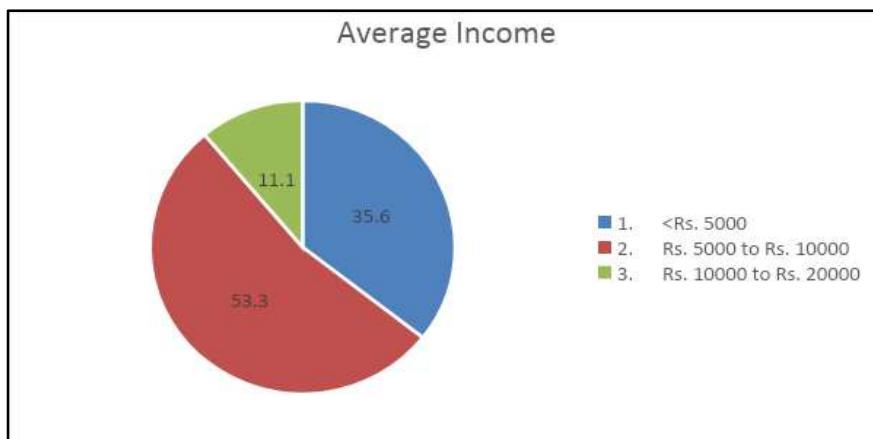
1. Toilet Design: Taken from the training module on sanitation for SHG



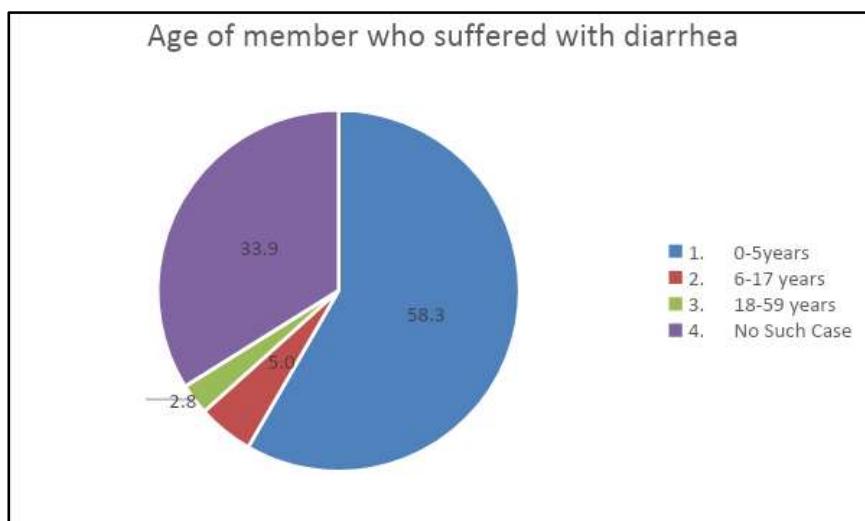
2. Bifurcation of total amount required for per unit construction at the Nari Shakti VO

S No	Particular	Require per toilet	Amount per unit in Rs.	Total Amount
1	Brick	850 pieces	4.8	4080
2	Cement	4.5 Sack	275	1237
3	Sand	46 CFT	30	1380
4	Door	1 (5.5*2.5)	930	930
5	Rural Pan	1	230	230
6	Pipe	1 (10ft of 3 inch)	125	125
7	Pipe	1 (2ft of 4 inch)	30	30
8	Tap Set	1	56	56
9	Ring	2 (42inch radius)		
10	Roof Slab	2 (2.5*4)	1550	1550
11	Chips (Gitti)	2CFT,zero size	100	100
12	Mason Cost	1 (without labor)	1600	1600
13	Transport	1	200	200
14	Paint	1	200	200
15	Miscellaneous	-	282	282
			Total Cost per Toilet	12000

3. Average Income of the Household



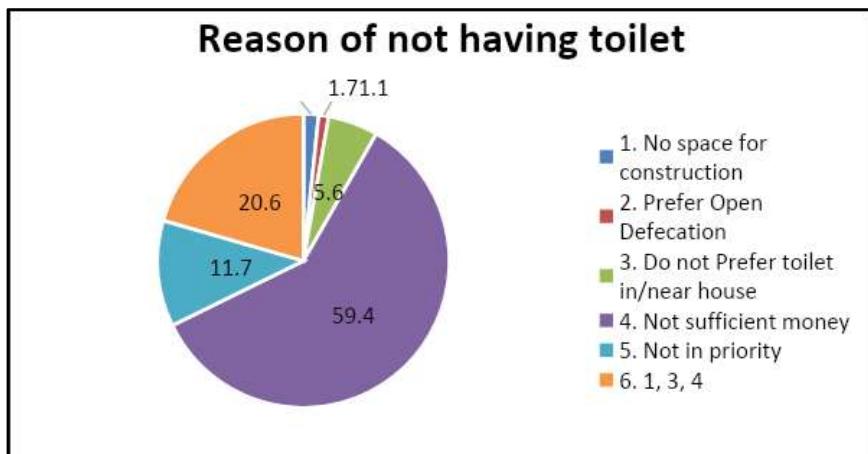
4. Members of the households suffered from Diarrhea



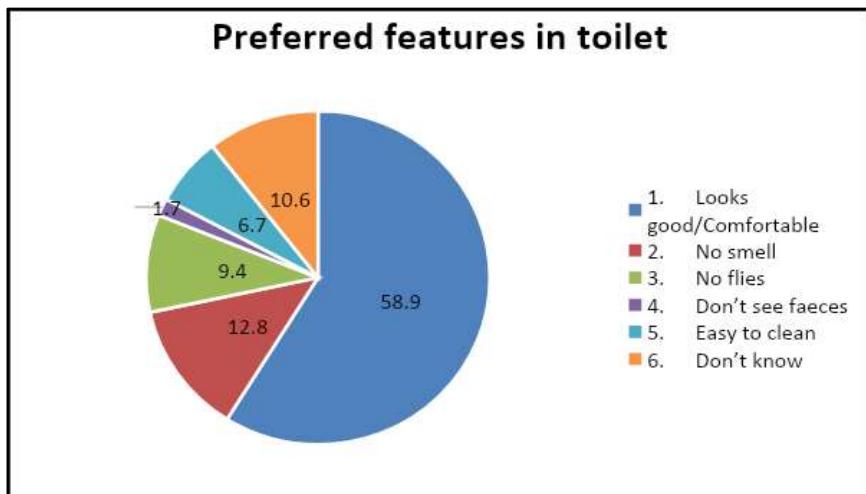
5. Hand Washing Practices



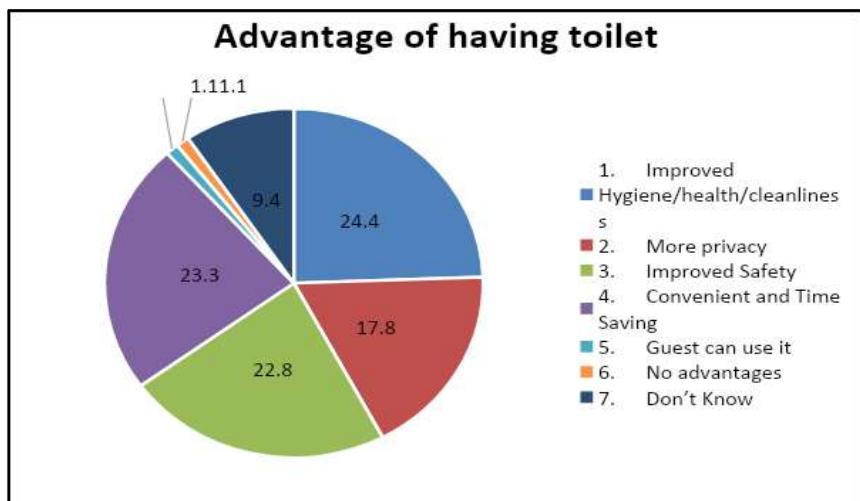
6. Reasons for not having Toilet



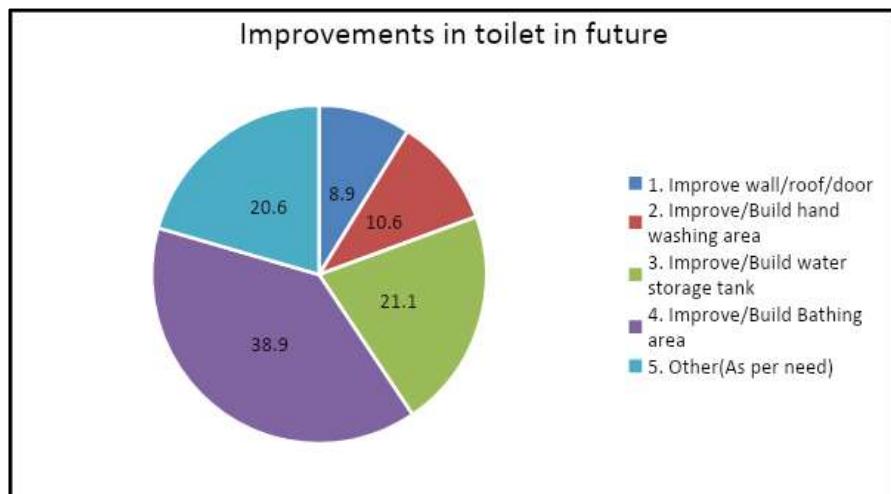
7. Preferred features in toilet



8. Advantage of having toilets



9. Improvements in the toilet in the future



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The case has been prepared based on the research study conducted in rural areas. All the characters and names of the officials has been changed to avoid the conflict of interest. This case is prepared for classroom learning to understand the planning and implementation challenges of developmental programs and policies.

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Making Computers Affordable

Dr Syed Kazim Associate Professor Acharya Bangalore B-School Bangalore

The mission of ReNew IT is to Make Computers Affordable to everyone. ReNew IT was founded in 2009 by an alumnus of IIM Calcutta. The primary goal of the ReNew IT is to increase the number of high-quality, low-cost PCs and related parts and accessories available to Students, NGOs, Small Businesses and other users. They mainly source computers from large MNCs - refurbish and remarket them. This helps bridge the large digital divide that exists in a country of over a billion people.

ReNew IT offers some of the best variants of low cost, refurbished computers, second hand laptops and used laptops to their customers. It offers some of the best variants of low cost, refurbished computers, second hand laptops and used laptops to their customers. Their wide range of re-manufactured computers, pass severe stringent quality tests and thus perfect in quality and physical condition. Besides this, they also offer refurbished laptops and servers from the best computer manufacturing companies in India. Their refurbished computers and laptops are available from the range of popular brands like Dell, HP and Lenovo. They aim to provide easy and affordable computers to students, startup businessmen and NGO's. Most of their computers are sourced from the top MNC's and are aptly re-manufactured under proper expertise.

ReNew IT won the coveted CNBC Masterpreneur Award. They won the FKCCI Innovation Excellence Awards for MSMEs 2014. They received the award from Union Minister for MSME, Sri Kalraj Mishra.

Challenge

As per the Census 2011 data, India has an IT penetration of 9.5% at a household level. This means that less than 1 in every 10 households and less than 1 in 20 small businesses have computers. To make India more digitally inclusive and to have greater access to information, India is in dire need of 600 million computers that are not only available for usage but are also affordable and in proper condition. In China, the penetration is more than 30%. For India as a country to progress further, it is important for everyone to have better access to computers. It is well documented how the spread of mobile phones has benefitted all of us.

Refurbished computers are re-manufactured computers that are up for sale by popular computer manufacturing companies. These desktops are widely popular for the trouble-free rates and a series of other creditable benefits. These computers have a lesser price because they are returned to the computer manufacturing company due to one or more manufacturing issues. Now, this undeniably does not mean that they are provided with feeble or a dysfunctional computer. In fact, right after the manufacturing issue is detected, experts from the manufacturing work on it to fix all relevant glitches. So, the re-manufactured computers that are up for sale turn out to be perfect in both features and price.

In order to start this business the biggest challenge was to get approval from the pollution control board approval apart from the normal business GST, tax and all those things so this is mandatory that they have to come and inspect their facility and then give the approval because there is a lot of waste that gets generated. Back then it was very difficult because ReNew IT was getting into this as

well as the government is also getting into something similar. So it did take some time to get the licenses. The government has their own team to look at all these facilities to give license and then renew it as well.

Initially it was very difficult for ReNew IT to get the E-waste as it was very difficult to get 500 to 1000 computers and laptops. In the initial 2 to 3 years it was very difficult. They would have met more than 100 corporates to get computers. Back then it was also not mandatory for corporates to give the computers to authorized vendors. It became compulsory just 6 years back that for e-waste they have to be authorized vendors. Every year there is a renewal period for the registered pollution control and initially for one and a half year picking up 2 to 3 contracts was biggest challenge for us. As they had great network, it helped them to kick start the business and take it to greater heights.

Initially they got comments that they were doing a kind of work which is glorifying the 'raddiwala'. It was very difficult to start something which was not heard off. It is a little bit of internal pressure to do something like this. Comparatively to others they got good support from their family. Their family was in business from four generation so they had strong support from their family, which was an added advantage.

ReNew IT has to recruit higher paid people like operation and sales. It is difficult, because they are not able to pay them well. In India, many students have perused ITI Diplomas and refurbishing staff, due to which it is very easy to get them onboard. But for senior staff it takes a little time. Initially, for a couple of years they faced little problem.

They need advertisement but they have shortage of funds. Big companies like Amazon, Dell are having their own refurbished products and they have market for it. In India, Maruti Suzuki came up with this idea of PRE-LOVED CARS nobody started thinking of refurbished products. But if they start advertising, it would be a boom for them.

The Gap

Generally when people's computer or laptop gets old, they really do not know what to do. They generally don't get any buyers, so they just keep the laptop in the office or in the house. Many people need second hand products, but they are not able to connect with the right purchasers. This was the problem and gap which ReNew IT identified and planned accordingly. Through their research and networking they got to know that similar business models were existing even in US. Thus gave them more strength and confidence to start a similar business model in Bangalore.

Reasons to Buy Second Hand Laptops

Second hand laptops have turned out to be the 'next big thing' because of their easy availability, affordable rates and top notch quality. In fact, nowadays many individuals settle for used laptops because of the series of benefits they offer. These laptops are loaded with the best features and an authentic operating system as well. Besides that, most of these laptops come with a manufacturer's warranty which is even more commendable. So, with a used laptop they get to avail all the features of a firsthand product, in a rate which will fit the customer's pockets. Following are 5 reasons why they should choose these second hand products.

i. Wide Availability

This is one viable reason why customers should splurge in these second hand products. These products are widely available in popular online ad based sites. Simply browse along and search for the required model to purchase it in a jiffy. They can easily locate these laptops with a thorough online search. In many cases customers may even land up with the latest model of a popular brand. So, make a thorough search and visit various online sites to choose the best deal of these laptops.

ii. Quality

These second hand laptops have no quality constraints as well. They are available in the best quality and so their performance too is pretty much commendable. As these laptops are used, they undergo rigorous performance checks. So, it can be said that the laptops being second hand come to be well tested of their quality. Due to this reason, the customers can be pretty much assured of using the best quality laptops. The laptops from the best brands also undergo rigorous quality checks from their manufacturing unit. So, customers can jolly well enjoy a high quality product in affordable rates with these used laptops.

iii. Lesser rates

It has been found that a used laptop can be available in a rate which is 30% lesser than the original or firsthand one. This indeed is a viable advantage if the customers are purchasing second hand laptops from top notch brands like Dell, Lenovo, HP or Apple. With second hand branded laptops customer get to enjoy the same features and the best value without making a hole in the customer's pockets. Most of the refurbished laptops are also available in equally lesser rates from the laptop manufacturing company. So, choose these laptops to enjoy the best from branded laptops in affordable rates.

iv. Protecting the Environment

Whenever customers settle for second hand laptops, customers actually take a step to protect the environment. This is because, the parts that make a computer contain a series of toxic and carcinogenic materials that can severely affect the environment. The situation may become worse if the toxins leak in soil and the ground water. So, by using a second hand laptop the customers actually do their part to reduce the number of computers that are going to the landfills. So, use these second hand products not only to save costs but also to save the environment.

v. Warranted product

Most of the second hand laptops turn out to be warranted from the manufacturers. So, even when customers are purchasing a used product customers actually get to enjoy the limited manufacturer's warranty from it. So, with the increasing cost of the brand new laptops choosing a used laptop can indeed be a viable and wise decision.

About the Company

Initially the co-founders met other refurbishes and attended meetings and this gave them confidence to start their own business. They also worked in a joint venture with company and later they realized that more than refurbished parts there is more value for refurbished computers and the IT penetration value was only 10% so the mobile penetration is very high parallel computer hardware penetration is very low and currently it is around 25%.

Initially they were not getting orders, but due to contacts and networking they received orders. One partner took care of operational activities and other partner took care of marketing and the accounting activity was outsourced.

Computer literacy can go a long way in developing a nation like India. In a country of more than 1.3 billion, extending the power of a computer to the masses holds a lot of promise and this is the intention with which ReNew IT was started by Mukund BS.

He is a B.E in Electronics from NIT Surat, who went on to do a post-graduation from IIM Calcutta. He worked with a few corporates but felt the need to do something which had a greater social impact. Hence he went on to found ReNew. The Mission of the organization is to “Make Computers affordable for everyone” and they are doing this by increasing the number of high-quality, low-cost PCs and related parts and accessories available to Small Businesses, Students, NGOs and other users. ReNew sources computers from large MNCs, refurbish and remarket them.

Computers still remain unaffordable for a big part of the Indian population and this is where ReNew is trying to step in to organize a predominantly unorganized market. ReNew IT sells refurbished computers mainly to these categories of customers:

i.Schools / Educational Institutions: Supply refurbished computers to small schools which don't have budgets for IT.

ii. Parents of school going kids: A lot of parents whose kids have come to high school buy computers from ReNew as their kids require a computer.

iii.NGOs – ReNew helps NGOs to get desktops, laptops, servers, etc., at the lower costs.

iv.SMEs – Research shows that 67% of the SMEs in India purchase a PC for ERP (book keeping and stock keeping). ReNew supplies refurbished PCs to many small offices who mainly use the computers for Tally, and Government / statutory filing which have moved online (like eSugam, VAT returns, etc.)

The common thread between all their customers is that they don't really need high performing computers. ReNew IT sells computers starting at Rs. 4500 and the outreach happen by directly contacting schools, NGO's, etc. Mukund has a team of 7 technicians and a manager who take care of the operations. ReNew IT is based out of Bangalore and aims to create a larger impact by taking their services to other cities and states in India as well.

At a time when tablets and smartphones are within easy reach of every Tom, Dick and Harry, an engineer is out on a mission to provide computers and laptops to the needy. Despite the high sale of tablets and smartphones, several people in Bangalore still find it tough to afford brand new IT products. This includes students, small businesses and NGOs. Many corporates upgrade their technology every three to four years, as they use only the latest. They buyback computers, servers and laptops from corporates, refurbish them, and sell them at affordable rates to the needy. After buying the products from companies, they checks the systems using testing tools, repair and refurbish, and finally remarket the products that pass all tests. From computers for Rs. 4,500 to laptops priced Rs. 7,000 onwards to servers for Rs. 75,000-80,000, the products are shipped from the testing and repair facility in Bommasandra to people across Bengaluru.

All the products come with a one month parts warranty, and a 1 year service warranty. They have till date sold 10,000 units to anyone who cannot afford to buy brand new products. Most buyers are first time users of IT gadgets. Despite Bangalore being the IT capital, there is tremendous need for affordable IT products. While starting ReNew, Mukund took funding support from his friends and family, apart from bank loans.

He used his business school network to approach corporates planning to upgrade technology. And the testing facility provided easy access to NGOs and students in nearby areas in need of affordable IT products. They would create awareness amongst people by visiting colleges, handing out pamphlets at bus-stands and ATMs. From a Bangalore only presence, ReNew has now started offices in Hyderabad and Mumbai. They aim to build a pan India footprint.

They basically wanted to do two things. First, ReNew IT wanted to do business. Second, they wanted to do something to help the environment and this was the best part or the way for business. So, the option was either they do or not do. But they never thought that the business would grow drastically and in a short period of time they grew rapidly.

They never knew that they would be this big and now they think that the industry is very big and it has huge opportunities to offer. When they started, they were the fourth registered pollution control registered vendors and now there are more than 50 in Bangalore itself. Majority of them do not do refurbishing they do recycling.

They purchase the basic computers for Rs. 7,500 with license and with 6 months of warranty. They also have a service partner across the country, so that the service can be done based on the need and time the customer wants. Sometimes they also get computers which are only a year old. A computer or laptop which is available for Rs. 1 lakh, they sell it for a mere Rs. 30 – 40 thousand. Due to this competitive advantage, a lot number of startups in and around Bangalore, Hyderabad, Chennai, and Mumbai purchase the computers and laptops from them.

As the online purchase has increased over the years, selling refurbished computers and laptops has become easier. There is huge demand and potential for refurbished computers and laptops. Lot of students and SMEs buy from them. The most important thing to sell is to ensure that the computer or laptop looks good as in India people go for the one which looks good compared to which actually is good.

ReNew IT closely work with NGO's, government institutes and such organisations where they ask us to refurbish the computers and laptops and donate them. They feel that there is a slight change in that aspect. It is because where they are helping the society as well and on the other doing good business. Outwardly it might look like that but inwardly they are also functioning like any other organization like handling the similar kind of processes and doing what they do kind of a thing.

ReNew IT is a small organization like horizontal more than a vertical. They are ten people most of their refurbishing is semi-automated now. They usually take care of marketing and they also have people in different verticals, like one for sales and one for operations and five people under him. Since it is more horizontal, it is more easier were they just sit and talk more formal. They have open meetings. Once the organization becomes bigger then they observe more change.

ReNew IT follows discipline becomes easier. They are more in-tune to meeting the deadlines rather than how much hard work customers do or how much customers take time to complete it. Things become easier in a small organization, with easy to go culture. They also do have punch in and punch out system. Since they are a profit making organization there is no tax rebate. Retaining the sales team has always been a challenge for them as they jump due to pay scale and some other factors.

But on the other hand the person in charge of operations is there with them since inception and some employees are there with them for 9 to 10 years. They work on most of the Sunday's as most of the pickups are done on Sunday. They have Sunday as a working day as corporate are free on Sunday to handover the computers to us. So it is working day for them because once the corporate work is done, then the internal team can take care of the work. As they are not into retail, the takeoff only on Monday.

Purchase and Process

The purchase computers and laptops from corporates and they don't sell it in small number but they offer 500 to 1000 computers. Few computers would be in ready to use condition and few would be such that they have to do lot of work on it and there would also be few which they won't be able to repair, as it won't make economic sense. The parts would be more expensive than the main system. So there is lot of parts that are used out and lots of parts that's comes into waste as well.

CSR by Companies

There are two main aspects in business; the first being is to earn money, because if customers don't earn money for a long time, customers will not have interest and satisfaction for the particular work. The second being is to help and positively contribute to the society. This actually helps to scale up the business in the long run. Many companies have started with CSR activities so do they also like to help and support organisations that are in some way contributing to the society. This has actually helped their business to grow.

ReNew IT works with few corporates who spend their money for CSR. Before this component came into picture, they think three years back. They worked with corporates who do not agree on doing this activity. Few companies come up with more than what they think of spending towards CSR activities and even now CSR is becoming more of a branding to them. If companies take it as they might come up with some benefit because of this, then they would take this seriously. On the other hand, there are few organizations who take these CSR activities to a greater extent in an amazing way.

Social Responsibility

ReNew IT is a socially responsible company. They work with NGOs and many other groups and individuals who cannot afford a computer. They also set up computer labs in government schools. These labs have been set up for the training of college graduates for building soft skills through their software. Some NGOs also have teachers and trainers who provide quality training and upgrading the soft skills of the students. They ensure more number of people should be computer literate. The NGOs with whom they work have achieved 80% placements after training from their training institutes. After a span of 10 to 15 years, they might get the true impact which they have created on the society.

Way Forward

There is a huge digital divide in India and they are striving to bridge it. A computer can change someone's life forever. IT will be one of the drivers of India's transformation from a developing economy to a developed nation. If India's IT penetration goes up from less than 10% to around the 30% mark in China or the 45% level of Brazil, they would see a new generation of icons like Narayana Murthy or Azim Premji emerge. They could soon see an Indian Google or a Facebook.

As they are into refurbishing computers and laptops, they are looking for refurbishing of mobiles and other electronic devices and it is completely a different market, so they would look at its structuring first. As they give 6 months warranty for refurbished computers, they also want to do that for other devices as well. On the other hand, competition is increased drastically, so the focus is also to see how they can perform better when compared to the competitors.

They are currently in talks with Amazon and Flipkart as well to have something like a buyback program with Amazon. Like how people can purchase products, they can also come and sell their second hand products and they would act as vendors by purchasing it and reselling it to others. Initially the demand for refurbished computers and laptops was less but over the years it has increased. There is also good support from Government of Entrepreneurs as the process of registration, documentation and all other formalities have become very quick.

One of the major issues faced by the company is competition. It is facing serious competition from various small, big and local players. The next major issue faced by the company is that it is a challenge for the company to retain the employees in a city like Bangalore, where there are multiple job opportunities.

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About the Author

Dr. Syed Kazim is an author, proficient speaker, trainer, psychometric analyst, and a voracious reader. He has completed his MBA and Ph.D., in the field of Management. He is an author of several books in the field of business, management and personality development. He has published number of papers and case studies at national and international journals.

Annexure

WHAT'S HOT on dnaindia.com
BANGALORE HAS QUESTIONS THAT NARENDRAN MINDS
MONDAY, APRIL 21, 2014 | 21.04.2014 | 250 | \$250
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M&M show again
Glen Maxwell, who was bowling 300 runs in the first ODI against Sri Lanka, has now got 300 runs in the first Test against India. All three first tests, Sachin Tendulkar's last, and the first two ODIs were won by India. Kedar Jadhav underperformed in the third ODI.

WELFARE PROGRAMME City-based ReNew IT buys computers, servers and laptops from corporates, refurbish them, and sell them at affordable rates to students, small businesses and NGOs

Engineer distributes refurbished PCs, laptops to the needy

Priyanka Golkeri (@priyka30k)

Bangalore: At a time when tablets and smartphones are within easy reach of every Tom, Dick and Harry, an engineer from Bengaluru is on a mission to provide computers and laptops to the needy.

Despite the high sale of tablets and smartphones, several people in Bangalore still find it tough to afford brand new IT products. This includes students, small businesses and NGOs.

"Many corporates upgrade their technology every three to four years, as they use only the latest. We break computers, servers and laptops from corporates, refurbish them, and sell them at affordable rates to the needy," says Malleeswaram boy Mukund Raghav.

After buying the products from companies, Mukund and his team check the systems using testing tools, repair and refurbish, and finally remarket the products that pass all tests.

From computers for Rs4,500 to laptops priced for Rs75,000-Rs80,000, the products are shipped from the testing and repair facility in Bommasandra to people across the country.

All the products come with a one month parts warranty and a 1 year service warranty.

"We have till date sold 10,000 units to anyone who cannot afford to buy brand new products. Most buyers are first time users of IT gadgets," says Mukund, who started ReNew IT with his partner Raghav five years ago, after quitting his job with ITC.

A chance meeting with a family friend who was a computer sales agent of buying IT products from companies, and then providing them to the needy, triggered in Mukund the desire to start something similar in Bangalore.

"Despite Bangalore being the IT capital, there is tremendous need for affordable IT products," says the electronics engineer.

As per a Census 2011, India had an IT penetration of 8.5% at the household level, implying that less than 1 in every 10 households owned a computer.

While starting ReNew, Mukund took funding support from his friends and family, apart from bank loans.

Being an alumnus of IIM Calcutta meant using the business school network to approach corporates planning to upgrade technology.

And the testing facility at Bommasandra provided easy access to NGOs and students in nearby areas in need of affordable IT products.

"We would create awareness among them by visiting colleges, handing out pamphlets at bus stands and ATMs," says Mukund.

From Bangalore's only presence, ReNew has now started offices in Hyderabad and Mumbai. "We aim to build a pan India footprint."

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The new company claims to have given 10,000+ units to the needy

Giant Leap towards Employment

Dr Syed Kazim Associate Professor Acharya Bangalore B-School Bangalore

When 1 crore students pass out every year, there exists a huge gap which is available between the industry expectations and the students' employability. TalenTree would not say their capability's about the right perfect match between the employer expectations and availability. It was very widening those days what they understood from the minister is India was a 2.3% employability rate out of 100 students only 2.3 or 2.4 candidates had employability, employable talent in comparison to South Korea which stands 96%, Japan at 85%, Germany at 76%, the UK at 72%, the US at 52% of India was at 2.4%.

In order to provide employment, it is important to understand the long term and short term skills required by the industry. The long term industry requirements are technical publications, aerospace design, aerospace structural design and automotive and aerospace structural analysis. The long term project-oriented courses are product design and development, tool design (Jigs and Fixtures, Press Tools) and manufacturing engineering (Process Planning).

The short term skill requirements are geometric dimensioning and tolerancing, design for manufacturing and assembly. The short term skill enhancement courses are English speaking skills, effective communication skills and critical thinking and problem-solving skills.

If an employee wants to survive in an organization today, then he has to keep unlearning and relearning. In today's scenario employees not just have to learn, but they have to unlearn and relearn again. They will have to learn to change and improve if they have to perform better. If the employee has to perform better, then he has to be updated. The updating is nothing but an upskilling in the context because, a large audience who comes for recruitment is youth, so they have to give example of their relevance and it is easy to understand and appreciate. There are two big challenges in today's scenario. First, there are not many jobs in the offer. Second, the employer is not able to get a candidate who can fit the job requirement, leading to underemployment.

After extensive studies, a major gap that is observed is that there exists and will continue to exist is 'learnability'. Graduates come with good grades, distinctions, certificates, and grades, but they are not well versed with the basics. For example, engineering graduates are supposed to know the basics such as Ohm's law, Newton's law, etc. What the industry experts is not a word to word recitation of these but the essence of these theories which can be applied in the real world.

The next most important aspect that companies look for in a candidate is 'flexibility'. Candidates with technical expertise such as engineering, choose only to work in their core areas only. It is a known fact that graduates definitely prefer to work in formal sectors due to job security, fixed income, and sustenance. Around 80% of the jobs are available in the informal sector and only around 20% of the jobs are from the formal sector. This growing gap can be fixed by flexibility.

The final most common factor is 'attitude'. For example, a lecturer may be knowledgeable and

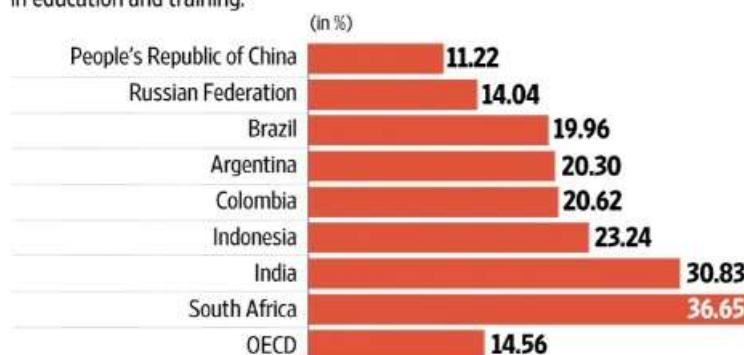
talented but if he is not able to gel with the principal, he may be backtracked or off tracked. On the other hand, if a person is not that competent and is still able to gel with everyone, he will have an upper hand with respect to opportunities, salary and career growth.

Today, the requirements of candidates are also changing, as they want jobs which give them a status in the society. Job is not just a need or element for today's youth. Recently when they went to a village, a person who has 20 acres of land and earns around 2 - 3 lakhs per month is not able to settle down in life. The demand from the other side is that he will get a bride when he is employed. He has employed 100 people but they say it is not sustainable and secure. So the social status element is being infused by a good number of people in society. So even if a person works as a security guard in Bangalore city, he can get a bride easily. Due to which more people are leaving rural areas and coming to urban areas in search of jobs.

Every individual has the right to grow. When it comes to India, the issue is not just about unemployment alone, but even underemployment. Students of MBA after spending 8-10 lakhs for studies don't get their expected job and salaries. In India, the supply is more than the demand. On average India needs around 1 lakh MBA graduates, but we are producing more than 6 lakh MBA graduates. If supply is high and demand is low, then the demand for the commodity decreases.

Where are the jobs?

More than 30% of Indians aged 15-29 years are neither in employment nor in education and training.



Percentage of youth aged 15-29 who are neither employed nor in education and training, 2015 or the latest year available.

Source: OECD Economic Survey: India 2017

The Social Entrepreneur

Jagadish Shekhar Naik is a Social Entrepreneur and the man behind 'TalentTree'. He is a member, National Skill Development Council at ASSOCHAM, New Delhi, co-founder and CEO of TalenTree India, Bengaluru, head of operations (Karnataka) at MPTA Education, Pune, Member of Board of Studies, Central University, Kalburgi and President of Dignity of Individual (DOI) Foundation, Sankeshwar, Bengaluru and Dharwad.

He has completed his Masters in Human Resources Management from Mangalore University and Executive MBA, SP Jain Institute of Business Management and Research (SJIMR). He has trained and addressed over 1,00,000 youth and professionals and interviewed over 25,000 candidates. In the job fairs organised by him, more than 70,000 candidates have participated from across Karnataka. He has worked for various corporates such as Volkswagen Group, Tata Marcopolo Motors, TE Connectivity, and Bill and Melinda Gates Foundation.

Inception

Basically, the background of TalenTree venture goes back to February 2016, when Jagadish Shekhar Naik was taking care of the HR Operations of a company called ‘Scaneye’ a premium commercial vehicle manufacturer in India which manufactures premium trucks, buses, and engines, which is a Volkswagen Group Company. During his employment, he got an opportunity to participate in a skill India initiative program at Delhi. Mr. Rajeev Prathap, Minister of Entrepreneurship and Skill Development addressed the delegates.

This gave Jagadish the idea to start his own venture he was keen on taking the skill India initiative to a large number of youths in India who were passing out from various institutions, so that they could be employed in the formal and informal sector. Thus, it would create a winning situation for both the employer and employee.

As per a report, as many as 97% of graduating engineers want jobs either in software engineering or core engineering. However, only 3% have suitable skills to be employed in software or product market, and only 7% can handle core engineering tasks.

According to the HRD ministry, India has 6,214 engineering and technology institutions that are enrolling 2.9 million students. Around 1.5 million engineers are released into the job market every year. But the dismal state of higher education in India ensures that they simply do not have adequate skills to be employed.

Keeping this as a data point, Jagadish really got a lot of insights from Mr. Rajeev Prathap. He spent the next 4 to 5 months about a venture. Then he finally decided to start ‘TalenTree People Consulting Pvt. Ltd.’. He started the company with an objective to create a forum that helps youth get what they deserve to get. The company was registered on 26th August 2016 and the journey towards employment began.

About the Company

Youth is the backbone of our nation. The economy of the country will only improve if we support the youngsters to be skilled and to get suitable employment or help them to engage in self-employment activity. This is not only the responsibility of the Government but also the responsibilities of the citizens and corporate, who can help in achieving this objective. Keeping this in mind, TalentTree has been organizing Udyoga Melas and Skill Development Programs. The company is registered at the Registrar of Companies, Bangalore. Its authorized share capital is Rs. 1,000,000 and its paid-up capital is Rs. 100,000.

As a part of this initiative, TalentTree has tied up with various corporate, SME’s, Industrial bodies and Skilling centers to be a part of the endeavour to provide an opportunity to students and unemployed youths of Karnataka state. The company is organizing various ‘Skill and Job Fairs’ at various locations across the state, wherein youth are given a direct window to get employed, earn and learn, while they cherish various career options.

TalentTree has also established a web portal called www.skillandjobfair.com, a compressive E-platform that helps to provide information to aspiring students, candidates and employers to register for the Skill and Job Fairs which happen across the state. TalentTree is extremely concerned

about two aspects, employment, and entrepreneurship. TalentTree also trains the youths on various skills, which will enable the candidate to become an employee or entrepreneur.

TalentTree has its own team to perform all the activities. TalentTree also has a good number of people who are willing to work as volunteers during events. The company works on a cost to cost basis. The basic aim is to positively impact their stakeholders. Many professionals volunteer are involved in the activity as they events happen on Saturdays and Sundays. The core team does the basic planning and execution. They only need volunteers on the day of the event for crowd management.

TalentTree does not believe in writing down the values of the company and pasting it in the office. The one trait that they believe in is ‘passion’. They have the burning desire to get results and succeed in the venture is what matters most. All their employees are on a mission and that is what which drives them.

TalentTree has Employee Relationship Experts, MIS Experts, IT Tech Service Experts, Sales and Marketing Executives and Employer Relationship Experts to perform various kinds of activities for the events to be successful.

The Economic Model

TalentTree works with the Government of Karnataka, Department of Skill Development, Entrepreneurship, and Livelihood. There is a provision to conduct such skill and job fairs and they are paid by the Government. The funding for all their events basically comes from the Government of Karnataka. They also conduct private events, and in these events they are paid by the employer, based on the number of candidates recruited during the event.

Few like-minded people also come forward to sponsor the entire event. During the event the candidates, employers and guest have to be taken care of. Candidates are from the same state, but the employers and guest are from different parts of the country. During the event the employers are provided with fee food and accommodation. To make the stay comfortable for the outstation guest, Volvo buses are arranged from the hotel to the venue.

Big Step

When TalentTree came up with a plan to conduct Job Fair, their basic target was to get 5 to 6 thousand candidates. With the help of local political leaders, they were able to reach around 9 constituencies through 9 MLAs. Now, if they would get 2 thousand per constituency, they could easily get 18 thousand candidates.

What TalentTree did was they understood the pain points from the point of view of the candidate and the employer. They did a SWOT Analysis of the existing eco-system and understood that there was a huge potential to grow and improve.

But their first assignment had around 50,000 candidates who appeared for the job fair. Jagadish Shekhar Naik, as an employer had participated in about 22 different Job Melas and has personally felt there are a lot of areas that can be bridged. This experience worked and TalentTree was able to organize the Job Fair in a much more methodological and organized and much more in a scientific way.

TalentTree did not spend a lot of money on print advertisement for the event. They had only one advertisement, in Kannada and English newspaper, for the candidates and employers respectively. They did huge social media campaigning inside the district and they circulated the teaser across the state. The message about the event was largely circulated in around 200 km radius. The campaigning lasted for about 20 days. It resulted in an unexpected response in their first initiative itself.

They also conducted a small survey using the Liker Scale Test ahead of their Job Fairs. The participants go through various stages of selection. TalentTree has tie up with some major companies like Toyota, Tata, and Fresh World. These companies also give pep talk to the students before the event, which helps in instilling confidence among the candidates. During the event, they also received continuous support from Mr. Santosh Lal, Minister of Entrepreneur Labour Law.

During the events, the respective district administration also comes forward to support the initiative. TalentTree only acted as knowledge partners because when it comes to handling so many people it involves law and order which was very tightly managed. So, the honorable District Collector (DC) - Mr. Ramesh and Superintendent of Police (SP) - Mr. Chethan and the district in-charge Minister, Mr. Santosh Lal provided their support.

In order to execute such big events, Mr. Jagadish believes that one has to be updated and should have good networking with various companies across the country. TalentTree have been part of the Professional HR activities for many years and Mr. Jagadish is an active participant in HR associations. Due to which, reaching out to company is not a big deal for him.



Source: www.troofal.com

Mix and Match

In the initial days, when TalentTree started, the initiative was to map the candidate's aspiration through their skill. During the initial period they did not have any infrastructure which was providing the candidates with an opportunity to get skilled and employed. Later on through their experience

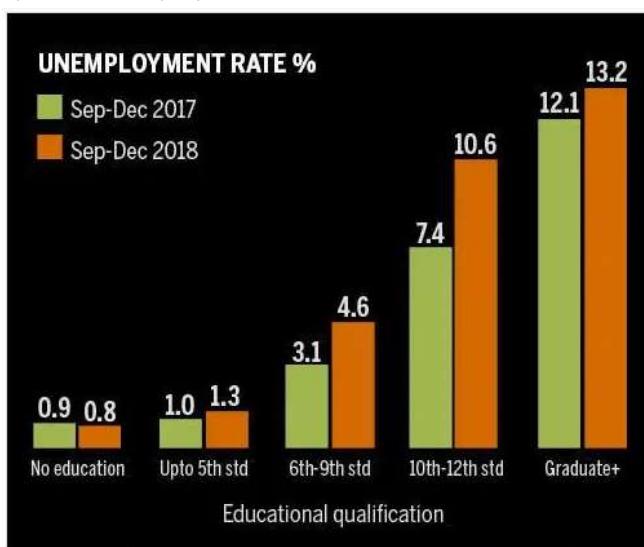
they created a platform where aspiring candidates and potential employers came in and helped the candidates map their skills.

In one of the Job Fair's, Toyota needs ITI fitters and 36,000 candidates who have registered online on 'www.skillsandjobfair.com'. From the entire list, only candidates only 960 were ITI fitters and there were 320 were interested in Bangalore location with salary expectations Rs.10,000 and above and Toyota is offering Rs.12,000. The marriage happens on the date of the Job Fair itself.

In order to make the Job Fair more organised, they divide the candidates into 14 categories as per their educational qualifications. The qualifications are below 10th standard, 10th standard pass, PUC pass, PUC fail, BA, B.Com, BSc, BBA, BSW, BBM, ITI, Diploma, BEC, and UGC.

TalentTree have developed an organised way of conducting the selection process. Initially the staff members announces the names of candidates and the candidates are sent to different rooms based on the company in which they have applied, this is how crowd management happens. As TalentTree has good experience of conducting such great events, the chances of committing a mistake is very less.

Most of the candidates get recruited in formal sector as many candidates are not interested to join informal sector. As per records, there are 72 lakh companies in India. On the other hand, in Karnataka alone, there are 2,25,000 shops and commercial establishments. For example, it is just a comparison between Udupi Hotel and Infosys and candidates would select Infosys over Udupi Hotel. TalentTree tries is best to do skill making and try to connect the candidate with the right recruiter. On the other hand, Karnataka Small Scale Industries Association (KASSIA) also helps the youth's data to reach out to potential employers which are in the formal sector.



Other Players

Jagadish does not consider consulting companies as their competition because TalentTree is not a consultancy company. The reason for forming TalentTree was to be in the recruitment space, which other players have not tapped, and give special focus to youth recruitment. TalentTree do not have

any competition and they are working passionately towards making youths employable in the country. TalentTree is positively contributing to the society and the employees are very much enthusiastic and are working towards the organisational goal.

In the pyramid of key candidates, they can be divided into 3 categories, price-sensitive, value for money and premium. The market has various players who cater to all the three categories of candidates. The government collaborates with various players based on the need and requirement. When premium candidates are targeted around 2,000 candidates turn up and when value for money candidates are targeted then around 10,000 people turn-up.

TalentTree ensures the candidates reach out to right platform and the right company. They also do not take any money from the candidate or the employer. Employers and consultants are completely different. Employers come only when organizers are efficient enough to handle employees. Consultants are basically middlemen between the candidate and the company.

When it comes to jobs, many organisations ask candidate to pay a fee, but do not provide any kind of job in the end. Thus, it is one of the biggest challenges to take the candidates into confidence and ensure credibility during the event. Initially TalentTree was very flexible but of late the company has established standards. Their aim is to attain a win-win situation, for the candidate, government and the company. They would like to call this a win-win-win situation.

The Process

TalentTree well defined selection process. Initially they share their experiences and vision with the candidates. They give an assignment to the candidate and expect them to perform actively. They don't give any timelines. They see how interested they are in doing the assignment and with what timeline. They don't expect them to give the results the way they want. They want to understand the natural traits of the individual and they perform well only when they have innate natural traits for the job. Imposing a thing on them doesn't work.

For interviews, candidates generally come prepared. TalentTree wants them to interact with the recruiter before accepting the offer. They are informed beforehand of all the challenges, negatives, pressures and unexpected situations they will be facing.

In order to prepare the candidate for the worst situation, they act as devil's advocate. The candidates are also asked to convince them as to why they want to join and work with a respected company. After they join, they will know that they will be facing some challenges and the company is always there to help them. Their aim is to psychologically prepare the candidates for what is to come.

Government Support

The government gives TalentTree projects to work on. There is a stipulated amount in every year's budget that the government sets aside for skill and entrepreneurship development in the state, for technical skill development, for setting up centers, assessment and certification.

TalentTree handle orientation; training is given by various companies. It's not a standalone process but an amalgamation of many companies. The government generally announces that it is going to

provide certain number of job opportunities in a particular year and the candidates should come to the portal and register online.

These registered candidates will be counseled by the government of Karnataka, with the help of various private organisations. These candidates then go through skill training in their preferred field by different partners and they follow up with orientation on various aspects. These candidates are then sent to orientation and job fairs. This scientific process is followed by the government of India as well. Some of the companies who are involved in the process are Axis Bank, ICICI, Bank of Baroda, Metro - Cash and Carry, Decathlon, Toyota and Tata.

Future Plans

As of now TalentTree is focussing on Karnataka, but they are trying to expand to other parts of India and also expand in foreign countries. There are planning to expand the business in two phases. In the first phase, the places targeted are Bangalore, Delhi, Ahmedabad, Bombay, and Bhubaneshwar. In the second phase they are planning to go abroad and wanting to hire employees from overseas. This will be the bigger USP of TalentTree. They are aiming to get employers from Brazil, South African Continent and Rumania. They are also trying to get employers from Australia and Germany as the population in these countries is reducing.

Discussion Questions

1. What major modern challenges can Mr. Jagadish face with respect to recruitment?
2. What are the obstacles hindering progress in the social venture, with special reference to TalentTree?
3. What inclusive growth and employment challenges the TalentTree will have to overcome in the Indian context?



Swachh Bharat Mission: Towards Better Sanitation and Health of Indians¹

Suddhachit Mitra IRMA

The Challenge

"An ideal village will be so constructed as to lend itself to perfect sanitation...The very first problem the village worker will solve is its sanitation," – Mahatma Gandhi (1937)

It was September 2018. For quite some time, Shri Sanjaybhai, a villager in the Anand district of Gujarat state, India, who was below the poverty line, was thinking of constructing a toilet just beside or at his residence taking advantage of the subsidy offered by the Government of India to people belonging to Below Poverty Line (BPL) individuals. "Should I construct a toilet out of the government subsidies being offered in the Swachh Bharat Mission - Gramin?" was the question that he needed to find an answer to.

On Mahatma Gandhi's birthday (Gandhi Jayanti), October 2, 2014, the Prime Minister of India, Shri Narendra Modi launched India's largest-ever cleanliness drive, the "Swachh Bharat Mission" (Clean India Mission) that was expected to cost INR² 620 billion. He administered a pledge to the Indian people to cleanse India, and asserted that it was not the responsibility of only *safai karamcharis* (cleaning personnel) or the government but of all Indians. He saidⁱ:

"India can do it; the people of India can do it. The way we derived pleasure from the Quit India (Movement), we would derive the same pleasure from Clean India".

The Prime Minister expressed his view that a "clean India" would be great tribute to Mahatma Gandhi on his one hundred fiftieth birth anniversary on October 2, 2019 as Gandhi valued cleanliness and promoted the concept. He added:

"It takes time to change established mindsets. It is a difficult task. But we have five years."

One important objective of the Swachh Bharat Mission, interchangeably referred to as Swachh Bharat Abhiyan (SBM/SBA), was to eliminate defecation in the open through construction of toilets, both household-owned and community-owned. The mission aimed at achieving an open-defecation-free country in five years through construction of 90 million toilets in rural Indiaⁱⁱ. The mission was organized in two branches: SBA (Gramin/Rural) or SBM-G, which functioned under the (then) Ministry of Drinking Water and Sanitation and SBA (Urban) that functions under the aegis of the Ministry of Housing and Urban Affairs. The mission has faced challenges. Despite this, an independent survey in 2017 ascertained that overall household access to toilets increased to 62.45% while 91.29% of the people having access to a toilet actually used itⁱⁱⁱ.

¹This management case was prepared by Suddhachit Mitra, Doctoral Candidate at the Institute of Rural Management Anand (IRMA), India, from both secondary and primary data sources as a basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative or a business situation. The emphasis in this case is on the Swachh Bharat Mission (Rural or Gramin).

² Indian Rupees

Defecation in the open with consequent contamination of water meant for drinking, bathing and other daily chores, more especially in rural areas, has been an endemic sanitary issue in India. Around 530 million people used to defecate in the open as they had no access to toilets in the year 2014, while rural sanitation coverage stood at 38.70%^{iv}. This was linked to various diseases. Human fecal matter can potentially harbor pathogens for serious ailments such as typhoid, cholera, polio and hepatitis. Especially affected were children, with studies indicating a positive correlation between defecation in the open and poor child health.^v About 50 infectious diseases, mostly diarrheal ones are propagated by water that caused deaths of 5.8 million very young children less than five years old per year.^{vi} Another research indicated that lack of access to toilets, unsound hygienic practices and contaminated drinking water caused stunting in children, defined as low height vis-à-vis age.^{vii} Children tended to miss school often as they frequently fell ill leading to indifferent performance, and were also likely to propagate infections. Adolescent school girls could experience fear and discomfort in the absence of proper sanitation thus discouraging them to attend school.

There were considerable environmental impacts of open defecation as well: untreated sewage containing fecal matter degraded coastal and marine ecosystems, soil and air, thus spreading disease. In terms of the economy, the World Bank estimated that lack of proper sanitation cost India 6.4% of its Gross Domestic Product (GDP) in 2006.^{viii}

To address the issue, the Swachh Bharat Mission/Swachh Bharat Abhiyan (SBM/SBA), a national campaign that broadly aimed to clean up Indian cities and rural areas was launched in 2014. Besides the funding for the program that was a considerable challenge, there existed another very important challenge. Sustainability of open defecation free (ODF) status of a habitation posed a challenge as people used to defecating in the open for a long time might experience discomfort using a toilet that might result in reverting to their old habit of defecating in the open. In the words of Sudeshna Maiti, Leader, Rural Sanitation, India Sanitation Coalition, “It is good see that progress on construction of toilets has been good. However, without sustainability, the ODF status of an area, rural or urban, becomes redundant.”^{ix}

Background

The Union Government of India had implemented several programs to provide access to sanitation to the rural population starting from the first Five Year Plan (1951-56). The Central Rural Sanitation Programme (1986) aimed at solid and liquid waste management and construction of toilets in rural areas. This was followed by the Total Sanitation Campaign (1999) that laid emphasis on Information, Education and Communication (IEC) activities to bolster demand for sanitation facilities as against making the campaign supply-centric. The Total Sanitation Campaign was renamed Nirmal Bharat Abhiyan in 2012. However, the Comptroller and Auditor General (CAG) of India in a report tabled in December 2015 commented that the campaigns failed to achieve much success. The CAG audit investigated the performance of the Total Sanitation Campaign and Nirmal Bharat Abhiyan during the period 2009-14. The report said that against an objective of construction of 42.63 million and 46.98 million individual household latrines for below poverty line and above poverty line families respectively, districts under the project, could fulfill only 52.15% and 44.18% of these targets during 2009-10 and 2013-14^x. Consequently the Nirmal Bharat Abhiyan was restructured as the Swachh Bharat Mission in September 2014^{xi}.

Shri Sanjaybhai

Shri Sanjaybhai was a resident of the Khadol village situated in the Anklav Tehsil of the district of Anand in the state of Gujarat, India. The village was located about 10 kilometers away from the district headquarters Anand. The village occupied 709.17 hectares with a population of 7,496 in 1,651 households.^{xii} There were 5,235 literate people in the village. There were 623 cultivators, 1,455 agricultural laborers, six household industry workers and 725 had other professionals.

Shri Sanjaybhai has five siblings. He has a family consisting of one child and wife. Including his parents, 10 individuals were part of his extended family. Shri Sanjaybhai worked as a member of the cleaning staff at an organization in Anand city, while his brothers worked as agricultural laborers, a work that was not considered to be regular employment. On an average the income of the family in 2018 was around INR 15,000 per month. They lived in two closely spaced residences. Relieving themselves in the open was practiced. However, during the night and inclement weather it was very difficult for female members of the household such as Sanjaybhai's sisters, wife and mother to go out. They used to generally go near a secluded spot near the highway. In the night they were occasionally subject to taunts or eve-teasing.

Swachh Bharat Mission

The Swachh Bharat Mission (Gramin) aimed at achieving a clean and Open Defecation Free (ODF) India by October 2, 2019^{xiii}. The broad objectives were^{xiv}:

- Improving the general quality of life in rural areas through promotion of cleanliness, hygiene and elimination of open defecation.
- Accelerating sanitation coverage in rural areas for achieving the vision of Swachh Bharat by October 2, 2019.
- Motivating communities at adopting sustainable sanitation practices and facilities through creation of awareness and health education.
- Encouraging cost effective and appropriate technologies for ecologically safe and sustainable sanitation practices.
- Developing, as and when required, community managed sanitation systems that focus on scientific solid & liquid waste management systems for overall cleanliness in rural areas.
- Creation of a significant positive impact on gender inequities and promotion of social inclusion by improving sanitation infrastructure, especially among marginalized communities.

Formative Research

A survey was carried out by India WASH Forum during July to December 2015 in rural areas of Jharkhand, Telangana and Gujarat to understand the following^{xv}:

- What are the barriers to adopting toilet usage? Do they stem from ignorance or from self-perception barriers from caste, class and gender?
- What is the typology of the population that adopts toilet usage and why do they do so?
- What is the threshold level at which more people change behavior and adopt toilet usage?
- What is the role of Behavioral Change Communication (BCC) messages? How are the BCC messages perceived by people and why do they not work? What is an appropriate message and how should it be reinforced?

A few recommendations from the study were:

- Identifying appropriate BCC messages from the perspective of individuals and communities
- Affordability in terms of subsidies needed to be considered. There was a need to address concerns that constructing a toilet requires a lot of money
- BCC messages should use appropriate, locally understood language
- Peoples' perceptions of causes of diseases should be addressed

Funding

The government decided to provide an incentive of INR 12,000, approximately US\$ 167 at current exchange rates³, for a toilet constructed by a rural household belonging to Below Poverty Line (BPL) and identified Above Poverty Line (APL) population after construction and use of toilets. A Revolving Fund was proposed to be created at the district level from SBM-G funds. Provision existed for the Revolving Fund to be provided to Societies, Self Help Groups or other such groups with proven credit-worthiness for construction of toilets. This Revolving Fund was also available to APL households not covered by incentives.^{xvi} Each year union budgets allocated funds for the SBM (see Exhibit 1 for estimated and actual budgets for the SBM-Rural over the years). In addition, the World Bank provided a loan of US\$1.5 billion to support the rural component of SBM (SBM-Gramin) in 2016 having a maturity period of 18 years. A parallel technical assistance of US\$25 million was also provided to implement community-led behavioral change programs aimed at fostering changes in social norms^{xvii}.

In addition to governmental and international funding, the union government developed models for potential Corporate Social Responsibility (CSR) funding from corporates.⁴ Towards this end, the government set up a Swachh Bharat Kosh (SBK) to enable CSR funds to flow in.^{xviii} The SBK received a sum of more than INR 6,730 million in three years starting 2015-16.^{xix}

It was envisaged that Information, Education and Communication (IEC) would consume a relatively substantive chunk of the budgeted expenses. Please refer to Exhibit 2 for an envisaged break-up of costs for SBM-G during the initialization of the program.

Logo and Pledge

A contest was organized for designing the logo and tagline for the Swachh Bharat Mission. The winning entry depicted spectacles of Mahatma Gandhi with "Swachh Bharat" written on the two glasses. The bridge of the spectacles sported the national tricolor which symbolized the entire nation unitedly working towards Gandhi's vision of a clean India. The tagline was 'Ek Kadam Swachhata Ki Aur' (A Step towards Cleanliness) exhorted Indian citizens to work towards this goal.^{xx} The logo is depicted as Exhibit 3. On the occasion of launching of the mission the Prime Minister led a cleanliness pledge which was joined by about three million government employees throughout the country^{xxi}. The pledge is shown in Exhibit 4.

³ As on September 10, 2019

⁴ Section 135 of the Companies Act, 2013, stipulates that firms with a net worth of at least INR 5000 million or turnover of at least INR 10,000 or a net profit of at least INR 50 million, should spend at least 2% of their average net profits for the previous three years towards corporate social responsibility (CSR)

Product

A sustainable sanitation system should be environment-friendly and safe for humans as well as affordable. Such a system consists of a toilet and an associated system for collection, transport and possible use of the excretory material, in addition to offering ease of use, maintenance and repair. There were four broad types of sanitation techniques in use for the Bottom-of-the-Pyramid (BoP) segment in India: single-pit latrine, double-pit latrine, urine diversion toilet (Ecosan) and toilet with one attached septic tank known as the septic tank model.

Bindeshwar Pathak, founder of the non-profit Sulabh intended to improve the lives of millions of manual scavengers in India employed in emptying of traditional toilets daily. Towards this, he devised an alternative model of toilet. The toilet for an individual household looked like an Indian squatting-style toilet with a single hole for flushing. However, the flushed waste did not go directly into the ground or a septic tank. Instead it fell into one two deep pits that are dug outside the toilet. As and when the first pit filled up, the household switched to the second pit. The waste in the first pit gradually transformed into a rich fertilizer and was removed as a dry, powdery fertilizer. As the second pit was nearly full, the first pit was emptied and its contents were used as compost. The two pits were thus used alternately. This ‘Sulabh’ toilet model was, however, unsuitable in areas where the water table was high, such as areas that receive high yearly rainfall or coastal areas. The Sulabh toilet had received the title ‘Global Best Practice by United Nations HABITAT and Centre for Human Settlements’.^{xxii}

A participatory approach towards setting up of toilets both at the level of beneficiaries or communities was suggested by the government to induce ownership and sustained use of the toilets under the SBM-G. A list of technology options along with costs was provided to prospective users to satisfy user preferences and region-specific and needs, such as those dictated by topography and soil conditions. However, the double pit (twin pit) was considered to be the most preferred option.

Place (Distribution Chain)

In states where penetration of sanitary materials in rural markets was not adequate, Rural Sanitation Marts (RSM) and Production Centers (PCs) were used effectively. The RSM was a retail outlet selling the materials, hardware, and designs needed to construct sanitary latrines, soakage and compost pits, washing platforms, certified plumbers and masons and associated sanitation accessories. RSMs were envisaged as a “commercial venture with a social objective”^{xxiii}. PCs were production facilities for affordable sanitary materials that catered to local (or rural) demand and consumption.

The concept of RSMs was envisaged for the first time in the CRSP Revised Guidelines (1993), presumably based on the successful implementation of the concept in some Indian states by UNICEF.^{xxiv} Besides physical infrastructure, RSMs were mandated to stimulate behavioral change in the population thus leading to adoption hygienic practices through use of IEC materials including brochures, pamphlets and stickers.

In a study conducted in the state of West Bengal of the success factors of the RSMs that followed a working model developed by a respected charitable organization and UNICEF, it was found that innovative practices made these RSMs viable in the long term. Under this arrangement, a few

villagers called '*anuprarks*' (motivators) constituted a Village Youth Club (VYC). They acted as grassroots motivators for promoting toilet construction by spreading the message by door-to-door visits in the village. Representatives from each VYC constituted a cluster which was a registered society or a non-profit organization. These non-profits were run under the aegis of the charitable organization as an RSM or PC for a few blocks or administrative units.^{xxv} This study underscored the importance of the IEC through word-of-mouth motivation for demand generation from within the target rural population. Striking the right balance between social objectives and revenue generation led to the sustainability of the RSMs under the survey.

Pricing

A sum of up to INR 12,000, about US\$170, was given as subsidy to each interested rural household belonging to Below Poverty Line (BPL) and identified Above Poverty Line (APL) population after construction and use of toilets. The Union government had allocated US\$ 20 billion to SBM-G.^{xxvi} Besides governmental financing, Self-Help Groups (SHGs)⁵, Micro-finance institutions (MFIs)⁶ and commercial banks were sources of credit for sanitation-related infrastructure to households.

Although costs for construction of toilets in rural areas could vary, options in consonance with governmental subsidies were available. Construction of individual household latrines in the vicinity of INR 12,000 was possible. For instance, one option from the Centre for Toilet Technology and Training attached to the National Institute of Water and Sanitation (NIWAS), an approved resource centre of the Ministry of Drinking Water and Sanitation (MDWS)⁷, Union Government of India, quoted INR 13,000 as the cost of construction of an individual household toilet.^{xxvii} For an estimate of breakup of costs see Exhibit 5.

Promotion

In India, especially in rural areas, defecating in the open was practiced and accepted, much like a social norm.^{xxviii} Thus constructing toilets was only one part of the solution; the fraction of unused toilets was an important parameter worth considering. It was reported that about 67% of toilets constructed in Jharkhand were unused, while the corresponding figure in Chhattisgarh was 59%, 30% in Tamil Nadu, 26% in Madhya Pradesh, and 24% in Rajasthan.^{xxix} In many regions in India, it was considered impure or unclean to have a toilet at or near the home.^{xxx} Many people in the know felt that while funds from the government, private firms and non-profits were substantive, cultural factors and lack of a holistic approach by stakeholders were factors behind non-usage of toilets by the target population despite owning them.^{xxxi} As a group of researchers observed:

"...widespread open defecation in rural India is not attributable to relative material or educational deprivation, but rather to beliefs, values, and norms about purity, pollution, caste, and untouchability that cause people to reject affordable latrines.... Open defecation, in contrast, is seen as promoting purity and strength..."^{xxxii}

⁵ These are groups of around 5-20 people, mainly women that pool their resources to fund loans for group members.

⁶ Financial services institutions aimed at individuals and small businesses owned generally by poor and marginalized sections of society lacking access to conventional financial credit facilities.

⁷ The Ministry of Drinking Water and Sanitation functioned as a ministry of the Union Government of India. Since May 2019, this ministry has been merged with the Ministry of Jal Shakti.

In view of the above as also because of experiences from other developing nations in the issue of ODF, it was felt imperative that Behavior Change Communication (BCC) should be used to bolster the SBM-G campaign. Behavior Change Communication can be defined as “an interactive process with communities (as integrated with an overall program) to develop tailored messages and approaches using a variety of communication channels to develop positive behaviors; promote and sustain individual, community and societal behavior change; and maintain appropriate behaviors.”^{xxxiii} Broadly BCC-centric strategies were based on Information, Education and Communication (IEC) materials that comprised both mass-media promotional messages and word-of-mouth or Interpersonal Communication (IPC).

The Indian government designed a multi-pronged promotional strategy to fight defecation in the open:^{xxxiv}

- Engaging frontline workers to raise awareness levels by initiating door-to-door campaigns with rural households
- Launching media campaigns at the national and state levels, that comprised the electronic media (audio, visual, mobile telephony) and local outreach campaigns
- Using celebrity endorsements, especially from movie and sports icons
- Involving local stakeholders such as physicians, teachers, local political and religious leaders, non-profits, frontline health workers, SHGs and community members in general
- Empowering community children to spread the message of sanitation by holding awareness events in schools, including rallies, seminars, walking for the cause of sanitation.

To harness the power of IPC, the government employed “swachhagrahis” to foster behavior change in the target population. Swachhagrahis were described as “the foot soldiers of the Swachh Bharat Mission (Grameen) and the motivators for bringing about behavior change with respect to key sanitation practices in rural India....A swachhagrahi is a volunteer who can come from any background, including a local ASHA⁸ worker, ANM⁹, Anganwadi worker, and staff, water line man, pump operator, member of CO/CSOs, youth organizations or from the general public living in villages.”^{xxxv} Besides providing motivation for behavior change, swachhagrahis were involved in geo-tagging¹⁰ toilets, verifying behavior of members of households, retro-fitting old toilets and other related activities.^{xxxvi}

Guidelines for SBM-G stipulated that 8% (see Exhibit 2) of the national allocation of funds should be spent on IEC related activities, out of which 5% needed to be utilized by the states, with matching allocations by state governments. However, many states showed inadequate (lower) utilization of IEC funds during 2016-17.^{xxxvii} In response, the MDWS issued guidelines to states and districts to conduct IEC activities in an adequate manner. A list of activities was suggested by the MDWS, including ‘triggering’ followed by ‘*nigrani*’. A ‘triggering’ exercise generally includes a Participatory Rural Appraisal followed by a guided conversation with community members. ‘*Nigrani*’ includes a

⁸ Accredited social health activist, a community health worker, a part of the National Rural Health Mission

⁹ Auxiliary Nurse Midwife, considered to be the first point of contact between the community and government health services.

¹⁰ Geotagging is a process of including geographical identification metadata including coordinates (latitude and longitude), altitude, bearing, place names and distance to electronic media such as a photograph or video, websites, SMS messages or RSS feeds.

visit to common open defecation places in the village in the early morning that reinforces the message from the triggering session. The guidelines advised against usage of divisive and ‘shaming’ strategies and coercive techniques.^{xxxviii} A district was required to have at least one swachhagrahi on an average per village. An IEC toolkit was to be supplied to motivators containing promotional materials such as flip charts, pamphlets and audio-visual material. Other promotional events/entities suggested were song and drama acts by local artistes, wall writing or painting, celebrations through *melas* or group meetings, hoardings and banners, exhibitions and mass media including TV, radio, community radio, digital media and awareness and training workshops. Exhibit 6 demonstrates a wall painting.

Punjab, a north Indian state, launched an ODF sustainability mobile app under the “My Village My Pride” campaign in July 2018.^{xxxix} The app permits online submission of feedback on sighting of open defecation, asking for a toilet if eligible, and registration of cleanliness-related activities in the village with photographs. All toilets built under the SBM-G could be viewed on Google Maps through their geotags using this app.

Movies are a popular mode of entertainment in India. Movies with themes that resonate with the philosophy of SBM could be considered to be effective means of spreading the message of cleanliness. One such movie was “*Toilet Ek Prem Katha*” (Toilet: A Love Story) directed by Shree Narayan Singh. Toilet Ek Prem Katha, a Hindi-language comedy-drama that had an impressive star cast comprising of leading actors such as Akshay Kumar, Bhumi Pednekar and Anupam Kher was released in August 2017. The movie was a satire in support of governmental initiatives to improve conditions of sanitation in rural India, with stress on eradication of the practice of open defecation. The movie was a commercial success and received critical acclaim to an extent. For example, Meena Iyer, reviewer of the Times of India newspaper wrote^{xl}:

“But, director Shree Narayan Singh holds up a mirror to society, showing us how our superstitious villagers, lazy administration and corrupt politicians have actually converted India into the world’s largest shit-pond. Women especially, are treated more insensitively than cattle!”

Since its inception the SBM used celebrity endorsements. On the day of the initiation of the programme the Prime Minister nominated the following as brand ambassadors: Kapil Sharma (comedian), Sourav Ganguly (cricketer), Kiran Bedi (former IPS officer), Padmanabha Acharya (former Nagaland Governor), Sonal Mansingh (classical dancer), Ramoji Rao (of the Eenadu group), Aroon Purie (of the India Today group). These people were achievers in a variety of domains. Similarly, regional ambassadors were inducted. At later dates other celebrities were invited to serve as brand ambassadors: Sanjay Dutt (actor), Juhi Chawla (actress), Shilpa Shetty (actress), Raveena Tandon (actress), Shahrukh Khan (actor), Shekhar Gurera, (cartoonist) and Dr D.P. Sharma (educationist).

The movie icon Amitabh Bachchan had been associated with the SBM from its inception in 2014. In 2015 he hosted a program titled *Swachhta Ki Pathshala* (School for Cleanliness) that aimed to educate school children about basic hygiene and sanitation.^{xli} Mr. Bachchan also acted in some advertisements for SBM-G that spread the message of eradication of diseases through elimination of open defecation. A series of advertisements featuring mainly Mr. Bachchan and Ms. Anushka

Sharma, popular movie actors in the Indian film industry, was launched in 2017. These advertisements urged people to defecate behind closed doors and used a humor-laden perspective.^{xlii} Another series of advertisements stressed on using the names of Mr. Bachchan's blockbusters in the past such as "Coolie" at encouraging people to give up the habit of defecating in the open.^{xliii}

Impediments to Diffusion and Usage

It is natural that a program of this magnitude would face impediments and challenges.^{xliv} Cultural factors inhibited people from defecating in a toilet located at or near home thinking that such an act was impure. Historically, the entrenched caste system had dictated that only people from certain castes emptied and cleaned toilet pits. In their absence, many villagers abandoned the use of toilets. Maintenance of the toilets was another impediment. In certain cases improper diversion of funds meant for toilet construction was reported.

Diffusion

Since the inception of the program in October 2014, diffusion of household toilets under SBM-G had seen a steady progress. Exhibit 7 displays the month-wise cumulative and non-cumulative diffusion figures across the country. Exhibit 8 displays the cumulative diffusion plotted against time. The number of household toilets constructed under the SBM-G stood at 99,277,734^{xlv} that represented more than 99% of the target. The number of declared ODF villages stood at 599,963 and the number of verified ODF villages at 532,952.^{xlvi} All except one of the 35 states and union territories of the country had attained Individual Household (Toilet) Coverage of 100%.^{xlvii}

Performance Monitoring

An independent survey to monitor the performance of the SBM was conducted by the Quality Council of India (QCI) of 140,000 rural households during May-June, 2017. The survey covered 4,626 villages across all Indian states and union territories. The survey indicated that 62.45% of households had access to a toilet, while 91.29% of the people having access to a toilet actually used it. Three north-eastern states, Sikkim, Manipur and Nagaland performed at the top with 95% of rural households having access to a toilet, whereas for Himachal Pradesh and Uttarakhand the corresponding figures were more than 90%.^{xlviii}

Use of Technology: Geotagging

Geotagging of toilets is the process of mapping the toilet with a unique identification number that includes data such as the gram panchayat name, toilet number, type of toilet, timing and photos. Generally smartphones with a camera and GPS were used for geotagging. This was considered for monitoring of toilets built as a photograph was associated with a particular location. It was felt that it would enable officials to verify the existence and eliminate duplication of toilets in the database. Both government officials and swachhagrahis were involved in the geotagging process. The district administration of Kannauj in Uttar Pradesh state geotagged by late April 2018 16,000 of the 22,000 toilets constructed in the district since March, 2018.^{xlix}

Shri Sanjaybhai's Decision

Around September 2018, Shri Sanjaybhai took a decision to construct a toilet out of the funds

available as subsidies from the SBM-G. He decided to construct the toilet slightly outside the residence as he believed that constructing the toilet within the residence would make female members of the household a little reluctant to use it when males from outside the household were present in the residence. He chose the twin pit toilet. Accordingly, he started digging pits about 17 feet deep. An inspection of the pits was conducted by the panchayat around November 2018. Around this time the subsidy was sanctioned. Further construction started around December 2018 and was over by February 2019. An inspection from the panchayat was done and Shri Sanjaybhai's bank account was credited with the subsidy. The total cost of construction of the toilet was around INR 16,000. In the excessive monsoon that ravaged Gujarat in 2019, Shri Sanjaybhai's toilet had been affected to a minor measure but he is determined to repair it and continue using it.

Looking Ahead

"A clean India would be the best tribute India could pay to Mahatma Gandhi on his 150 birth anniversary in 2019," Shri Narendra Modi, the Prime Minister of India had said as he initiated the Swachh Bharat Mission on October 2, 2014, in New Delhi. As the stipulated time of five years to complete the mission drew near in September 2019, Indians from all walks of life could justifiably experience a sense of achievement. The broad goals of the mission were almost met and the mission was steadily moving towards a successful completion. The impact of the mission was being strongly felt. For instance, the monthly incidences of Acute Diarrheal Disease (ADD) showed a minimum peak in the year 2018 that was attributed to the Swachh Bharat Mission and a decreasing trend in outbreaks in the year 2017 as well.¹ The Swachh Bharat Mission had lived up to what it promised.

Suggested Discussion Points

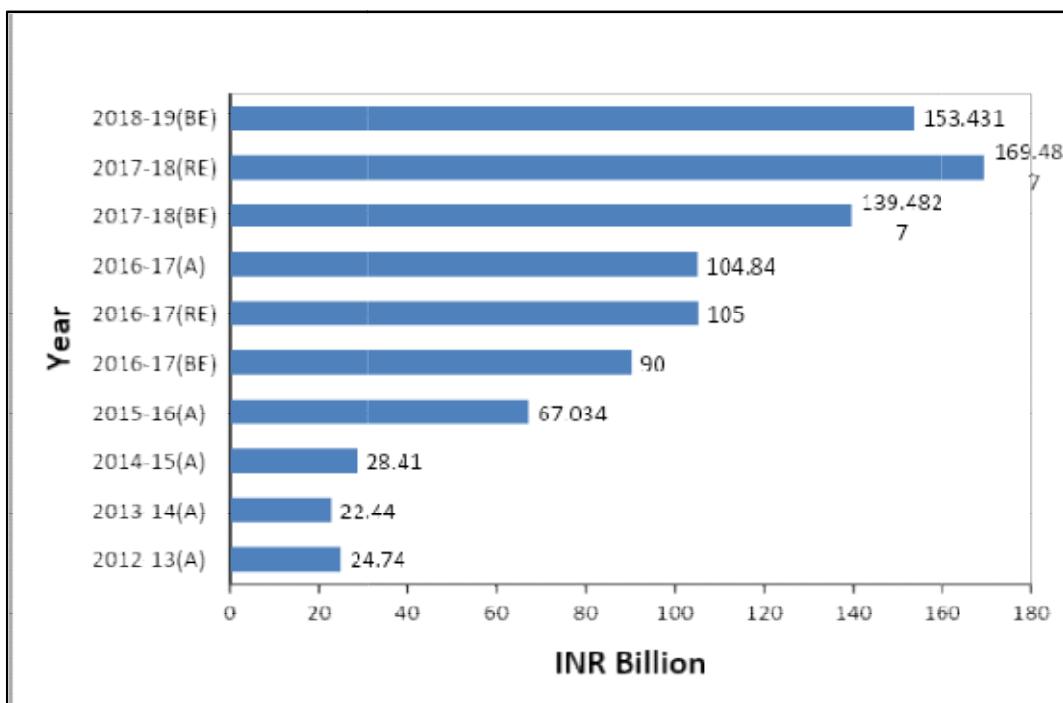
The following assumes that participants would come prepared with readings suggested prior to reading the case and the case itself.

- How was social marketing used in the Swachh Bharat Mission? As a member of the target population how could have Shri Sanjaybhai's decision to construct a toilet been influenced by the social marketing campaign?
- In the light of the Diffusion of Innovation theory, please comment on the attributes of a typical individual household toilet that could have led to its possible adoption by people in villages [optional depending on the facilitator].
- In the light of the Diffusion of Innovation theory, please comment on the nature of the cumulative diffusion curve of Individual Household Toilets as shown in Exhibit 8.
- Please estimate the parameters of the Bass model from the entire diffusion dataset as shown in Exhibit 7 using Ordinary Least Squares (OLS) as your method of estimation. Comment on your results [optional depending on the facilitator].
- Please visit the Swachh Bharat Mission dashboard at <https://sbm.gov.in/sbmdashboard/>. Please attempt to explore the dashboard and engage in a discussion on your learnings.

Annexures

Exhibit 1: Union Budgetary Provisions for Swachh Bharat Mission (Rural) / Nirmal Bharat Abhiyan

(Adapted from <https://union2018.openbudgetsindia.org/en/sectors/drinking-water-and-sanitation/swachh-bharat-mission-r-nirmal-bharat-abhiyan/>)



A: actual; BE: budgeted estimates; RE: revised estimates

Exhibit 2: Envisaged Total Program Costs for Swachh Bharat Mission (Rural)

Source: Adapted from Mehta, M. (2018). Public finance at scale for rural sanitation—a case of Swachh Bharat Mission, India. *Journal of Water, Sanitation and Hygiene for Development*, 8(3), 359-373.

Cost Component	Total Cost in Million US\$ (Percentage of Total Costs)
Incentives for individual household latrine (IHHL) at US\$ 188 per household	12,832 (60%)
Community sanitation complexes	357 (2%)
Solid and Liquid Waste Management (SLWM) for Gram Panchayats	5,708 (27%)
Information, education and communication (IEC)	1.680 (8%)
Administrative expenses	420 (2%)
Total programme costs for the Ministry of Drinking Water and Sanitation (MDWS)	20,998 (100%)

Exhibit 3: Logo of the Swachh Bharat Mission (Source: <https://jhansi.nic.in/scheme/swachhbharat-abhiyan/>)



Exhibit 4: The Swachh Pledge (Source: <https://swachhbharat.mygov.in/basic-page/take-pledge>)

Mahatma Gandhi dreamt of an India which was not only free but also clean and developed.

Mahatma Gandhi secured freedom for Mother India.

Now it is our duty to serve Mother India by keeping the country neat and clean.

I take this pledge that I will remain committed towards cleanliness and devote time for this.

I will devote 100 hours per year, that is, two hours per week, to voluntarily work for cleanliness.

I will neither litter nor let others litter.

I will initiate the quest for cleanliness with myself, my family, my locality, my village and my work place.

I believe that the countries of the world that appear clean are so because their citizens don't indulge in littering nor do they allow it to happen.

With this firm belief, I will propagate the message of Swachh Bharat Mission in villages and towns.

I will encourage 100 other persons to take this pledge which I am taking today.

I will endeavour to make them devote their 100 hours for cleanliness.

I am confident that every step I take towards cleanliness will help in making my country clean.

Exhibit 5: Cost Estimates for Individual Household Construction

Adapted from Gramalaya, Tiruchirappalli. 2015. Individual Household Toilet Type Designs, Engineering Drawings and Cost Estimates (Designed for Swachh Bharat Mission Program of Government of India), p.31. Available at <http://www.gramalaya.org/pdf/gramalaya-toilet-models-and-cost-estimates.pdf>

Model: Individual household toilet with hollow brick superstructure. Size 4 feet * 4 feet.

Item No.	Particulars	Quantity	Unit Cost	Amount in INR
1	Hollow block	120	20	2400
2	Cement bags	3	400	1200
3	Toilet pan with footrest	1	1200	1200
4	4-inch PVC pipe per foot	10 feet	50	500
5	Steel door	1	1000	1000
6	River sand	1 cart	1200	1200
7	RCC roof slabs	Lump sum		1200
8	Charges for masons per day	2 days	600	1200
9	Unskilled labor	2 days	450	900
10	Earthwork for leach pits	Lump sum	800	800
11	Cement covering slabs for leach pits	2	400	800
12	Cement window	1	200	200
13	Transportation charges	Lump sum		400
	Total			13,000

Material and labor costs may vary depending on several factors.

Exhibit 6: A Wall Painting

(Source: Ministry of Drinking Water and Sanitation, Government of India. IEC Guidelines for States and Districts. Available at <https://jalshakti-ddws.gov.in/sites/default/files/SBMG%20IEC%20Guidelines.pdf> accessed on September 20, 2019.)



Exhibit 7: Month-wise Cumulative and Non-Cumulative Diffusion of Household Toilets under the Swachh Bharat Mission (Gramin) Programme

(Source: Department of Drinking Water and Sanitation, Ministry of Jal Shakti, Government of India. Dashboard. Household Toilet Coverage Across India. Available at <https://sbm.gov.in/sbmdashboard/IHHL.aspx> accessed on September 15, 2019).

Month	N (in million)	n (in million)	Month	N (in million)	n (in million)
Oct-14	0.5		Sep-15	9.2	1.2
Nov-14	1	0.5	Oct-15	10.2	1
Dec-14	1.5	0.5	Nov-15	11.4	1.2
Jan-15	2.3	0.8	Dec-15	12.5	1.1
Feb-15	3.1	0.8	Jan-16	13.7	1.2
Mar-15	4.9	1.8	Feb-16	15.1	1.4
Apr-15	5.2	0.3	Mar-16	17.5	2.4
May-15	5.7	0.5	Apr-16	17.7	0.2
Jun-15	6.5	0.8	May-16	18.3	0.6
Jul-15	7.2	0.7	Jun-16	19.8	1.5
Aug-15	8	0.8	Jul-16	21.1	1.3

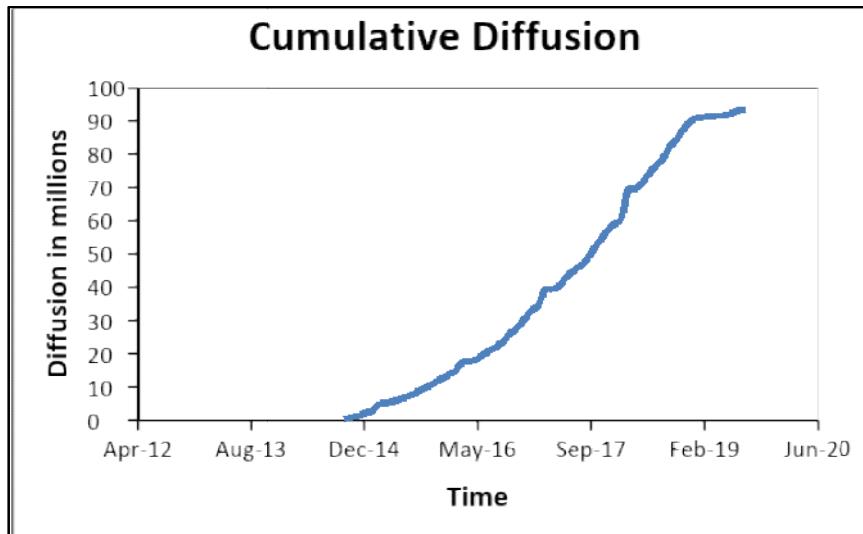
Month	N (in million)	n (in million)
Aug-16	22.2	1.1
Sep-16	24	1.8
Oct-16	26.2	2.2
Nov-16	28.1	1.9
Dec-16	30.5	2.4
Jan-17	33	2.5
Feb-17	34.9	1.9
Mar-17	39.3	4.4
Apr-17	39.6	0.3
May-17	40.3	0.7
Jun-17	42.9	2.6
Jul-17	44.8	1.9
Aug-17	46.4	1.6
Sep-17	48.3	1.9
Oct-17	51.5	3.2
Nov-17	54.3	2.8
Dec-17	57.1	2.8
Jan-18	59.1	2
Feb-18	61	1.9

Month	N (in million)	n (in million)
Mar-18	69.1	8.1
Apr-18	69.6	0.5
May-18	71.2	1.6
Jun-18	74	2.8
Jul-18	76.4	2.4
Aug-18	78.5	2.1
Sep-18	82.2	3.7
Oct-18	84.5	2.3
Nov-18	87.4	2.9
Dec-18	89.8	2.4
Jan-19	90.9	1.1
Feb-19	91.2	0.3
Mar-19	91.5	0.3
Apr-19	91.6	0.1
May-19	91.8	0.2
Jun-19	92.3	0.5
Jul-19	93.2	0.9
Aug-19	93.4	0.2

Notes: N represents cumulative diffusion
n represents non-cumulative diffusion

Exhibit 8: Plot of Cumulative Diffusion of Individual Household Toilets under the Swachh Bharat Mission (Gramin) Programme

(Source:Case Author with data from Department of Drinking Water and Sanitation, Ministry of Jal Shakti, Government of India. Dashboard.Household Toilet Coverage across India. Available at <https://sbm.gov.in/sbmdashboard/IHHL.aspx> accessed on September 15, 2019)



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Part 2

Mini Cases



Mahatma Gandhi National Council of Rural Education

Department of Higher Education

Ministry of Human Resource Development, Government of India

Hyderabad - 500004



Where there is Rural Wellbeing
there is Universal Prosperity

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Irrigation Water Availability at Ayee Village, Ladakh

Avi Jain, Sujaya Kumara, Institute of Rural Management Anand

Challenge

Tesring Angchuk is the newly appointed villagemen of Ayee Village of Nubra Valley, Ladakh. He has been introduced to the decades-old problem of irrigation by farmers of the village. Angchuk is making rounds to the office of District Collector in an attempt to present a government-sponsored watershed development project for irrigation. At the waiting room of the office, he meets Sonam Thardot, Sarpanch of Arano Village who tells him about the Ice Stupa model of Sonam Wangchuk. Angchuk is impressed with the idea; however, he ponders over the feasibility of the plan. He is in a dilemma to apply for a government-sponsored watershed development or go with Ice Stupa model to solve the water crisis of his village.

Setting up the Context

The water crisis in Ladakh is an age-old problem faced by every citizen living in the cold desert. The problem is tackled through Zing, traditional water conservation practices which makes the communities suffer from agriculture most of the time. Majority of the farmers practice organic farming where they refrain from using pesticides and fertilizers in any form. Most of the villages in Ladakh, especially in Nubra Valley, practice subsistence agriculture which also serves as the only option for Livelihood to most of the families. However, with the advent of Ladakh's introduction to the tourism space, the Ladakhi communities have passively subscribed to globalization and have entered the market in several regards. The increase in consumption and demand for organic produce has made the farmers in Ladakhi villages to increase their production, requiring more water for irrigation. The farmers of Ayee village face the same challenge. Tsering Angchuk, the villagemen who himself is a farmer, is concerned with the availability of water for increased production. The village primarily utilizes water from Chamsen, a natural stream which flows from the mountains situated behind the village. The village, however, has no mechanism to store the water. The water flows from the stream through a canal that has been built on one side of the street and ends in the farms. The current mechanism allows each farmer to irrigate land on the alternative day which helps them manage the scarcity which affects their overall production. The production as quoted by farmers can increase by nearly 30% (refer to exhibit 1) if they get to irrigate their land in a proper routine.

Moreover, the villagers engage in various other livelihood options like Tourism, MGNREGA and working as porters at the Indian Army (refer to exhibit 6). Hence, they feel deluded to work on improving agriculture and sustaining their livelihoods through other means. The myopic understanding of agriculture and interlinking it with water availability are the only source of sustenance and it has demotivated them in the past decade.

Background

About Ayee Village

Ayee village is one of the Buddhist villages of Nubra Valley. It is situated 70 km from Diskit, the headquarter and 5 Kms from Kobe, the village panchayat. Woven with a population of 181 The Villagers, the village holds 37 households with a demographic age of 37.22 years. The formation of the village holds primitive foundations with a blurred history. The village marked its existence with four families who came to a small land in search of food and shelter. The rural dynamics revolve around subsistence agriculture as a primary occupation. The village has witnessed zero net migration in the past ten decades

with seasonal economic migration as a trend. The villagers engage in agricultural from April to July. They engage in MGNREGA labour work from January to March. The land sees rest in winters from August to February. Dwindling literacy and high school dropout rate also predicts the economic instability of the village. The village entails a sharing economy with non-economic give and take phenomenon. Untapped as a tourist destination, Ayee withholds an ancient meditation cave and famous Juniper tree and related stories.

Moreover, the use of traditional agricultural practices and organic farming makes Ayee stand as the fully organic village of Nubra Valley. As a village in a remote area of Nubra Valley, it has suffered from opportunity crisis concerning government schemes, basic amenities, and proper institutional infrastructure. Exhibit 2 represents the demographic characteristics of the village.

Village Institutions and Facilities

Ling Road is the only street in the village. All the houses are situated in this street. This 3 has 37000 work equipped private dry toilets but no domestic water supply. Nine public taps provide water from a canal flowing from the Glacier, which includes drinking and local water supply to all the houses. Moreover all the houses have television set. While the LPG connections are available to the villagers, all the households have traditional Bukhari (wood powered furnace) on which they cook their daily meals. The reason for the low consumption of LPG is not the awareness but the heat generated from this furnace that keeps the room warm during winters. Moreover, the street displays two non-functional public toilets which are on the outskirts of the village. The village receives electricity for 5 hours from 600 PM to 1100 PM. The availability of electricity has taken a toll on the productivity of the village since the electricity in the households is available only during non-work hours. The time is utilized in charging mobile phones and watching local Ladakhi news which turns out as the mode of entertainment for the villagers. There were two street lights witnessed on the outskirts of the village near the community hall, which also functions for five hours. Overall, the village street has limited resource availability which is publicly shared by all the households of the village.

The unavailability of other basic amenities like school, Panchayat Ghar and temple makes it difficult for the villagers to mobilize activities during the winters when the valley observes heavy snowfall, and it becomes difficult to move out of the village. The reason being the functioning of important institutions creates a lot of idle non-productive time for villagers. The apartments are made of bricks while the rooftop of every house is covered with leaves which is useful in insulating the room during winters and even during summers. The street also witnesses a school at the endpoint of the village however the school was closed down due to inadequate educational facilities provided by the government.

Agriculture in Ayee Village

Agriculture and livestock are an essential part of the lives of Ayee villagers. People here do not particularly view agriculture as an economic activity; instead, they see it as a part of their lives. Subsistence farming is quite predominant at Ayee. People here own tiny pieces of land. The average landholdings are just a fraction of an acre. Ayee has a net cultivated area of 0.2064 acres. With crops including Carrot, Cabbage, cauliflower, potato, onion, turnip, garlic, tomato, peas, capsicum. Coriander and Radish. When it comes to agricultural equipment, the villagers are mostly conservative. Even today, most of them plough their lands with bulls (yak). The entire village has only two tractors. The tractor is the only mechanized agriculture equipment they use. Chemical fertilizers are non-existent in the village and the Nubra as a whole region. Moreover, the land is equally divided among all the households and no land fragmentation exist in the village. The cropping season is Zaid period from April to June since it

becomes difficult for the villagers to practice agriculture during winters in snowfall. Most of the produce is retained for household consumption, and the surplus is sold in the Leh market during October month of every year.

Climate Change and Ayee Village

Climate change as an issue has been addressed by the villages in terms of rainfall, snowfall, and the water table. Nearly every household surveyed presented their concern to climate change by talking about the decrease in the level of snowfall over the past few years. Moreover, the villagers experience unseasonal rainfall during the agricultural season. It makes the rainfed irrigation ineffective and unreliable alternative to solve irrigation water scarcity. The villagers also discussed increasing the water table, which further affected the agriculture practices of all the households. The reason quoted and too significant as the geographical location of the village is in one of the coldest places of Ladakh resulting in raw oriented perspective to climate change.

Moreover, this is hardly done anything to cope with climate change. As far as green governance is concerned, every household is ready to invest the proposed amount mainly in dealing with the issues of electricity, water and a decent proportion to the waste management system. They are prepared to spend a hundred hours of labour work in building solar farms, water bodies and the incinerators for proper waste disposal. Moreover, it was observed that the female members of the family interested in building water bodies wild the male counterpart interested in installing solar farms to deal with the issue of electricity.

A decent proportion of the population of the village believed in building watershed on the Siachen river to solve the water issues rather than to build water bodies. Every household was excited to venture into the current cult phenomenon of making Ice Stupas and Artificial Glaciers solve the problems related to water. Overall, the villagers proactively participated in promoting initiatives that could help them solve problems directly related to the significant development issues concerning the village.

Water Crisis in Ladakh's Villages

Ladakh, an earthly paradise isolated from the world, is permanently happy. But the problem has started brewing in this paradise. Dry taps and tube wells and a possibility of a prolonged water crisis are casts huge shadows on its present and future. Leh, its largest city, rations water—two hours in the morning and in the evening—from months in summer. Other parts of Ladakh region including villages of Nubra Valley are no better. Ayee village observes the same crisis every year. The village has an abundant water supply till the winter ends, i.e. April. The agriculture season starts in the month of May and ends in June. The crops grown during the season remains the same; however, the production rarely changes every year. The output for the year, the price in the market and the transportation cost for the year 2018 is given in exhibit 3. Water has diminished in these streams, and runs empty on frequent basis throughout the year. The numbers are disturbing. There was half to 80% shortfall in yearly precipitation in Ladakh somewhere in the range of 2013 and 2017, and 2016 witnessed the lowest rainfall of all time.

Ladakh is an arid desert, and its parched atmosphere makes conditions brutal for farming. Practically 90% of farmers in Ladakh are subject to snowmelt water for the water system. Researchers state the water issue around there is basically because of environmental change. There has just been a 3 degree Celsius ascend in the average temperature of Ladakh in the previous four decades. This has caused less snowfall and quicker snowmelt in the higher districts. In the western Himalayas, the ice sheet spread has diminished by practically 20%, and a portion of the icy masses are confronting an existential danger. Specialists state an extensive temperature alteration has influenced the precipitation design antagonistically in these higher locales. In the last couple of years, generation of absolute yield declined

by 30% to half. Harvests, for example, potato, grain, turnip, radish, and peas have endured due to non-accessibility of water.

Ice Stupa in Ladakh

Ice stupas are artificial glaciers considered as an answer to the water crisis in Ladakh. Ice stupas share a similar physical outlook as that of a Buddhist Stupas. The person behind the concept of ice stupa is Sonam Wangchuk, associate degree engineer from Ladakh. The idea has smitten him once he saw ice hanging to a lower place a bridge in summer. The Ice Stupa retain its shape till the end of the winter season. The melting speed of artificial glaciers will increase rapidly when it is exposed to daylight and wind. Hence, it has to be utilized quickly and efficiently. Sonam Wangchuk started engaging on ice stupas by capturing and freezing water. The water occupied sometimes keeps flowing away into the rivers throughout the winter. The essential plan behind ice stupas is to obtain water, sprinkle it, and freeze it for an extended time. Construction of ice stupas typically starts in winters. This system wants no pump or power. The water piped from upstream will rise to the peak of the supply. The water speeding out of the pipe starts to freeze in cold winter nights (at -30 to -50°C). The water first freezes at the bottom level then mount higher increasing the peak of ice stupa. Because the height of the stupa will increase, it naturally takes the form of a cone. To support the structure, ropes and willow branches are used. Because of the cone structure, the stupa will escape melting. As these ice cones extend vertically upwards towards the sun, they receive less quantity of direct daylight. It helps the ice stupa to flee melting and last longer until summer. With easy and economical construction (refer to exhibit 4 for cost estimation), ice stupas will positively solve farmers and villagers' drawback. It may also facilitate in establishing an inexperienced tract on the brown desert.

Storyline

Tesring Angchuk is concerned about the issue on multiple fronts. Firstly, agriculture provides for 95% of the total food requirements of all the families of the village throughout the year. Aversion from agriculture will lead to food crisis during harsh times in winters as the distribution and storage of food will be severely affected. In order to ensure a continuous supply of vegetables and grains, agriculture is necessary for subsistence. Secondly, lucrative propositions like tourism, MGNREGA and porter work has limited availability and cannot promise stable employment to all the working members of the village. A slight instability in the market or economy will leave them unemployed, leading to poverty and deprivation. Thirdly, in order to combat with the water scarcity, the farmers will resort to inorganic practices which will help them yield crops at a faster rate, losing the essence of organic practices and ending up harming their own family. Angchuk though faced with complex sets of problems, is determined to propose a solution that can solve the water crisis of the village.

Meeting with District Collector

Angchuk has reached the district collector multiple numbers of times but still faces to get funding or a better proposition for solving the issues associated with irrigation. He has presented three proposals of building a watershed model for preserving the natural stream water of Chamshen, building a watershed to divert and utilize the water of Siachen river and bringing water supply through pipes sponsored by the government. The collector has shown no expression on building a watershed for Chamshen, however, has ignored the proposition of Siachin river and water supply through pipes. She has quoted political conflicts with respect to Siachin river as the reason for impotency to establish a watershed project. While she has denied the proposal for water supply as Ayee village is situated in the remotest part of Nubra Valley which makes it expensive and infeasible to establish a water channel to fulfil their irrigation requirements.

Meeting with an Ice Stupa Engineer

Angchuk, after receiving a non-cooperative expression from the government, decided to visit a young Ice Stupa Engineer working at SECMOL to understand the feasibility of building Ice Stupas. He discovered that the stupas require a lot of skilled and trained personnel than unskilled labour, unlike a watershed development project. Moreover, the villagers will have to continuously monitor the progress of an Ice Stupa and will have to ensure that the structure is kept away from any leakage and improper construction. However, the overall cost requirement of building an Ice Stupa is grounded as compared to a watershed. Another exciting aspect of Ice Stupa is the time of maintenance. Though it requires consistent monitoring, the relative months of support are less than the watershed management. The Ice Stupa needs proper planning with respect to its place of construction and further channels for distributing the water in the required field. After gathering information and knowledge of alternative available, Angchuk returns to the village with the hope of seeking a solution to the water scarcity along with the fellow members of the village.

Response

After returning to the village, Angchuk calls for a village meeting where he presents all the available solution to the villagers and Sarpanch. They listen to him carefully and gets confused with what alternative to choose. Moreover, the meeting evolves with the formation of three groups who propagates different ideas for solving the irrigation problem. One group proposes to follow the watershed development for conserving the Chamsen water as the stream is going to provide the pool irrespective of any climate change. The other group offers the construction of Ice Stupa as it requires less maintenance and hence could save a lot of time of the villagers where they can engage in other activities during winters. The third group proposes to approach a higher authority in the government and initiate the construction of watershed on Siachin river as the lands are situated near the river. The fourth group emerges with a different idea but with an old debate of shifting from agriculture and focus on Tourism. Angchuk soon discovers different thoughts between groups and suggests everyone look every alternative from a practical angle to seek the best solution for the water crisis.

However, Angchuk seeks no typical response and participation from all the members of the village. The Sarpanch gives him a week time to find a solution for the issues existing in the village. Angchuk needs help in discovering the answers to the following problems at hand

- What is the best proposition to solve the irrigation problem?
- What can be done to imbibe a sense of collective action among the villagers of Ayee village?
- How to strike a balance between the aspirations of villagers to pursue non-farm activities and agriculture at the same time?

Questions for Discussion

1. Watershed project or Ice Stupa, which is a feasible proposition for Ayee Village?
2. Should transgressing from agriculture and focusing on alternative livelihoods a better option for the villagers?
3. How should Tsering Angchuk engage with the farmers in promoting better water management practices to control water scarcity in future?
4. What should be the alternative way of preserving the Chamsen water if not building a Watershed or Ice Stupa?
5. How should government as an essential stakeholder plan rural development to solve the water crisis of Ayee Village and that of Ladakh?

Annexures

Exhibit 1

Vegetable Production		Proper Irrigation (30% Increase)
Carrot	70	91
Cabbage	69	89.7
Cauliflower	71	92.3
Potato	93	120.9
Onion	91	118.3
Turnip	105	136.5
Tomato	104	135.2
Peas	81	105.3
Raddish	95	123.5

Exhibit 2

Age Group		Occupational Distribution		Skilled/Unskilled	
0 to 5	10	Farming and Livestock Rearing	79	Working Population (18-60)	50
6 to 12	18	Livestock Rearing	1	Skilled Labour	10
13 to 17	11	Govt. Service	24	Unskilled Labour	30
18 to 30	55	Business	1	Engaged in Agriculture	50
31 to 45	31	Private Service	9	Skilled Labour (Seasonal Migration)	5
45 to 60	40	Student	45	Unskilled Labour	25
60+	14	Unemployed	8	(Female)	

Exhibit 3

Vegetable Prices		Transportation Cost
Carrot	35	
Cabbage	40	
Cauliflower	40	
Potato	15	
Onion	18	
Turnip	45	
Tomato	42	
Peas	60	
Raddish	25	The cost of transporting the vegetables from Ayee to the nearest market is Rs. 40 per Kg of the bag. All the vegetables are collected together, weighed and then sent to the market once in any year through a minibus.

Exhibit 4

Ice Stupa	Particulars	Cost
Materials	PVC Pipes	20000
	Lights	2000
	Tools	1000
	Transportation	10000
	Motor	2000
Labour	Particulars	Time/Numbers
	Labour Hours	1100 Hours
	No. of Unskilled Labours	20
	No. of Skilled Labour	30
	Time Required to train a Labour	20 Hours
	Overall Maintenance Time	6 months

Exhibit 5

Watershed	Particulars	Cost
Materials	Cement	20000
	Iron	15000
	PVC Pipes	7000
	Tools	4000
	Transportation	28000
	Machinery	9000
Labour	Particulars	Time/Numbers
	Labour Hours	1100 Hours
	No. of Unskilled Labours	40
	No. of Skilled Labour	10
	Overall Maintenance Time	3 months

Exhibit 6

Sector	Annual Income Earned (Average Per Household)
Pension and Salary (Indian Army)	180000
Tourism (Taxi, Shops and Home Stay)	20000
Agriculture	5000
Livestock	2000
Private Service	12000
Porter (Indian Army)	10000
Government Service (Other than Indian Army)	50000

Note The income mentioned above is an average of income calculated from the data collected from the census conducted for Ayee village in 2018.

About the Authors

Avi Jain and Sujaya Kumara are pursuing Post Graduate Diploma in Rural Management at Institute of Rural Management Anand. They came across the problem during their fieldwork at Ayee village in Ladakh. The case is prepared for class discussion and does not intend to provide the real situation faced by the villagers of Ayee village. Moreover, the data represented in the case is collected from the primary sources in October 2018. Furthermore, the authors would like to thank the Ladakh Ecological Development Group and Tsering Angchuk for hosting them during the fieldwork.

Bakhri - The Village with a Puzzle!

Sibaditta Baidya Institute of Rural Management Anand

Challenge

Sibaditta was having his afternoon Chai with his friends, Satyam and Snigdh after an intense discussion over the possible key problems of the village. All of them were pursuing PGDRM from a premier rural management institute of the country. Sibaditta hailed from Siliguri, West Bengal; Snigdh was from Dumka, Jharkhand and Satyam from Patna, Bihar. For the past 50 days, they were staying at the village Bakhri, for their Village Fieldwork Segment (VFS), a key component of their course curriculum. So far in their VFS, they had done a Village Survey, a comprehensive survey encompassing various aspects of the rural economy and Household Surveys of 21 households in the village. It was certainly not an easy task to collect, understand and process all the quantitative and qualitative data within one and a half months. To make matters worse, they were not conversant with the local language, Maithili. Luckily, they had Rani Di, a villager and their host during the entire period of their village-stay. She and her husband were working in local NGOs and had a good reputation amongst the villagers. Without their cooperation, this project would not have been successful.

"Sibaditta, are you daydreaming? Rani Di made this cutting chai for you, and you are wasting it!" Snigdh said, somewhat gushingly. "We cannot afford to sit back and relax, we are yet to analyse and identify the pain points of the village", Satyam said. Time was ticking for them, they had to make a presentation and submit the Village Development Report, based on the data they had collected and its subsequent analysis, at their institute within the next ten days. Yet, all of them were stuck with the same question- what was the core problem in the village? As part of the Village Survey, the trio had got a lot of data about different aspects of the village. The following pages give a glimpse of the information that they collected.

Brief History of the Village

The origin of settlement in Bakhri village dated back to around 1780. At that time, Shah Alam was the sovereign Mughal Emperor of undivided India. He conferred the Diwani rights (right to collect taxes on behalf of the Emperor) of Bengal (inclusive of modern day Bangladesh, and Bihar and Odisha states) to the East India Company.

In the northern part of Bihar, the two most prominent rivers were Bagmati and Lakhandehi. People living at the bank of confluence these two river and its nearby area were always in distress due to seasonal flooding of the two rivers. The place at the confluence of the river was named as Katra. The name Katra was influenced with the presence of a centuries old temple of goddess Durga, named 'Chamunda Devi Sthan'. The presence of a religious site in Katra had prevented local residents from abandoning this place. But they required a place to settle at a higher altitude which was not flood prone. However, they did not want to move far away from this religious monument. That made them to move to a nearby locality which today is known as Bakhri.

Contemporary local history also says that the Nawab of Patna had a huge role in settling people in the village. He resettled the population of around 100 people from Katra to the nearby highland. Even as per the Land Survey of 1896, the village land was under the name of the Nawab of Patna. Around the same time, Baba Laxmandas of Ramandi Samprdaya had established a monastery (math) in this village. This attracted his followers and other people to settle here.

Immunity from flood had also shaped the current settlement pattern of the village. Though the village land is plain and fertile and also close to two rivers; most part of the village land was used for residential, road and public infrastructure purposes. Most of the people involved in farming, had their agriculture land outside the village. Only 5% of the population had farming land within the village boundary.

About the Village

The village Bakhri was located 35 km East of Muzaffarpur town in Bihar. The village was 58 hectares (150 acres approx.) in area. The total land in the Bakhri was divided in four parts residential land (45 acres), roads and other public property (45 acres), agriculture land (35 acres) and orchards, forest and water bodies (25 acres). Bakhri was a land-locked village, surrounded by village Dhanaur in the North, Sonpur in the North-East, Siswara in the South-East, Deogan in the South and Sakri in the West. The main road, the Katra- Majhauli road, connected the village with the district headquarters and nearest city Muzzafarpur. The road was not conducive to heavy traffic; hence connectivity was scarce. The village had one main entry and exit point, Dargah Chowk, situated on this main road. The other three exit points connect the village to Deogan, Sonpur & Siswara. The centroid of the village was the Panchayat Bhawan located in the eastern part of the village, which was also the geographic centre of the village. This village came under Sonpur Panchayat which was located at a distance of 2 km from the village centroid. The block headquarters at Katra was situated 3 km away from Bakhri. The nearest primary health centre, bank, PDS shop and police station was situated in Katra. The nearest railway station was the Muzzafarpur railway station. The only school in the village was a government higher secondary school situated near the village centroid.

During their survey, the students observed that Bakhri village had a population of 3115 people residing in 730 households. The total number of houses was 432. The village was divided into seven tolas Khatwae tola, Teli tola, Lohar tola, Pasi tola, Suri tola, Kumhar tola and Dusadh tola (refer Exhibit 1). Except for Khatwae tola and Kumhar tola, the tolas were homogeneous in terms of the caste of the inhabitants.

For the household survey, the sample population was 149 from the 21 families. Sibaditta calculated from the sample that the average age of the male population was 26.27 years and that of the female population was 25.02 years. The median age for males and females were 20 years and 19 years respectively.

Occupation

Most of the working-age population of Bakhri village was employed as seasonal agricultural labour for 2-3 months in a calendar year. For the rest of the period, they generally work in a nearby brick kiln, shops or go to nearby cities for employment (refer Exhibit-2,3) Satyam derived the Simpson's diversity index for occupation, which was quite high for people working inside the village and people working outside the village, at 0.8385 and 0.7948 respectively.

The village had 35 acres of net cultivated area and 45 acres of inhabited land. The gross cultivated area for the year 2017-2018 was 58.05 acre. There were 10 acres of forests, and 45 acres of public land, which included roads, government buildings, temples, playing ground and cementation centre. There was no permanent fallow land in the village. There was seasonal fallow of 31 acres during the Zaid season. Most of the agriculture fields were rain-fed with some supported by bore well irrigation. Bore-well irrigation had come up recently due to the increasing variability in rainfall as well as the recurring instances of drought in past years.

Rabi Season

Four main food crops were grown in the village during the Rabi season, which generally starts from November and ends in March, viz., Wheat, Keshari, Lentil (Masoor), Karia. Wheat was the main crop grown in the season. The net cultivated area for this crop was around 20 acres. Approximately 90 farmers were cultivating it in that particular year, with their crop fields being irrigated through bore well. Keshari, a type of pulse, was grown in 3 acres of agriculture land. In total only four to five farmers were growing it. The landholding of the village was also skewed, i.e. one farmer controlling 20 acres of land. Lentil was grown in a very small area of about 0.5 acres and only 10 farmers grew this. Karia, a type of low-quality pulse, was grown by only five to six cultivators in a total of 0.5 acres of land and mostly grown for self-consumption.

Only two commercial crops were grown. The first was Mustard. The total area cultivated under this crop was 0.75 acres. The other one was Tori, a type of oilseed that was grown in 0.25 acres of land. Both of these cash crops were grown by very few farmers.

Some vegetables were also grown in this cropping season, Potato, Cauliflower, Cabbage, Ladies' Finger, Bottle Gourd, Bitter Gourd, and Gherua being the most important ones. All these crops were mostly grown in the backyard of the houses and thus constituted a total cultivatable area of about 0.05 acres. These marginal vegetables were again grown mostly for self-consumption.

Zaid

This season starts from the month of April and ends in the month of June. Most of the farmers left their agriculture land barren in this season. One of the reasons for this practice was the unavailability of the source of irrigation. The other reason is that farmers left land fallow so that it can regain its fertility for the next cropping season. This also ensured that the farmers had the flexibility of deciding the exact time for sowing and reaping paddy and wheat according to weather conditions. However, few cultivators grew two crops namely Green Gram and Sesame. The total cultivated area was one acre and two acres respectively. These crops were also grown only for self-consumption.

Kharif

In the Kharif season, primarily paddy was grown. The net cultivated area in this season was around 32 acres. Most of the area was rain-fed and about 10 acres were irrigated through bore well.

The villagers did not grow any cash crops and sugarcanes. The choice of crops was due to the tradition and unwillingness of farmers to experiment.

Most of the cultivators made use of chemical pesticides and fertilisers in the field due to their ignorance of bio fertilisers. A big farmer who knew about it said that because of its higher cost, farmers were reluctant to buy it. There was no shop selling bio-fertilizers in the vicinity of the village. Manure was used by some people who had composts in their backyard.

There was no mechanism of procurement of farm output by the government in the village. A storage house was made by the government near the village but was not being used as there was no procurement. Due to this, the farmers did not receive Minimum Support Price (MSP) for any crop.

Livestock

The villagers reared four types of livestock Cows, Buffalos, Goats, and Poultry. The buffaloes reared were mostly of the traditional variety, while cows were a mix of hybrid and traditional breeds (Exhibit4). Here Snigdh pointed out that both of these animals were reared for milk and most of the milk produced was used for self-consumption. There was one milk collection centre of Bihar State Milk Co-operative Federation Ltd. established in the late 1990s. This collection centre used to collect milk from all nearby villages and transport it to the nearest chilling station located in Muzaffarpur. Since there were not enough incentives for villagers to join state milk co-operative, they preferred selling milk in the local market within the village.

Goats were reared mostly for their meat and their sales rose during the festivals of Durga Puja and Eid al-Adha. People also sacrificed goats in their personal ceremonies. Poultry was reared for their eggs and meat. Satyam, the non-vegetarian in the group, observed that there was a good demand for eggs and chicken meat in the local market.

Financial Institutions

Various financial institutes were available in and around the village. People of Bakhri generally took loans from local banks, private money lenders and micro-finance institutions (Self Help groups and Mahila Mandals). Private and government banks were also available for loans, but people generally did not approach them. Villagers took loans for agricultural, medical emergencies, marriages, repayment of existing loans and sometimes even for consumption expenditure.

There was a branch of Union Bank and Vaishali Kshetriya Gramin Bank in Katra. Some of the private banks had their branches near the village and their consumer centres located at Dargah Chowk. Local private money lenders were well regarded and respected within the village. People in distress mostly took loans from them at an exuberant interest rate which went as high as 500%. People would choose to do so because of the good rapport with them and unfamiliarity with formal procedures/paper-work. The time taken by formal financial institutions to disburse loan was also a reason for villagers to go to private money lenders in distress.

After the intervention of the NGOs in the village, Self Help Groups and Mahila Mandal had been formed within the village. Now villagers had started approaching them for loans. These groups provided loans at a minimal interest rate, but they had a long way to go.

Education

The only school in the village was a government school- Utkramit Madhya/Ucch Vidyalaya. The medium of instruction was Hindi. There were a total of 1190 students enrolled in the school and are taught by 16 teachers. Hence, the Pupil-teacher ratio (PTR) was 791. The prescribed PTR according to Right to Education act is 351. This high PTR also has an effect on the quality of education in the school, which came out very evidently when the trio conducted a basic arithmetic test and most of the students performed poorly. The village education system can be understood in Exhibit 5.

In the earlier days, this school was one of the best school among all government schools in the entire district. However, in recent years, due to school level politics, it had lost its charm. Still, students from neighbouring villages enrolled here. The school had increased the enrolment number in the past five years, though the number of teachers had decreased.

This school had a very good number of female students. It stood at 52% of the total students enrolled. On observing this pattern, the trio was delighted. They thought that this small village in Bihar could be an example for the whole country for women education and empowerment.

There were 13 male teachers and three female teachers in the school, of which two were undergraduates, nine were postgraduates and six were from specialized courses. Students complained to Satyam that on average, a teacher would be absent for about 10 days a month. At a time, not more than 10 teachers used to be present on a normal day. There were officially no dropouts from school till class 8.

The school had all basic facilities like blackboards, toilets, a playground, and a library but there are no fans or benches for children except in two classes. There are no smart classes, computers or any internet connection in the school. There were separate toilets for boys and girls who were clean and operational.

The students got incentives like free books and mid-day meals till class 8. A scholarship was provided by the state government and one of the criteria for it was to have an attendance of more than 75%. The mid-day meal programme works efficiently.

On average, on a normal day, about 900 students attended school. The library was built long back. However, these facilities were never utilized.

Governance and Welfare Programs

Bakhri came under the Sonpur Panchayat which had five revenue villages associated with it Sonpur, Bakhri, Madhopur, Deogan and Rajardih. The inhabitants of Bakhri lived in different types of houses according to their convenience (Exhibit 6) The total budget allocated to this Panchayat in the last five years summed up to Rs. 6.8 Crores. Funds were also allocated for Green Governance projects like planting of trees for timber, herbs and fruits and programs about the use of bio-fertilizers and pesticides.

The frequency of Gram Sabha meetings was around 4-6 meetings/year for the past three years. Most of the decisions regarding local public goods were taken by elected representatives, government officials and wealthy and influential individuals. According to the Govt. record, the issues discussed in both Panchayat and Gram Sabha meetings varied from street lighting, sanitation, and sewage, drinking water facility, road and transportation, electrification, health, distribution of government assistances and social issues and ceremonies.

But when Sibaditya, Satyam, and Snigdh interacted with the people about the outcome of the meetings, most of them said that they attended these meetings just to learn about the Government schemes and when they could expect to get its benefits. So, mostly their mode of participation was passive. Some villagers informed that they did take interest in discussing the village development work and thus, there was some substantial lack in the work done for sanitation and electrification in the village. The main reason for non-attendance was either no interest in topics discussed or lack of time. Some villagers also blamed the lack of knowledge about meetings' date and time, for not attending them.

According to the village headman, there were 25 Government welfare schemes active in the village. There were 72 Non-Panchayat Government officials in the village and five NGO workers working the

village. The state government was finding its ways to address the issue of unemployment in the village. However, no concrete plan yet in the picture. Since MGNREGS not being so popular in the village, the state government was trying to find out other ways to engage the working population in a productive way.

Health Service and Hospitals

There was one health sub-centre and one Anganwadi in the village. This sub-centre used to provide its service twice a week and there was barely any facility available there. There was a dearth of medical service in the village. The Primary Health Centre (PHC) was situated in Katra, the block head quarter. It was a big building with many medical facilities available. A government hospital and a family planning clinic were in Muzaffarpur. Many of the private clinics were run by the doctors working in the PHC. It was seen that some of the doctors at the PHC asked their patients to meet them in their private clinics. When the trio tried to reach out to the doctors, they were a bit reluctant in giving out information.

There was awareness regarding medical issues among the villagers and they visited hospitals/clinics when required. There was one health worker in the village. When Satyam and Sibaditta went to the village for the health survey, they observed that most families including the poorest ones went to private hospitals in Darbhanga, a nearby town, for treatment. The main reason villagers cited that they couldn't trust the service quality of the government hospitals. The poor families financed almost all of their medical expenses by taking loans. The medical loans were taken mostly through private money lenders or SHGs.

It was observed that the poor and illiterate people panicked more during medical issues and were forced to pay more than the prevailing rate for their treatment. They didn't even realise that they were being looted as they barely had any knowledge about health services.

Electricity and Roads

'Saubhagya' scheme by the central government had been very successful in this village, as every household had a legal electricity connection. None of the households had a solar panel for electricity. Only three households had solar lantern, one each in Khatwae tola, Teli tola and Suri tola. During the transect walk of the village, the trio observed one non-functional solar street lantern in Khatwae Tola. On enquiry, the residents said that it was built from the panchayat fund several years ago and had been non-functional for past many years.

There was no facility of street lighting in the village and this was a major concern for the households as they could not move out of their houses after sunset. The panchayat had put forward a proposal of street lighting to the concerned department; however, no action had been taken thereafter. All the tolas had pukka road since 2014, except Suri Tola, which had a bricked road. These pukka roads were repaired in four tolas after 2016-17.

Under the Swacch Bharat Abhiyaan-Grameen, Rs. 12000 was given to every household to build a toilet complex. This central government scheme was a huge hit in the village, as every household had a proper private toilet after initiation of the scheme. However, there were few Households in which the elder male people still went out for open defecation. NGOs and the government were trying to curb this practice in the villagers, but it required a behavioural change, hence results were not encouraging.

There were four public toilets and one community sanitary complex in the village. They had been built after 2016, one each in Lohar, Pasi, Kumhar and Dusadh tola. . Only three tolas, Khatwae, Teli and Suri

had sewage system which was fumigated twice in a year by the government. The panchayat had built the sewage system in Khatwae tola and Teli tola. The locals used to clean these sewage lines during the festival time also. Rest of the tolas had no proper sewage system, thus waste was disposed in the fields.

Drinking Water

Hand-pumps were the major source of usable water in the village, with 91% of households having hand-pumps within their houses. All the households used either hand-pump or bore well water for getting potable water. There was no water treatment plant in the village. There was no facility of public tap or drinking water well in the village, either. However, there were public hand-pumps in each tola which was used for drinking water purpose. Around 60 households used either public hand pumps or hand pumps installed in neighbouring houses for water. Some of the households, who didn't have hand-pumps, had tap connection in their house for drinking water purpose. Taps were connected with a tank which drew the underground water through the motor pump. There were nine such households.

There was a plan to establish tap connections in 98% of households, which was supposed to be functional in the immediate future. There were four overhead water tanks in the village, one each in Teli tola, Pasi tola, Lohar tola and Suri tola which were currently non-functional. No new overhead tank was built and no repairing had been done in the current panchayat. There were three wells in the village, but all had dried up and were used as garbage disposal pits. The drinking water in the village had a slightly abnormal odour, but was almost clean in texture. However, in Kumhar Tola, the drinking water was slightly muddy in texture. Villagers used to not filter the water before consumption, and hence about 51 people from this tola had been afflicted by water borne diseases in the year 2018.

Dilemma

To understand the problem, the trio had conducted a survey separately. They wanted to know the villagers' opinions of the key problems there. 80% of the villagers responded that the absence of street lights and garbage management system was the pressing problem of the village. They informed that it reduced the total working hours and hampered the overall productivity of the village. During their stay in the village, they also felt the problem of waste and urgent need of conducting Sawchta Abhiyans, or cleanliness drives, in the village on a regular basis. According to villagers, absence of proper garbage disposal in the village was a major concern for them. The houses which were situated near cultivated fields, used to dispose garbage in those lands. The non-biodegradable waste was causing problems during the cultivation, as it reduced the soil fertility. Some households used to throw the garbage in the wells, which had blocked them and made them unusable. Others burned the garbage, causing air pollution in the area. There was not a single usable well for drinking purpose or for irrigation in this village. These issues had been discussed in Gram Sabha meetings several times, but no concrete action had been taken in this regard yet.

Safety was also a major issue of the village. The adjacent places of the village were not safe after sunset. Although any crime had not been reported by the locals to police, but the area is still known for the criminal activities. Due to this, people of the village, especially men, do not consider going out of the home alone after the sunset. According to villagers, presence of street light can reduce the problem drastically.

Because of these anecdotes from the villagers, Satyam and Snigdh were convinced with the problem of the village, and was ready to design the solution based on the problem statement. On the other hand, Sibaditya was confused. From his past experience, he was aware of the fact that the rural population

seemed simple, yet their socio-economic situation could be complex. The problem, which appeared to be prominent, could have a deeper root elsewhere. He also felt that data should be interpreted properly before concluding the case. Data can reveal a lot, if it is interpreted correctly. He tried to understand from the data, but it was beginning to feel like a heavy task for him.

The time is ticking, and he need to figure out the problem statement. He need to convince his friends as well. Once the problem is found, designing a solution for the problem statement of the village is expected from management students of such prestigious b schools. But the question remained unanswered. What should be the priority of the village?

Questions for Discussion

1. What can we understand from the description of the village?
2. What are the key points coming out from occupation?
3. Are these agricultural outputs scalable? Can you think of any business plan here?
4. What is the problem with the financial institutions?
5. What are the key points coming out of education?
6. What can be the solution?

Annexures

Exhibit 1 Village Map

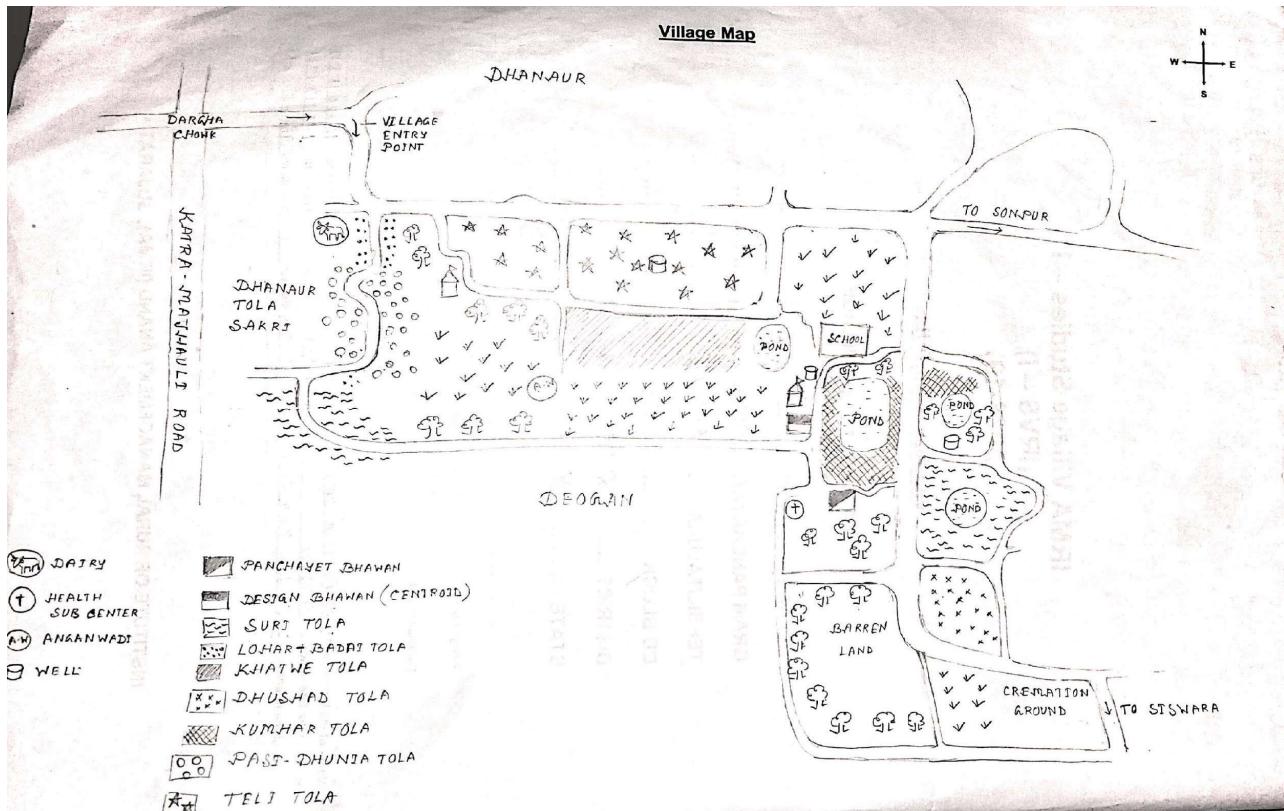


Exhibit 2 Employment within Village

Sl. No.	Establishmen t	No. of Establish ment in this Village	No. of Workers in the Establishment (No.)						Wage Rate		
			Total No. of Workers	No. of Workers from this Village	No. of Wome n	No. of Salar ied Wor kers	No. of Cas ual Wo rke rs	No. of Piece- rate Workers	Casual Worker		Piece Rate (typic al day)
									Male	Female	
1	Rice Huller	1	6	6	0	0	6	0	200		
2	Flour Mill	2	0	0	0	0	0	0			
3	Oil Extraction Units	1	25	13	3	0	25	0	200	200	
4	Bicycle Repair Shop	1	0	0	0	0	0	0			
5	Tea Shops	1	0	0	0	0	0	0			
6	Tailors	4	0	0	0	0	0	0			
7	Blacksmith	1	1	12	8	0	12	0	400		400
8	Masons	16									
9	Carpenters	1	3	3	0	0	3	0	450		
10	Weavers	7									
11	Potters	3	0	0	0	0	0	0			400- 450
12	Barber	2	2	2	0	0	0	0	0	0	50
13	Grocery shops	10	10	10	0	0	0	6	350	0	100

Exhibit 3 Employment Outside Village-Nearby Area

S. No.	Establishment	Establishment in this Village	No. of Workers in the Establishment (No.)							Wage Rate (Rs./day)						Piece Rate
			Total Workers	Worker from Bakhri	Women	Salaried Worker	Casual Worker	Piece-rate Worker	Permanent Worker			Casual Worker				
									Male	Female	Child	Male	Female	Child		
3	Rice Huller	6	36	0	12	0	36	0	200	200	100	200	200	100		
4	Flour Mill	11	22	6	10	0	22	0	200	200	100	200	200	100		
7	Oil Extraction Units	3	12	4	6	0	2	0	200	200	100	200	200	100		
10	Brick Kiln (for baked bricks)	5	150	80	5	0	0	0	150	0	0	0	0	0	11/pi ece	
11	Bicycle Repair Shop	15	30	18	0	30	0	0	200	0	0	0	0	0		
12	Tractor/vehicl e Electronic Repair Shop	7	21	0	0	21	0	0	200	0	0	0	0	0		
13	Tea Shops	70	110	0	0	100	0	0	200	0	140	150	0	0		
14	Eating Houses	65	325	12	0	175	0	0	300	0	140	200	0	140		
15	Tailors	12	15	0	0	0	1	5	0	300	0	0	0	0		
16	Blacksmith	15	18	9	0	0	8	0	300	0	0	0	0	0		
17	Masons	80	80	25												
18	Carpenters	18	56	3	0	56	0	0	400	0	0	0	0	0		
20	Cobblers	1	1	0	0	0	1	0	0	0	0	0	0	0		
21	Potters	10	10	0	0	0	0	10	0	0	0	0	0	0	450/ piece	
23	Washer Man	9	13	0	0	0	0	13	0	0	0	0	0	0	15/ piece	
24	Barber	22	90	1	0	90	0	0	500	0	0	0	0	0		
25	Cinema House	1	12	0	0	12	0	0	750	0	0	0	0	0		
26	Vegetable shops	75	75	25	0	0	0	0	0	0	0	0	0	0		
27	Grocery shops	70	150	25	0	100	0	0	350	0	100	300	0	100		
28	Dairy farm	2	5	0	0	5	0	0	0	0	0	0	0	0		
29	Poultry farm	2	0	0	0	0	3	0	0	0	0	0	0	0	180	

Exhibit 4 List of livestock available in the village

Ownership of Livestock			
S. No.	Type	Number of Households Which Own this Type of Livestock	Price (Rs./unit)
1	Cow –Traditional	30	
2	Cow - High Yield	10	15000
3	Buffalo – Traditional	40	45000
4	Buffalo - High Yield	0	55000
5	Bull/Bullock/Ox	1	
6	Male Buffalo	0	70000
7	Camel	0	
8	Horse/donkey	0	
9	Goat	122	
10	Sheep	0	1500
11	Pigs	0	
12	Poultry birds	40	
13	Elephants	0	120
14	Bee Hives	0	

Exhibit 5 Education Facilities available in the village

Street/Basti Name	Education Facilities					
	Children attending Primary School	Children attending Middle School	Children attending Secondary School	Children attending Post-secondary School	Attending College/ University	Attending Technical Education
Khatwae Tola	60	20	5	0	0	0
Teli Tola	70	42	30	15	13	0
Lohar Tola	25	15	20	9	6	0
Pasi Tola	35	12	20	0	6	0
Suri Tola	15	9	3	0	0	0
Kumhar Tola	12	6	5	0	0	0
Dusadh Tola	55	15	25	0	2	0

Exhibit 6 House type in each tola

Street/Basti Name	No. of Households in Each Street	Number of Brick Houses	Number of Huts	No. of multi-storied Houses
Khatwae Tola	161	28	67	0
Teli Tola	228	128	7	5
Lohar Tola	46	13	14	5
Pasi Tola	127	7	68	3
Suri Tola	42	2	23	2
Kumhar Tola	25	2	13	0
Dusadh Tola	101	13	47	0

About the Author

This mini case is written by Sibadittha Baidya. He got the inspiration to write this mini case from his village fieldwork internship experience in Bihar.

Canal System Changing Irrigation Practices

Ankit Singh IRMA

Challenge

Ravi, a student from a premier management institute was astonished by the green fields in the hottest dry month of May in western Uttar Pradesh. The reason for this green cover is long-standing crops of sugarcane in fields. He seemed puzzled as with reports of groundwater level going down in recent years why these farmers are still growing notorious water-guzzling crops. Many local newspapers cover the problems of farmers and issues related to sugarcane production such as delay in payment by sugarcane mills. Ravi left the place wondering whether the sugarcane production is sustainable in the longer run. He was confused and not able to understand people as they were asking to stop free service of canal water by the government.

Setting up the Context

Ravi is a student at the Institute of Rural Management Anand. He was interning with the conservation organization to understand the canal irrigation in the western Uttar Pradesh. During his internship segment, he was given the task to assess the falling groundwater level in the western Uttar Pradesh. He conducted some of his secondary research and found out that groundwater has declined in these areas. However, these areas also have one of the largest agricultural production. This area is also flourished due to the presence of its surface irrigation resources. Upper Ganga Canal is an important source of irrigation. The production of sugarcane caused huge distress of water in the area as its production requires a lot of water. Also, in recent times farmers have started using submersible and sugarcane variety Co 238. Sugarcane is one of the prominent crops in western UP apart from the wheat and paddy.

Therefore, to understand that even in the presence of canal water the declining groundwater level and rising number of tube wells, he first tried to check the canal water supply in the area. To study the vast network of the canal water and its effective utilization, he picked one of the canal branches known as Anupshahar Branch. There is a total of 10 control structures that were found effective. From the branch, water reaches to distributaries and from these distributaries, it reaches to minors through which farmers put outlets to extract water. [Exhibit 1]

The majority of water is extracted by the head region of the distributaries and minors. He also found that there were many instances of illegal abstraction in the entire region. This misuse of canal water in the head region of the canal has an impact on the increase in tubewells in middle and tail regions. He thought whether this canal water supply could be improved and even if it improved whether it would be sustainable for the sugarcane production.

Background

The Upper Ganga Canal

The Ganges or Ganga Canal is a canal system (Exhibit 1) that irrigates the Doab region between the Ganges River and the Yamuna River in India. The canal is primarily an irrigation canal, although parts of it were also used for navigation, primarily for its construction materials. Originally constructed from 1842 to 1854 (William Stevenson, 1909), for an original head discharge of 6000 ft³/s. The Upper Ganges Canal has since been enlarged gradually for the present head discharge of 10,500 ft³/s (295 m³/s). The system consists of the main canal of 272 miles and about 4000 miles long distribution channels. The canal system irrigates nearly 9,000 km² of fertile agricultural land in ten districts of Uttar Pradesh and Uttarakhand.

The Upper Ganges Canal is the original Ganges Canal, which starts at Bhimgoda barrage near Har Ki Pauri at Haridwar, traverses Meerut and Bulandshahar and continues to Nanau in Aligarh district, where it bifurcates into the Kanpur and Etawah branches. With a prime motive of sustaining the irrigation requirements of the farmers of the region, the discharge capacity of these canals has been constantly increased in order to meet the growing demands of the farmers. This, in turn, has baneful effects on the flow of river Ganga, realizing the Kharif as well as Rabi needs of the farmers. On the other hand, as time has progressed it has been observed that despite deviating more than 60% of the water into these canals, the requirement still stands unmet leading to coincident groundwater extraction. Ideally, the 60% river water after fulfilling the plant needs must contribute towards groundwater recharge, but contrary to the depth of groundwater levels is constantly increasing. This may be due to the growing ineffectiveness of these canal structures not supporting equitably distributed discharge or the irrigation water demand of the region has increased substantially.

Sugarcane and wheat constitute the main crops grown in the area with patches of orchard area too. For more than fifty years' sugarcane has been the dominant crop in the area with an increase in acreage year after year due to higher returns as compared to other crops. During Rabi wheat is the other crop which is grown along with sugarcane due to suitable growing conditions. Sugarcane which is a water-intensive crop has a high demand during the Kharif season with the weather conditions requiring fields to be watered every seven days. Historically, these needs were fulfilled by the diverted water of river Ganga which has sustained its productivity but over time these canals due to ill maintenance have lost their essence leading to water being deviated without covering the stipulated command area.

The upper Ganga canal has three main branches

1. Deoband branch
2. Anupshahr branch
3. Mat branch Hathras branch; taking off from Mat branch.

This Branch of the canal is 131 km long. There is a total of 14 distributaries along the length of the main Anupshahr branch. The main Branch is divided into three districts of Uttar Pradesh namely Hapur, Meerut and Bulandshahar.

Western Uttar Pradesh

The economics of Uttar Pradesh is based on agriculture and around 65% of the total population is dependent on Agriculture. It is India's fifth largest and most populous state. It covers fertile land of Rohilkhand plains n upper-middle and part of Ganga Yamuna doab. It shares its border with Nepal and Uttarakhand to the Haryana, Delhi and Rajasthan to the west of Madhya Pradesh.

The majority of farmers in western UP are small and medium-sized. The surveyed area has an average landholding of 10-20 bigha which is variable as one moves from Meerut to Bulandshahar. In Bulandshahr landholding size is less as compared to Merut and Hapur. The major crop in the region is sugarcane, paddy and wheat. Apart from that mango orchards also cover present in the area.

Climate and Rainfall

The region has a climate of tropical monsoon. The temperature in the region reaches up to 45 degrees Celsius in the months of April and May and around 3-4 degrees Celsius in January. Rainfall ranges from 600-1000 mm in western UP. 90% of rainfall occurs during the southwest monsoon in months of July – September. Limited and erratic rainfall concentrated sometimes causes flooding and damage to crops.

Rainfall is one of the important components of irrigation in western UP. It also determines the

dependency on canal or tube well on year to year basis. To understand the rainfall trend, the deviation of the rainfall from the normal rainfall is calculated. In the analysis, it was found that there shift in rainfall for the months of July, August and September. These months also aligns with the grand growth phase of the Sugarcane, during which the water demand is fulfilled by rainfall. However, due to the shift in the rainfall pattern the requirement of water for irrigation is also changing. Therefore, during the monsoon month, the need for canal and tube well is increasing. For the year 1951 -2010 the decrease in rainfall in western UP is increasingly significant at 95%. [Exhibit 2]

The Sugarcane crop is prevalent in the western part of Uttar Pradesh where irrigation is done by farmers based on checking soil moisture. The water requirement from the canal or tube well is very low during the monsoon season. The changing rainfall pattern is affecting the farmers and their water requirements.

Sugarcane

Sugarcane and sugarbeet are the main sources of sugar in the world. Out of total sugar produced in the world, 60 per cent is obtained only from sugarcane. Asia is the largest producer of sugar followed by Europe. Most of the sugar in Asia comes from sugarcane whereas in Europe from sugarbeet. Presently sugarcane is grown in an area of 16 m. ha in over 79 countries. The global production of raw sugar is 112 m.t. India stands first in area (3.93 m. ha) and production (167 m.t) among the sugarcane growing countries of the world. Uttar Pradesh has the largest area almost 50 percent of the cane area in the country, followed by Maharashtra, Karnataka, Tamil Nadu, Andhra Pradesh, Gujarat, Bihar, Haryana and Punjab. This crop in recent years has shown high productivity and yield. As the sugarcane is a water-intensive crop and therefore requires more water for irrigation. The area and yield in Meerut, Hapur and Bulandshahar districts are calculated at the district level given (Exhibit 3].

The yield has also increased due to the introduction of new variety Co 0238 which requires more fertilizers such as Coragen hence more water is applied in the field. The farmers in the area sow their crops in Late April and May. This is the time when the canal is opened for irrigation. Therefore, their time for sowing is in sync with the irrigation facility from the canal. However, the farmers who are dependent on the tubewell grow much earlier than canal dependent farmers during March. [Exhibit 4]

Storyline

Ravi during his research read an article from WWF which stated that recommended 'maintenance' of e-flows of Ganga of the order of 45-75 percent of mean annual runoff (MAR) in normal years. However, there is divert over 60 percent of Ganga's annual flow for canal irrigation, leaving very little water in the main river. The Upper Ganga canal is receiving so much water but still, its misuse not only effects the river flow but overuse for irrigation. To promote the sugarcane production and farmer pressure demanding irrigation facility the government of Uttar Pradesh had made canal water-free. The people in the area followed a Warbandi system. Warbandi system is timing-based services between which a farmer has the right to extract water. Earlier most farmers were highly dependent on the canal as there was less access to tube wells and submersibles. Farmers were growing different crops and if the water is not present for warbandi, they leave their land fallow. Slowly the sugarcane cultivation became the major crop which also due to major political backing in state. Farmers started using diesel pumps to extract water from the higher level of the groundwater table. In recent years, even the diesel pumps have started failing. This didn't deter the farmer to take any water conservation method.

The government has removed the fee levied on the canal already 7 years ago. When Ravi interviewed the farmers he analysed that earlier they were very satisfied with the quality of water in the canal. As per Narrative of one farmer in Meerut "Earlier we were doing irrigation completely by the canal. The daily chores of ours such as cattle washing, bathing and even sometimes drinking directly dependence on the canal. But the moment this canal water is made free to use, it started causing trouble. People are now putting illegal outlets to take the water whenever the water is available. They don't consider the dosage of water but flood their farms. It is also due to this crop variety needs more water. In sugarcane, more water will cause more yield. See, it doesn't whether it is your variety or not, the moment water comes people start filling their farms".

Ravi asked the farmers "why this illegal abstraction is not checked". A Farmer from the tail-end area said "Earlier there were government officials who checked for such abstraction. Now they do not get any revenue as fee canal usage so they don't find it worth to come and see. Also whenever he comes he asks for some bribe for illegal abstraction which is very less as compared to water rented from tube wells."

"So why it is not taken to panchayat and who are these beneficiaries? "asked Ravi. The farmer said "Most of the water is abstracted in the head region of the canal, therefore the farms in the head region of any distributary or minor. The water theft is very high in Kharif season when every seven days we have to give water. This led to new submersible water pumps in the area of the middle and tail regions of the canal. So once the farmer in the middle and tail region started using submersibles water they are doing not use canal water even if it comes."

"But the canal water is free?" Ravi questioned. The farmer explained "Sir here free services are the same as no service at all, we want the older system to come back. If not possible stop the canal water, it does not contribute anything in our farming. The conditions for canal minor and distributary structure is already deteriorated. Even the farmers in head regions have started using submersible water due to canal not being reliable."

Ravi "Is the condition remains the same in Kharif and Rabi season?" Farmer "In Kharif, we require around 25 times water to irrigate the field sugarcane as compared to around 4-5 times in Rabi either for wheat or sugarcane. Therefore, water in rabi reaches the tail end and it destroys the standing crops. We even don't clean these canals outlets. There was proper maintenance of canals in earlier days by manual cleaning. After JCB machines came for cleaning it became worse as the canal structures were deformed from it. Even farmers don't cooperate with each other to clean the canals as compared to earlier." Ravi left the place puzzled by seeing various factors that have to lead to one of the largest canal considered as marvelous engineering examples not able to solve the human need now.

Actions Taken

The present scenario is that the water is abstracted through electric submersibles. The water tube well connections are fixed and charged at flat tariff. The rate is approximately 1300 Rs per month. This encourages farmers to sell the water and abstract as much as they can. The water connection is limited due to feeder line separation. The average electricity available in these regions is 10 hrs. The water is sold for 50 Rs per hour and is sufficient to irrigate 1 bigha field in an hour (1 acre =5 bigha in the majority of areas in UP). Ravi Further listed down the canal and tube well on the basis of the service attributes. He also made used analytical tools to understand why the canal is preferred in the state. There are major 7 attributes identified for the services of irrigation and their observations are as follows

1. Price

Pricing of any service is an important component while determining an attribute of service. The canal is one of the most prominent sources for irrigation in the area. From the year 2012, it has been free to be availed in the command area. In recent years after the diesel engine stopped working in the villages. The next substitute to it is the electric tube well which is also increasing in recent years. The water market is already established with the presence of hourly rates in the villages. Even though the rate of the canal is free, the cleaning of the outlet for the farmlands requires a good investment of labour and costly for the marginal farmers.

2. Quality of Water

Canal water is diverted from the River Ganga in western Uttar Pradesh. The river water is perceived as highly nutritious and good for the crops. The farmers have however different perceptions regarding the quality of water. Some farmers showed a high affinity towards the quality of water and while some were indifferent towards it. Tube well water is good for crops like vegetables but does not have any nutritious value as compared to canal water. Also, the temperature difference in terms of water is also a problem for many farmers as they believe cold water from the canal during winters harm the crop.

3. Frequency of Application

There is a difference in the quality of water of the Canal and Tube well. The further probe is done to understand if there is any difference in terms of the application of water. It was found that in some cases there is a difference in the frequency of application. Canal water helps to retain moisture longer periods as compared to the Tube Well Water. Sugarcane irrigation demands the water moisture to remain for a longer period. Therefore, farmers believe that canal water requires less numbering of water as compared to tube well water.

4. Timeliness

One of the most important factors for irrigation is that water should be available on time for the crops. The canal is often found to be irregular in supplies. The roaster followed by the Canal department is not in sync with the sugarcane irrigation. The problem affects most of the farmers especially sugarcane farmers. They find it quite difficult to irrigate their field when there is a sudden stoppage of discharge. The water requirement in Kharif is high and requires water application in every 7 to 10 days. With the improvement of the electricity connection, farmers have started buying and installing more tube wells in the command area.

5. Availability of Water in Canal

The availability of water in the canal is related to irrigation services provided to them or not. This includes the reach of water in both the season of irrigation. This attribute is based on the water availability both the time of the season. Due to the erratic nature of the supply of the canal, it causes too much abstraction of water in the head region. This creates a problem for the people in the tail and middle region which believes that water availability is very low in rating.

Due to the increase in the number of submersibles in the area and better electricity supply, the coverage of the area irrigated by the groundwater is also increasing. This reduces the dependency on the canal and makes the tube well better in terms of the availability of the water.

6. Infrastructure

Infrastructure for the canal is defined based on the cleaned canal, outlets aligned to the minor level and physical condition of minors and distributaries. The structure of the control gates in the main branch of Anupshahar was found to be in good condition. However, this is opposite in the case of distributaries and minors as they were found to be in bad condition. There were many minors who have been not cleaned for years, which caused an increase in the weeds and garbage. This hampers the flow and most

of the water remains stagnant at the front. The JCB machine cleaning further creates the problem and its cleaning damages the structure of the canal. The JCB cleaning cost around 20000 -25000 Rs per Km. [Exhibit 5]

The infrastructure of the tube well related to its electric poles, power supply, good voltage and water pumping capability. The tube well is good in functioning and an increase in electric supply further boosts the growth of several tubes well. However, due to no separate feeders, the electricity supply has issues such as low voltage. This erratic supply also causes inefficiencies while irrigation. For e.g. when farmers divide the land into small parts to irrigate, if the power supply goes off, they must fill the half-filled farm to make water reach to the entire region.

7. Convenience

The convenience is based on the perception of the farmers of the ease of use service for irrigation. Canal water is distributed based on "Warabandi". Warabandi refers to the time allocation of use of the canal to irrigate field based on the piece of land. However, in many cases, this remains insufficient to farmers irrigating their field. Another major issue with the time was the allocation of Warabandi in the night time which makes farmers vulnerable to many dangers while irrigating their fields. It also creates dependency on other farmers who have clean their outlets so that water can flow up to fields.

Finally, Ravi met the departments such as Krishi Vigyan Kendra scientists and Hydrologists from the U.P government. According to them, Crop variety 238 of sugarcane does not demand more water and it is only farmers' perception.

Response

Based on these reports Ravi has assumed that the canal water should be stopped as the majority of the farmers are improper handling it. He submitted the report in his organization where he proposed that to stop water at least in Rabi season where it required a total 5 times water only [Exhibit 6]. The cleaning should be done by people which would easily provide cleaned canal. However, he was not able to convince the organization with good reasoning.

However, the strategy was still not present to reduce canal water exploitation [Exhibit 7]. There is also urgency to control the groundwater level as farmers who are unable to get canal water installing submersible. There is also a need to increase canal efficiency by proper cleaning which is not done in years. The most important was to reduce the plights of the farmer who have not received water from the last 20 years and registered as canal water users.

Annexures

Exhibit 1 Canal system

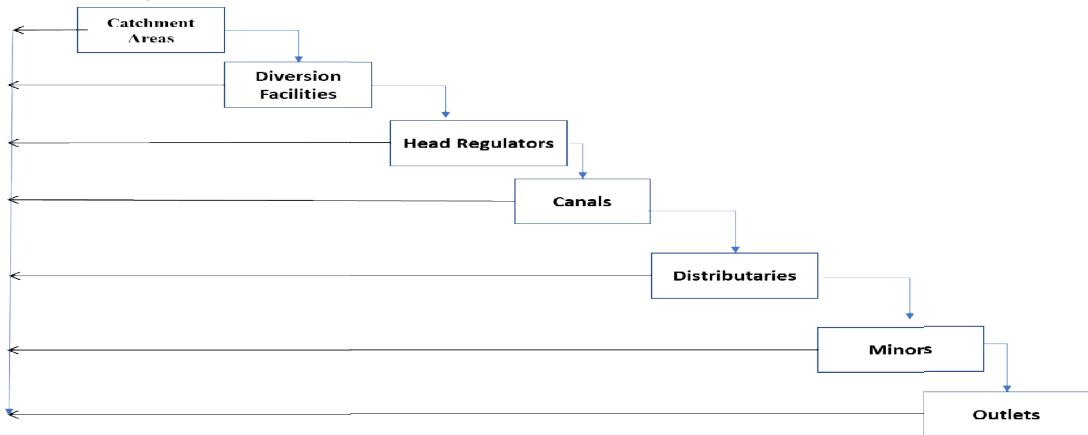
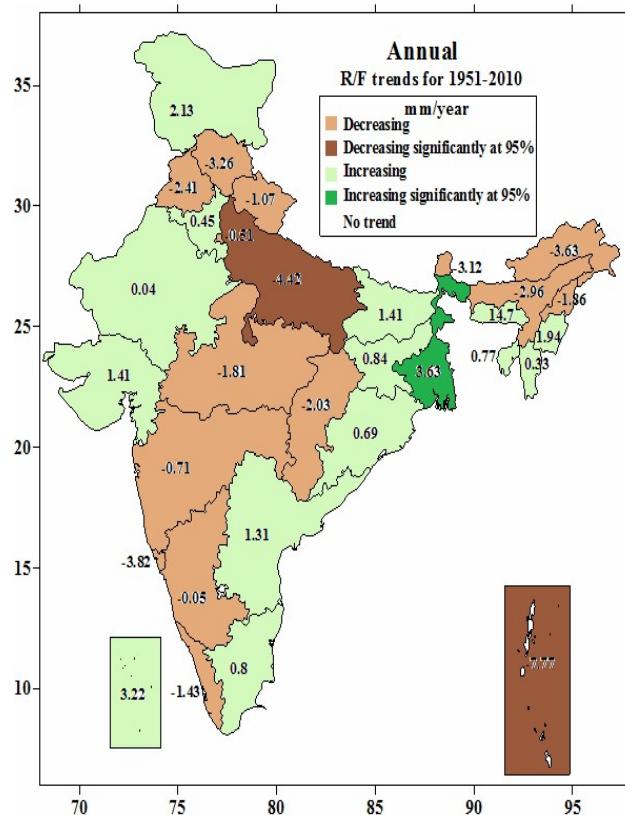


Exhibit 2 Rainfall Pattern

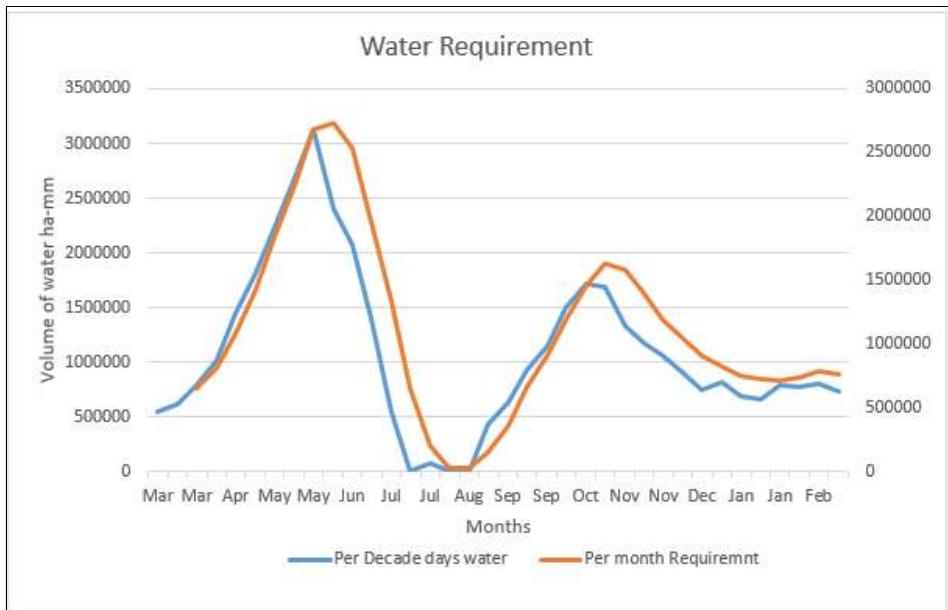


Uttar Pradesh West	Normal	Average Rainfall 2009-16
January	18.2	16.4375
February	15.1	17.6
March	11.3	14.075
April	4.8	6.0625
May	13.2	12.5
June	68.3	68.3625
July	258	221.325
August	291	197.0625
September	148	96.325
October	42.1	26.0375
November	6.9	3.9625
December	7.6	4.9625

Exhibit3 Sugarcane production data

Districts	Year	Season	Area (Hectare)	Tonnes	Yield (Tonnes/Hectare)
Meerut	2015-16	Kharif	118837	9443739	79.47
Meerut	2016-17	Kharif	131419	10937741	83.23
Meerut	2017-18	Kharif	131645	12556827	95.38
Bulandshahar	2015-16	Kharif	45836	3033060	66.172
Bulandshahar	2016-17	Kharif	45789	3528134	77.052
Bulandshahar	2017-18	Kharif	48470	4054612	83.65199
Hapur	2015-16	Kharif	35721	2416740	67.656
Hapur	2016-17	Kharif	36365	2856980	78.564
Hapur	2017-18	Kharif	39774	3313651	83.31199

Exhibit 4 Water requirement for sugarcane over the year



Water requirement for sugarcane over the year

Exhibit 5 Cost of cleaning Minors by manual labour

	Length(m)	Breadth(m)	Height(m)	Total
Dimension (in m ³)	1000	1.7	0.2	340
Rate(perday-m ³)[Mnrega rate UP]				91.09

Season	HP of pump	Electricity consumed/hr for Pump	Rate (Rs/unit)	Average Landholding (Bigha)
Rabi	7.5 HP	6	7	10
Kharif	7.5 HP	6	7	10

Exhibit 6 Number of times irrigation done crop-wise

Month	Sugarcane	Orchards	Wheat
January	1	1	1
February	1	1	1
March			
April	4	1	
May	4	1	
June	4		
July	4		
August	4		
September	2		
October	1	1	1
November	1		1
December	1		1
Total	27	5	5

Exhibit 7**Direct extraction of water from the Anupshahr branch****Sewage dumped into minors**

Questions for Discussion

1. What is the reason for too much misuse of water? Are farmers deliberately misusing water?
2. Is sugarcane irrigation suitable for a longer time in western UP?
3. What farmers can do to effectively utilize the canal water?
4. What should be the role of government in providing efficient irrigation facility?

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Fish Sourcing - Community Based Organization

Pratik Giri IRMA

Challenge

Ramesh was doing an internship in ABC organization who initially concentrated more on Sales & Marketing and visibility through advertisements and bypassed the upstream supply chain through purchasing raw fish and prawns from the exporters/processing Centres. This procedure is repeating the "exporters/processing Centres" player and it increases the price margin of about 8%-10%. To eliminate the involvement of many players in the supply chain, ABC planning to follow "Amul based co-operative model" by understanding the availability of different fish species, its seasonality, quantity and its price in the first phase. This helps them to purchase the high demand and high consumed fishes directly from the farmers/fisherman, which reduces the involvement of many players in the process and establish a sustainable supply chain in the long run.

Background

Indian fisheries and aquaculture is an important sector of food production providing nutritional security, besides livelihood support and gainful employment to more than 14 million people, and contributing majorly to agricultural exports. With diverse resources ranging from deep seas to lakes in the mountains and more than 10% of the global biodiversity in terms of fish and shellfish species, the country has shown sustained increments in fish production since independence. Paradigm shifts in terms of increasing contributions from the inland sector and further from aquaculture have been significant over the years. With high growth rates, the different facets, viz., marine fisheries, coastal aquaculture, inland fisheries, freshwater aquaculture, and cold water fisheries are contributing to the food basket, health, economy, exports, employment and tourism of the country. More than 50 different types of fish products are presently being exported to 75 countries around the world. Fish and fish products have presently emerged as the largest group in agricultural exports from India, with 13.77 lakh tonnes in terms of quantity and Rs. 45,106.89 crores in value. This accounts for around 10% of the total exports and nearly 20% of the agricultural exports and contributes to about 0.91% of the GDP. With over 2.4 lakh fishing crafts operating along the coast, 7 major fishing harbors, 75 minor fishing harbors and 1,537 landing centers are functioning to cater to the needs of over 4.0 million fisher folk. For promoting aquaculture, 429 Fish Farmers Development Agencies (FFDAs) and 39 Brackish water Fish Farms Development Agencies (BFDAs) were established in the country. Besides large-scale freshwater food fish culture, cage fish culture and high-value marine fish farming are gaining importance in the recent past.

Fisheries Supply Chain Vs ABC Supply Chain

The typical supply chain for fisheries is fishermen/farmer to the customer through an aggregator. But many different players involved in the supply chain process. ABC directly purchase raw fish from exporters/processing units and process at ABC processing Centers at Bangalore and Gurugram and sale those at desired areas.

Fishermen

Fishermen are the one who captures the fish from the sea or river. Fishermen use different types of boats or crafts to capture the fishes. Fishermen present in both inland and marines fish capturing. They invest in purchasing and repairing of boats and crafts.

Fish Farmer

Fish farmer is someone who cultivates the fish and prawns. They get the seed from Hatcheries to cultivate the fishing. In India, the common cultivation practice is ponds and aquaculture ponds. Other than these, cage culture is one of the cultivation methods practiced in the reservoir area and brackish water areas. High-density fish farming techniques such as Recirculating Aquaculture System (RAS) methods are new methods the farmer are adopting.

Consolidator

The main objective of consolidator is to collect the fishes from different areas and selling them to the processing unit. Supply chain tunnel start from here, who controls the prices of the fishes. The price margin is more than 15% here.

Processing Unit

This is the major area where the main transformation happens, here the raw fish transformed as a usable product with value addition, processing takes place keeping transportation in mind. The developed value-added product can be exported to other countries or different cities in the country. The major price margin increases here only, it is about **50% - 60%**. It is because of grading, as exporting and retailing required higher grade fish and prawns, unqualified (for grading) fish and prawns will be left out, which leads to a lot of wastage and also the involvement of labor machines cost more.

Wholesalers

Wholesaler function is exactly opposite to the way that the consolidator works, it is a part of sales and marketing. The consolidated value-added products can be sold to retailers to this platform. The price margin is about 15% - 20% in this area.

Retail Institute

The critical point in sales and marketing is retailer, the total supply chain tunnel is compressed here. The price margin less but the customer purchases are mainly based through retail institute only, to reach the product to the customer is mainly through retail institute shows the criticality involved in this part. This phase is direct reach to the customers, so price fluctuation is more here, the price is quite high in the mornings and reduces as time lapses, the price margin in the morning increases about 20% - 25 %.

Consumer

Consumers are the end-users of the products, retail institutes generally the point of contact to the customer or consumer. In specific to fish and prawns, the consumer prefers fresh fish, that is what ABC is working on. The freshness of the fish is a critical measure for price and preference of the consumer. E-retailing of fish to the consumer is a new growing trend which saves the time for the consumer and delivers at the footsteps. As consumption of seafood is increasing even in Tier 1 and Tier 2 cities, e-retailing will show great growth shortly.

Business Models

Each harbour has its business system and practices.

Auctioneer System

The first and most common one is the auctioneer system. The auctioneer controls the entire supply chain. The auctioneer gives an advance to the boat owners to get the auction power of that particular boat. The advance amount would be ranging from 1 Lakh to 30 Lakh rupees. Once the boat owner accepts the advance, then he can sell only through that particular agent. The agent commission also

varies from the harbour to the harbour. The normal commission would be ranging from 1% to 3% of the total sales. There are helpers, writers and accountants present in the harbour to help the auctioneer. The upstream flow of auctioneer system is shown in Exhibit 1. He found more shed companies in Kollam and Munambam. They do processing for export companies. The most common buyers are Exporters, Dried fish producers, Fish meal/ feed producers, Fish oil producers, Local distributors, commission agents, aggregators, and wholesalers. The most important stakeholder in this system is the commission agent and that route has maximum traffic.

The Union Auction System

The union is governed by boat owners and agents. They have 6-10 staff. They have dedicated staff to conduct the auction and keep accounts. These harbours have a more credit-based business. So, to avail the facilities to the buyers, the union has some policies and procedures. Apart from the auctioneer, all the other stakeholders are the same as the auctioneer system. The union auction system is represented in Exhibit 2.

The Boat Owner System

The boat owners are very powerful here. They get advance from exporters and commission agents. Then they give the fishes without weighing. For those fishes which do not get advance, they conduct the auction in specified areas by themselves.

Women Participation

The highest participation of working women is seen in Kollam district compared to any other harbour. He found many small-scale women operating processing unit business in the outskirts of the harbours, as well as many local women helpers and distributors, work in these harbours. Mangalore and Munambam also have small women participation. But other harbours do not have any significant women's participation.

Payment System

Harbours in Gujarat and some harbours in Kerala, Tamil Nadu, and Andhra Pradesh have ready cash business. But other harbours provide credit facilities with different conditions. In Goa and Karnataka, provide credit facilities to registered vendors. In Karnataka, familiarity with harbour decides the eligibility to credit facilities. Gangoli and Karwar provide credit facilities through harbour union. To get in the credit list company have to have a cash security bond or personal bail bond. In Tamil Nadu, the company will not get credit facilities in the Ramanathapuram district. Maximum one-day credit will be available in Thoothukudi F.H., with a lot of conditions. In Colachel and J.P.R.F.H. Muttom provides credit facilities with the help of the union. Some harbours provide instant discounts for the ready cash payment. The discount can go at 10%. The same harbours provide a discount for credit buyers also. But they should pay within seven days to be eligible for the discount.

Seasonality Vs. Price for Marine Fishes

Price escalates in Goa due to tourism in November and December. Again due to less number of catch from January onwards, the price escalates. Pomfrets and Crab have a high demand and consumption however due to its non-availability in abundant quantity its price is higher in most of the states of India. He has a base price for July month for south-east region and he has calculated seasonal fluctuation and non-seasonal fluctuation for prices to understand the dynamic nature of price in the seafood industry. Availability and price of each marine fishes are different in different months (See Exhibit 4).

Seasonality Vs. Price for Inland fishes

Availability of Fishes and prawns is more from June, Aquaculture ponds are prepared in April and start to cultivate by end of May. Prawns, Catla and Rohu require 100 days for production, hence output available from June and July. Half of the farmers cultivate with grown seeds of about 30 days which results in early production. The price is almost similar throughout the year as production is more in Andhra Pradesh and West Bengal, and most of the purchase happens from these states, and also if fish prices go up consumers seek substitute of fishes such as prawns and chicken, these leads to fish prices stable even in summer i.e no season. Availability and price of each inland fishes are different in different months; it is given in Exhibit 5.

Existing Supply Chain among Fish Farmer

According to the area of cultivation, the farming community can be divided into 3 i.e., Small, medium and large-scale farmers. It is shown in exhibit 6.

Small Scale Farmers

He considers a farmer as a small-scale farmer, who cultivates in small ponds, aquaponics, cages, and tanks. Small scale farmers do only local sales. Because of the cultivation expenses, they cannot sell the fish to agents or wholesalers. He observed their fish possess high protein content than other fishes. So, it is very healthy and the customer retention ratio is very high.

Medium-scale Farmers

A medium-scale farmer is one who cultivates in an area of 2-3 acres. Like small scale farmers, they also do only local sales. But the major sales happen through agent and market sales.

Large Scale Farmers

These farmers cultivate in Large areas. Some farmers he came across cultivate in 100+ acre. These farmers do wholesale sales. Some companies are directly buying from them including exporting companies and online sellers also. The e-commerce company also procures from them via a year contract. Apart from that, they do sales through agents and landing Centers.

Storyline

During the field visit at Gujarat, Ramesh has found that the fishing community is the weaker section of the society. Especially illiteracy, poverty, lack of knowledge of the latest fisheries technology and lack of proper price to their products are responsible factors for their slow growth. This vicious circle is further strengthened by the lack of institutional support both in infrastructure and finances. Consequently, fishermen are subjected to exploitation by middlemen who act as money lenders and contractors. For solving the above problems and for the development of fishermen and fishery industry. "The Fishery Co-operative Movement" like other movements is considered as an effective tool. The cooperatives which keep them away from exploitation and help to improve their socio-economic conditions. So far some efforts have been done in this direction and have yielded good results in some areas but the overall picture of fisheries co-operatives is not encouraging. Ramesh has collected primary data related to the marine fish and primary level of the supply chain from boat owners, auctioneers & commission agents at the harbour and CMFRI scientists at different research offices, and Matsyafed office. All the data related to the freshwater & brackish water fish were collected from hatcheries, farmers, MPEDA offices, State fisheries offices, and secondary data were the Indian Council of Agricultural Research website, CMFRI website, MPEDA website, State fisheries website, etc.

Action Taken

He has suggested a Community-based organization (CBO) to remove Middlemen and also to create a market of fresh and organic product. He has a strong opinion about the feasibilities. In this model, the company can convince 10 to 15 farmers as per the organization's daily demand and create one community-based organization, provide them seeds, subsidized feeds and quarterly training to engage them and to create awareness about the new fishing culture. Cost structure involved in the formation of co-operatives based model shown in Exhibit 7.

He has also suggested other than the co-operative model for Marine fishes which will help the organization most. In this model, ABC will have a two-three staff to monitor the operation and ensure the quality. The two staffs are the purchaser cum quality in charge and the stock keeper. The vehicle and driver also will be provided from ABC. In the harbour, for operation and procurement, one local commission agent will help us. He will charge 2-3% of the total amount for the service. Apart from that, he will help us to do every operation in the harbour. He will invoice the Labour charge and ice charge separately after the work.

Cost Estimation

He has listed out the total expense for sourcing in Thoothukudi. The cost calculation is present in Exhibit 8. He has divided the total expense into five categories. Transportation is the major fixed cost of this project which includes the purchase of two vehicles. It contributes 98% of the total fixed cost. Apart from the fixed transportation cost variable cost is also included. He chose two vehicles because one vehicle should always be present at Thootukudi. 2 permanent staffs including 1 purchaser cum quality and a stock keeper (he will record and co-ordinate the movement). Company has to provide accommodation for the staff. While sourcing ABC might need helpers and consumables. He has added these as a variable expense.

Response

He has finalized two models for sourcing for his presentation to co-founder Mr Varun but he is not sure whether these models will solve the problem of sourcing or not. Also, he was looking after the other alternative which will remove the middlemen and help organization and farmers both. Kindly evaluate both the alternatives and think of new models which will give more benefits and help Ramesh to his presentation.

Questions for Discussion

What are the benefits involved in commission agent model?

1. What are the benefits involved in the CBO model?
2. Which model is more helpful?
3. Benefits associating with CBO model?
4. Benefits associating with commission agent model?
5. Why can't directly purchase from fishermen?

About Author

Pratik Giri is currently pursuing PGDRM at IRMA. He did Mechanical engineering from M.S. University. He had work experience of 34 months in Godrej. He has done his internship in Startup during MBA at IRMA.

Annexures

Exhibit 1 – Auctioneer System

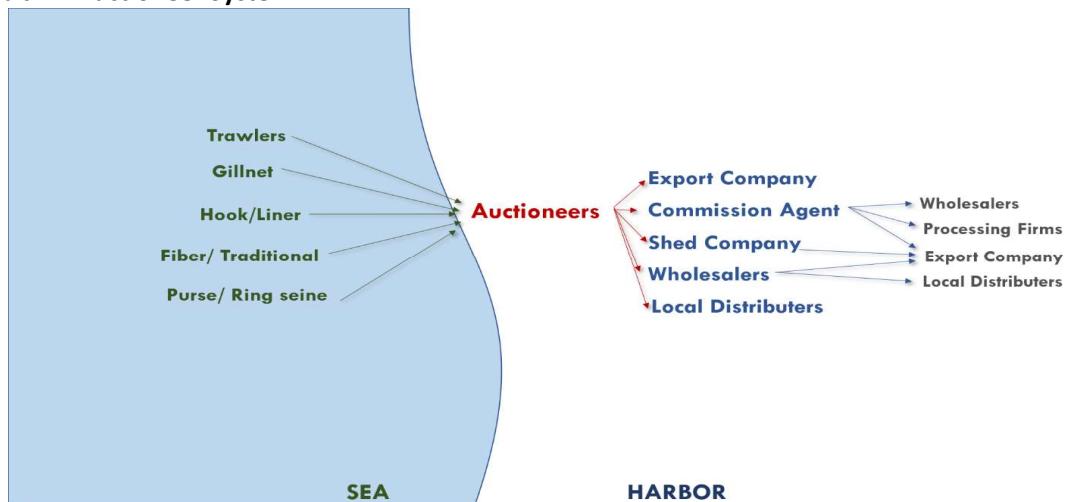


Exhibit 2 Union Auction System

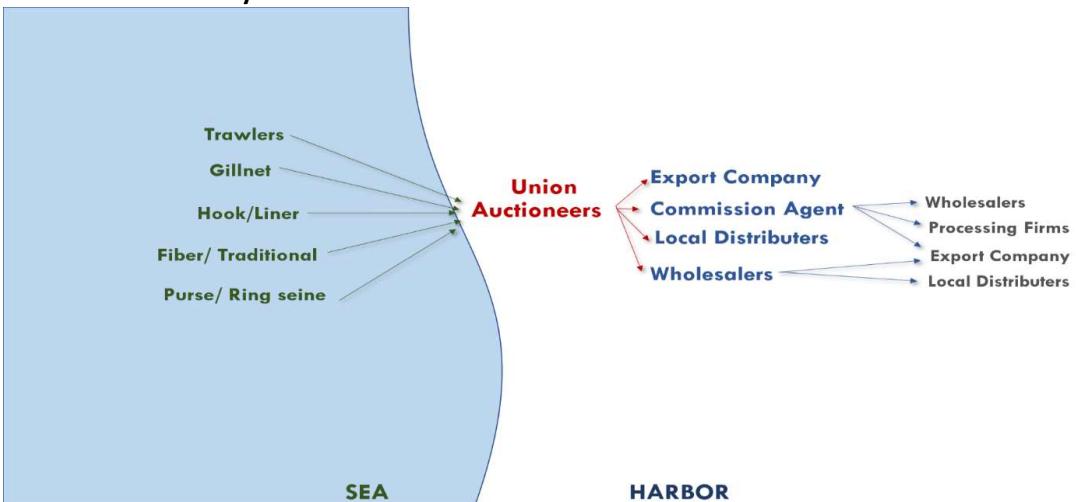


Exhibit 3 Boat Owner System



Exhibit 4 Seasonality vs. Price for Marine Fishes

Species	SF(%)	NSF(%)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ribbon Fish	5	25							140					
Anchovies	12	34							320					
Prawns (25C)	10	40							1100					
Silver Pomfret	20	60							800					
Black Pomfret	20	60							500					
Seer Fish(Big)	25	70							750					
Seer Fish(Small)	25	70							420					
Shark	10	35							200					
Squid	10	45							280					
Indian Mackerel	5	25							130					
Croakers	10	40							300					
Lesser Saradine	10	35							165					
Salmon	10	40							550					
Malabar Yellow fish	10	40							250					
Thread fin bream	10	40							120					
Butter Fish	10	40							120					
Moon Fish	10	40							120					
Indian Halibut	5	20							250					
Barracuda	5	20							280					
Seabass	10	25							400					

Note:

-SF: Seasonal Fluctuation &

-NSF: Non Seasonal Fluctuation

Prices were taken in July during the field visit

Legends:

High
Medium
Low
NA

Exhibit 5 Seasonality vs. Price for Inland Fishes

Species	SF(%)	NSF(%)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Prawns(25 C)	5	10							540					
Catla	5	10							100					
Rohu	5	10							100					
Barramundi	5	10							400					
Rupchanda	5	10							100					
Murrel Fish	5	15							500					
Mrigal Carp	5	10							220					
Common Carp	5	10							125					
Parshe	5	20							150					
White Caboos	5	15							250					
Hilsa	5	40							2000					

Note:

-SF: Seasonal Fluctuation

-NSF: Non Seasonal Fluctuation

Prices were taken in July during the field visit

Legends:

High
Medium
Low
NA

Hilsa fish available in West Bengal and Andhra Pradesh mainly during August to November, the prices for this fish is very high and volatile, the price range starts from Rs. 1400 and goes up to 7000 in peak days when there is a less quantity available.

Exhibit 6 Existing farmers supply chain

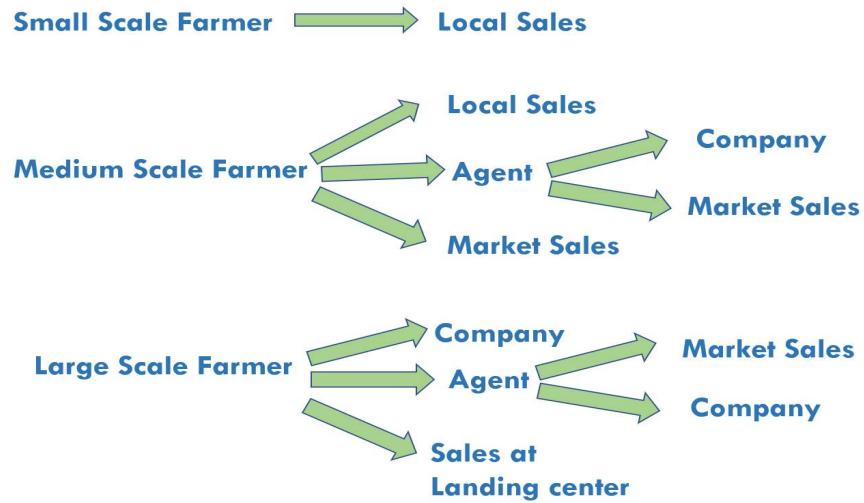


Exhibit 7 CBO Based Model

CBO of 10 farmers	
Investment For 1 Year	
Calculation for 100 tonnes Indian Major Carp in a year	
Items	Cost(In Lakhs.)
Employee for community engagement	6.00
Seed Cost	0.63
Feeding Cost	2.50
Training Cost	1.00
Administration Cost	1.00
Transportation Cost	20.00
Small Office Rent Cost	2.40

Exhibit 8 Commission Agent Model

		Measure	Unit	Unit Price	Expense Type
Transportation	Vehicle Cost	Nos	2	INR 1,000,000.00	One time
	Driver	Nos	2	INR 1,000.00	Daily
	Petrol	Km	800	INR 7.00	Daily
	Harbor entry fee	Nos	1	INR 100.00	Daily
Staff	Purchaser cum Quality	Nos	1	INR 25,000.00	Monthly
	Stock Keeper	Nos	1	INR 15,000.00	Monthly
	Helpers	Nos	10	INR 500.00	Daily
Accommodation	Accommodation Advance	Nos	1	INR 30,000.00	One time
	Rent	Nos	1	INR 3,000.00	Monthly
Consumables	Packing box	Nos	40	INR 200.00	Weekly
	Wrap and Consumables	Nos	1	INR 500.00	Daily
	Ice	Nos	10	INR 100.00	Daily
Commission	Agent Commission	Percentage	0.02	INR 200,000.00	Daily

Understanding Terminology

1. Harbour: A harbour is a sheltered body of water where ships, boats, and barges can be docked. The term harbour is often used interchangeably with port, which is a man-made facility built for loading and unloading vessels and dropping off and picking up passengers. Ports usually include one or more harbours. Harbours may be natural or artificial. An artificial harbour can have deliberately constructed breakwaters, sea walls, or jetty or they can be constructed by dredging, which requires maintenance by further periodic dredging.
2. Fish Farming: Fish farming or pisciculture involves raising fish commercially in tanks or enclosures such as fish ponds, usually for food. It is the principal form of aquaculture, while other methods may fall under marine culture. A facility that releases juvenile fish into the wild for recreational fishing or to supplement a species' natural numbers is generally referred to as a fish hatchery. The most important fish species produced in fish farming are Rohu, Catla, Tilapia, and Prawns.
3. Cultivation Environment: Many aquaculture practices are used in India in three types of environment- freshwater, brackish water, and marine for a wide variety of culture organisms. Freshwater aquaculture is carried out either in fish ponds, fish tanks, fish cages or in rice paddies (limited scale only). Brackish water aquaculture is done mainly in fish ponds located in coastal areas and paddy fields. Marine aquaculture cultivation is mainly through cage farming.
4. Brackish Water Aquaculture: Soil and water quality for brackish water aquaculture is almost similar to freshwater aquaculture except for water salinity. Salinity represents the quantity of dissolved salt in a given unit of water and is usually expressed in g/kg of water (ppt). In brackish water ponds salinity usually ranges between 0.5%and 30%depending on the distance from the sea and seasonal variation due to monsoon precipitation.
5. Cage Culture: Fish cages are placed in lakes, bayous, ponds, rivers, or oceans to contain and protect fish until they can be harvested. The method is also called "off-shore cultivation" when the cages are placed in the sea. They can be constructed of a wide variety of components. Fish are stocked in cages, artificially fed, and harvested when they reach market size. A few advantages of fish farming with cages are that many types of waters can be used (rivers, lakes,

- filled quarries, etc.), many types of fish can be raised, and fish farming can co-exist with sport fishing and other water uses.
6. Hilsa fish available in West Bengal and Andhra Pradesh mainly during August to November, the prices for this fish is very high and volatile, the price range starts from Rs. 1400 and goes up to 7000 in peak days when there is a less quantity available.

MGNREGA and Agriculture- A Case Study of Bhankhla Village

Prakhar Sonkhya IRMA

Challenge

Nandu Jat, son of Ramlal Jat, one amongst the many farmers in the Bhankhla Village in Bhilwara District of Rajasthan was pondering over his future in farming. An owner of 5 acres of land, was worried about the reducing profitability in the sector. Agrarian distress has stuck with the Primary Sector since time immemorial. Governments and policy makers have time and again failed to make primary sector grow rapidly. Nathuram, one of Nandu's neighbors, was also sitting with him and felt that rising input cost, lack of price realization and no support from any institutions has actually discouraged people to continue farming. Depleting ground water level was another factor which worries them in the absence of proper irrigation facilities. Amidst the entire dilemma, they are pondering over migrating to towns and cities in search of jobs to ensure a better future.

Shyamal Mali, a marginal farmer in the same village with a landholding of one acre is able to harvest only one crop in a year due to unavailability of irrigation facilities. Shyamal has the responsibility of his mother, wife, and three small children. Cultivating once in a year on an acre of land seems to be of not enough to sustain his economic needs. His mother and wife participate in MGNREGA work in the village whenever it is undergoing. The household gets a mere 50 days of work in a year with a pay of only about Rs. 100 per day for females. This takes a dig on the family's income and in order to bridge this gap Shyamal decided to migrate to the district headquarters, Bhilwara, as a labor to earn some money.

Setting up the Context

Bhilwara, which is an industrial town, is one of the 33 districts of Rajasthan. Recognized as the textile city of Rajasthan, it is famous for its textile production and is home to a lot of industries. It is the centre of mass production of Yarns and Clothes. This ready market available for cotton makes it one of the main crops grown in the area. Bhankhla Village is located in the Sahara Block on the Bhilwara-Rajsamand District Border on National Highway 758. It is 65km away from the District Headquarters, Bhilwara. The Village has a population of 3806 which includes 1930 males and 1870 females of which around 306 are children (0-6 years). There are about 655 Households in the village. It consists of people belonging to multiple castes and tribes like Jats, Brahmin, Jains, Maali, Bhils, Bagaria, Khoiwal, Prajapat, Dhobi etc. People of the village are mainly employed in agricultural activities. People who do not own land or own a small piece of land mostly work as Agricultural Laborers and Casual Laborers. The region is devoid of any industries nearby so there is no alternate source of income. Since there are not many employment opportunities other than agriculture, a large number of people migrate to other places in order to earn a decent livelihood. Many people are also dependent on MNREGA as their source of income.

About MGNREGA

Background of the Policy

Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is a wage employment scheme which targets poverty alleviation and livelihood security as its main objectives. It was enacted by Government of India in 2005 with the aim of providing 100 days of guaranteed employment to every rural household willing to work in the unskilled activities. The objective of the programme is to create employment opportunities for the large number of unemployed labor force in rural India, particularly in

times of agricultural crises and in non-agricultural seasons. MGNREGA is the largest employment program in the world and has provided employment to 1760.78 crores of man days of work in rural areas by 2015. The program aims to create assets and infrastructure for water management, soil conservation and other such activities which are fruitful for the village. The state governments have formulated the scheme for MGNREGA called as Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS). MGNREGS was envisaged as a bottom-up, people centric, demand driven program where the work in a particular village is undertaken based on the demand from number of households demanding such work. The district is the nodal unit for implementation of MGNREGA. The implementation is through the three-tier governance structure of Zila Panchayat at district level, Panchayat Samiti at the block level and Gram Panchayat at the village level. The Gram Sabha plays a crucial role in demanding the work and recommends the work to be taken up to the higher authorities. Every household demanding work must hold a job card and is entitled to get the work within 15 days after demanding. Also, in case no work is provided, the act provides a non employment allowances to the people. The cost of the program is shared by Central and State governments. The central government provides 100 percent funding of wages for unskilled work and 75 percent of material cost of the scheme while the state government provides 25% of the material cost which includes wages of skilled workers. The MGNREGA work has to be labor intensive so that it can provide employment to a good number of people. Wages provided under MGNREGA correspond to the minimum wages paid in the particular state, which is revised from time to time.

MGNREGA has been able to increase the income levels of farmers, increase the agricultural wages for the laborers, and has also resulted in the creation of rural assets etc. However, despite of its working on such a scale, MGNREGA is often criticized as a failure. The programme has never been able to provide guaranteed number of employment to the people. The national average of MGNREGA providing employment to one household is close to 45 days. (See Exhibit 2). As far as wages are concerned, it is far below the prescribed MGNREGA wage rate prescribed by the state government. Also, the program which was supposed to be a demand driven program has become a supply driven program where powerful administrators, officials hold the power and decide the work allotted through MGNREGA. Delay in payments is one main issue on ground. Lack of transparency and supervision has allowed rampant corruption taking place in MGNREGA.

Storyline of the Village

In the village Bhankhla, 289 households out of 655 households go for MGNREGA work. This number shows the importance of the scheme as a source of income. Exhibit 1 shows the number of households who go for MGNREGA work. It is to be noted here that streets are based on castes, and caste determines the ownership of land in the village. A further analysis shows that households having more land i.e. people from castes like Jats and Jains do not seek employment under MGNREGA whereas people owning less land seek MGNREGA work more often.

Looking at the total number of people working under MGNREGA it can be safely concluded that the participation of females is higher than males. This is because average wage per day is Rs. 100 which is less attractive for male workers. Also, MGNREGA work is less laborious. Exhibit 1 shows this bifurcation clearly. Also, in implementation of MGNREGA, there are many problems. It was envisaged that Gram Sabha will be the forum for raising voices and deciding upon the timing of work to begin. However, in reality, Sarpanch and Governmentt officials hold powers and make it a supply driven program.

In Bhankhla, households got work for only 55 days a year. More importantly, the variations in wages for people were very significant. These were based on power dynamics in the village. People who controlled the administration give more wages to the people of their own caste and provide low wages to low and easily exploitable class. This trend has continued even when DBT and Social audits has been introduced in MGNREGA.

Agriculture- Background of the Sector

The agriculture sector employs nearly half of the workforce in the country. However, it contributes to only 17.5% of the GDP (2015-16). Over the past few decades, the manufacturing and services sectors have increasingly contributed to the growth of the economy, while the agriculture sector's contribution has decreased from more than 50% of GDP in the 1950s to 17.5% in 2015-16.

India's production of food grains has been increasing every year, and India is among the top producers of several crops such as wheat, rice, pulses, sugarcane and cotton. It is the highest producer of milk and the second highest producer of fruits and vegetables. In 2013, India contributed 25% to the world's pulses production, the highest for any one country, 22% to the rice production and 13% to the wheat production. It also accounted for about 25% of the total quantity of cotton produced, besides being the second highest exporter of cotton for the past several years.

However, the agricultural yield (quantity of a crop produced per unit of land) is found to be low in the case of most crops, as compared to other top producing countries such as China, Brazil and the United States. Although India ranks third in the production of rice, its yield is lower than Brazil, China and the United States. The same trend is observed for pulses, where it is the second highest producer.

Key issues affecting agricultural productivity include the decreasing size of agricultural land holdings, continued dependence on the monsoon, inadequate access to irrigation, imbalanced use of soil nutrients resulting in loss of fertility of soil, uneven access to modern technology in different parts of the country, lack of access to formal agricultural credit, limited procurement of food grains by government agencies, and failure to provide remunerative prices to farmers.

As of 2011-12, almost half of the total workforce of the country was employed in agriculture. The share of population depending on agriculture for its livelihood consists of landowners, tenant farmers who cultivate a piece of land, and agricultural laborers who are employed on these farms. Agricultural growth has been volatile over the past 10 years, with annual growth ranging from 8.6% in 2010-11, to -0.2% in 2014-15 and 0.8% in 2015-16. Exhibit 3 shows the trend in the growth of agricultural sector over the past 10 years.

The Agriculture has been hit by very low growth in recent times. The profitability of the farmers is continuously declining because the cost of production has increased at a higher rate than the price realized by the farmer in the market. To increase the profitability of farmers, improving productivity or reducing cost is important measures of increasing profits of farmers. Governments have given subsidies on agri-input commodities like Seeds, Fertilizers etc. Labor cost is one of the major costs in Agricultural activities. It is realized that increase wage rate and unavailability of labor in farms are one of the negative results of MGNREGA. It is difficult for farmers to employ labor demanding high wages at their low margins. Therefore, it is important for government to tackle such an issue.

Storyline of the Village

Talking about the Bhankhla Village, like any other village, agriculture is the main source of income in Bhankhla. Majority of cultivation is done in Kharif and Rabi seasons. In Zaid season very few households grow crops and vegetables. The village has an area of 4567 acres which includes both agriculture and residential lands (See Exhibit 4). According to the Village Patwari, about 2407 acres is the agriculture area out of which 1065 acres is irrigated and 1342 acres in non-irrigated.

Kharif season is also the Monsoon season in India. Mainly, the crops grown in this season are Maize, Cotton, and Jawar. Apart from these crops Til, some types of vegetables and Urad are also cultivated during this season. The following table shows the cultivated area of the different crops. A total of 1662.5 acres of area was cultivated during the last Kharif season (See Exhibit 5). Maize is cultivated in an area of 625 acres. Jawar and cotton are the other important crops of this season. Most of the irrigation is done through natural rainfall. The main reason for the low utilization of land is the unavailability of labor in the village and high wages of labor which is not viable for the farmer to give at low margins.

Rabi season is time after rainfall and most of the winter months in the northern parts of India. Wheat and Barley are the main crops grown during the season. Channa, sarson and some other vegetables are also cultivated. Area under cultivation for Wheat and barley is 450 acres and 375 acres respectively. (See Exhibit 6) Farmers have to use irrigation sources like tube wells and borewells. But there are many farmers who do not have irrigation facilities and thus, do not cultivate the second crop. Consequently, less area of land is cultivated during Rabi as compared to Kharif. Irrigation cost is very high in Rabi as compared to the Kharif season.

Exhibit 7 shows the percentage utilization of land for cultivation in Kharif and Rabi season which is 69% in Kharif and 44% in Rabi season (See Exhibit 7). This analysis indicates that agriculture land utilization by farmers is very low in both the seasons. Less utilization of land increases the input cost per unit crop grown and hence decreases the income generated from the same.

The reasons for underutilization of land were discussed with some farmers of the village. It was found lower availability of water for irrigation and less availability of agricultural labor force. Due to the uncertainty of labor, and high wages, cultivators do not take risk by sowing more area. In Rabi, the major reason for underutilization is the lack of irrigation, whereas in Kharif, the underutilization is due to higher input cost, unavailability of agricultural laborers and high wages which makes the cultivation unviable. Farmers in the village are left to grow fodder for their cattle to feed. At national level, the data since 1990 shows that the input costs are increasing at a faster rate than the prices of the crops in the market. Therefore, low agricultural productivity exists in Bhankhla Village.

Goal-Doubling Farmers' Income

India's strategy for development has focused primarily on raising agricultural output and improving food security. The strategy involved an increase in productivity through better use of technology and varieties, and increased use of quality seed, fertilizer, irrigation and agro chemicals, b) incentive structure in form of remunerative prices for some crops and subsidies on farm input, c) public investments and facilitating institutions. The strategy was successful as India was able to address food shortage problems. But in all these years, no policy could explicitly recognize the need of increasing farmer's income. The NSSO data shows 22.5% of farm households are below the poverty line (See Exhibit 8). The low farmer income forced many cultivators to leave farming. Therefore, the Government of India in 2016, came up with the goal of doubling farmer's income by 2022 and promote farmer's welfare and reduce agrarian distress by bringing parity between income of farmers and those working in non-agricultural activities.

Since the goal has been set up, it has looked unachievable. Agriculture will require a growth rate of 10.41% per year to achieve this goal. It is to be noted here that this level of growth has never been achieved in the history of Indian Agriculture. It is important to understand the focus areas to double the farmer's income. If technology, input prices, wages and labor, use could result in per unit cost savings, then the income of farmer would rise. Another source is the better price realization for the produce.

To achieve doubling of farmer income by 2022-23, the ongoing growth needs to be sharply accelerated. NITI Aayog has come up with various steps which can help increase the farm income. These are such as

- 1) Increase in Productivity of the crops There has to be an increase in productivity in terms of more utilization as well as more output on fixed input of land.
- 2) Saving in cost of production With support from the government, if the cost of production can reduce, it will ultimately benefit the farmer's income.
- 3) Increase in cropping intensity Focusing on the irrigation will allow farmers to grow two and even three crops in a year. Policies like, Pradhan Mantri Krishi Sinchai Yojana looks to expand the irrigation facility in the villages.
- 4) Diversification through high value crops The staple crops occupy 77% of the Gross cropped area but contribute only 41% of the total output. On the other hand, the same value is contributed by horticulture which accounts only 19% of the area.
- 5) Better market linkages through e markets like e-nam etc.

Actions

The increase in sources of income discussed above can be regrouped into five major development interventions. These actions can be taken by the government to make some quick changes.

- a) Development Interventions- Some recent initiatives of Government of India aim to raise output and reduce cost include Pradhan Mantri Krishi Sinchai Yojana, Initiatives like Pradhan Mantri FasalBima, Prampagat Krishi Vikas, Soil Health card etc. This will bring investment in Agriculture which is as low as 2.76% of GDP
- b) Interlinking of rivers Irrigation is one of the major challenges remain in the agriculture of India. The data says that only 38.5% of the sown area engage in second crop in year. It shows 60% of land remains unproductive for half a year. Focusing on providing irrigation facilities is the need of the hour. Water policies are only successful in some parts of India. Government needs to realize its importance in Agricultural growth.
- c) Technologies and Innovations Sustainable growth in productivity and farmer income requires a shift from input intensive agriculture. Breakthrough in technologies is important to bring new innovations which can reduce the inputs for a better output.
- d) Institutions building- Indian Agriculture is dominated by Marginal and small farmers, who suffers disadvantage in terms of economies of scale. Therefore, collective action and building collective enterprises is also an important feature in agricultural growth. Various organizations like NABARD and SFAC are actively engaged in building Producer Companies which are self-sustainable and profitable organizations.
- e) Policy Interventions Various Policies have been taken by government.
 - 1) Initiating market reforms through the State Governments by amending the agriculture marketing regime
 - 2) 22,000 Gramin Haats are to be upgraded to work as centers of aggregation and for direct purchase of agricultural commodities from the farmers.

- 3) Launch of e-NAM initiative to provide farmers an electronic online trading platform. Implementation of flagship scheme of distribution of Soil Health Cards to farmers so that the use of fertilizers can be optimized. So far more than 15 crore Soil Health Cards have been distributed in two cycles.
- 4) “Per drop more crop” initiative under which drip/sprinkler irrigation is being encouraged for optimal utilization of water.
- 5) “Paramparagat Krishi Vikas Yojana (PKVY)” under which organic farming is being promoted. North East is being developed as organic hub.
- 6) A revised farmer friendly “Pradhan Mantri FasalBima Yojana (PMFBY)” have been launched. The scheme covers various types of risks from pre-sowing to post harvest and the farmers have to pay very nominal premium.
- 7) Under “Har Medh Par Ped”, agro forestry is being promoted for supplementing farm income, increase risk management and climate resilient agriculture as an important component of Integrated Farming Systems.
- 8) Minimum Support Price (MSP) is notified by the Government for certain crops. Giving a major boost for the farmer’s income, the Government has approved the increase in the MSPs for Kharif & Rabi crops for 2018-19 season at a level of at least 150 percent of the cost of production.

Response

Bhagilal Jain, a progressive farmer in the Bhankhla village read all these government schemes. While he said that on paper the schemes look very attractive and hope to bring change but in reality not many schemes exist and even if some of them do, they lose their essence by the time they come to the village and not effectively implemented. He further adds that these schemes have existed in some or other way since many years. But still has failed to bring any major revolution in the sector. He is confident that these schemes will not be able to achieve the growth of 10% in Primary sector and goal doubling of farmer’s income.

Few days after Nandulal Jat and Shyamlal Mali were introspecting about their course of action, Bhagilal Jain, who is also a former Sarpanch of the village called a public meeting to discuss some issues faced by the farmers. The Member of the Legislative Assembly of the state was also invited to the meeting. The Bhankhla village was facing two problems simultaneously. One, there was no major source of income in the village other than agriculture forcing the villagers to migrate in search of livelihood. Second, in the farms, there is a huge labor crunch and the labor wage is very high which discourages the farmers to hire labor. It results in less utilization of farm lands.

The meeting began with farmers alleging the local officials and elected representatives such as Sarpanch of not allowing Gram Sabha to function properly and taking all the decisions on their own. Also, they questioned them for providing employment for very few days and for a very small remuneration. The Sarpanch and officials however maintained the position that limited funds are allotted from Block and District and therefore they are not to be blamed. They also defended themselves by stating that they got the new panchayat building constructed wholly through the budget of MGNREGA only.

Bhagilal Jain was listening to everyone but had not interrupted by then. He knew that the purpose of that day’s meeting was something else. Bhagilal then, stood up and proposed a plan in the meeting to the community. He said government needs to link MGNREGA with Agriculture in the village. This means that if government is willing to provide 100 days of employment to every household, it must divert the

funds to provide agricultural labor in the agricultural farms. This will ensure agricultural labors getting employment in the village only and helping farmers by saving their costs. Farmers were initially doubtful as it was a very new idea which they had never thought of. However, after deliberations and discussions, there appeared to be a consensus among farmers. Of course, the scheme will turn out to be beneficial for them and the community will always accept policies which benefits them directly. He also says that the government should focus on increasing the productivity and reduce the cost of production with technological advancements. Also focus on irrigation is very important. While this is a long term solution, in the short term by helping in sharing labor cost, government will reduce the farmer's cost of production, increase productivity by enabling farmers to cultivate all available land and therefore increase the output. In the labor market, the government will ensure employment of the agricultural laborers which will give people source of income and ensure economic growth. This will also reduce the migration from villages to towns and cities. The MLA of the region agreed to take the suggestion to the government and to the Member of Parliament so that he can raise the issue at Central level. With this, the meeting ends and farmers go to their farms.

However, for the government, it will be a tough decision because such policies can have large scale repercussions. Whether the policy will really bring change in employment and increase farmer's income or will it just become a burden for the government as it will require large funds to enroll in the scheme is a question that remains to be answered. It is also possible that only large farmers get the benefit of such a policy whereas small farmers do not get anything out of it. With an aim of doubling farmer's income, can such an intervention really help because this will directly reduce the cost of production for farmers? If yes, then how the scheme should be formulated is a big policy challenge. These are the major questions hanging around which needs relevant discussion and deliberations. It is therefore important to analyze such policy and come up with a conclusion.

About the Author

The case has been written by Prakhar Sonkhya. He is currently pursuing Post Graduate Diploma in Rural Management (PGDRM) from Institute of Rural Management, Anand (IRMA). He is an economics graduate from St. Xavier's College, Jaipur. The author has used his experience from Village Fieldwork Segment where he went to the same village in Rajasthan. VFS is a part of 2-year curriculum at IRMA. The author thanks MGNCRE for giving the opportunity to students for writing teaching cases and produce quality academic content for young students.

Annexures

Exhibit 1 No. of Households and members in MGNREGA in Bhankhla Village

Street name	No. of households	Male	Female
Bagaria	20	20	0
Bhil	100	60	90
School Rasta	20	20	25
Mali	70	40	70
Khoival	75	20	70
Brahman Kheda	4	4	0
Total	289	164	255

Source Gram Panchayat Bhankhla, 2018

Exhibit 2 Average Days of Employment under MGNREGS

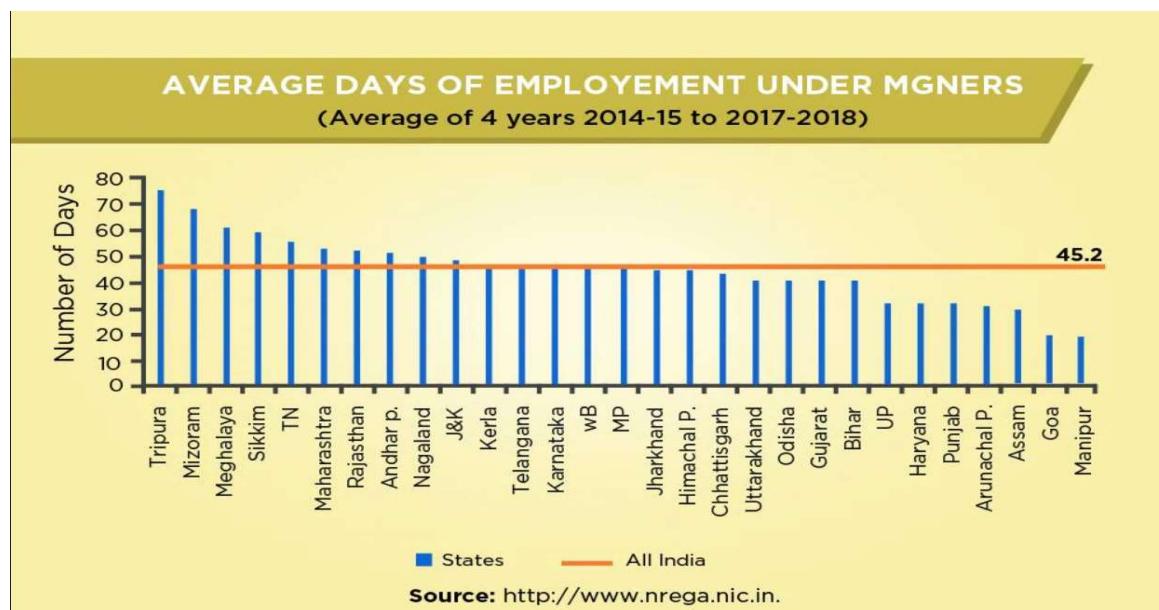
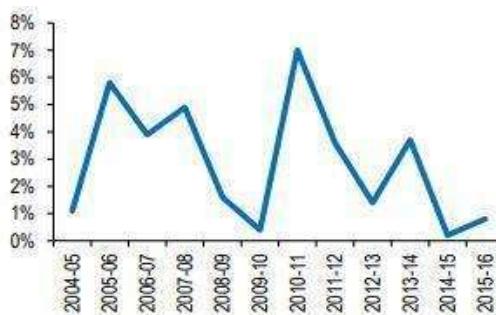


Exhibit 3 Agricultural Growth from 2004-05 to 2015-16



Source CSO and NSSO Data

Exhibit 4 Agricultural Area in Bhankhla Village

	Area (Hectare)	Area (Acres)
Total Area	1827	4567
Agriculture area	963	2407
Irrigated	426	1065
Non irrigated	537	1342

Source Patwari, Bhankhla

Exhibit 5 Kharif cultivation pattern in Bhankhla Village

Crop	Area (Hectare)	Area (Acres)
Maize	250	625
Jawar	200	500
Cotton	110	275
Chari Jawar	65	162.5
Gwar	25	62.5
Groundnut	10	25
Vegetable	3	7.5
Urad	2	5
	665	1662.5

Source Agriculture Extension Officer, Bhankhla Village

Exhibit 6 Rabi Cultivation Pattern in Bhankhla Village (2016-17)

Crop	Area (Hectare)	Area (Acres)
Wheat	180	450
Barley	150	375
Channa	26	65
Mustard	35	87.5
Masoor	5	12.5
Vegetable	20	50
Others	10	25
Total	426	1065

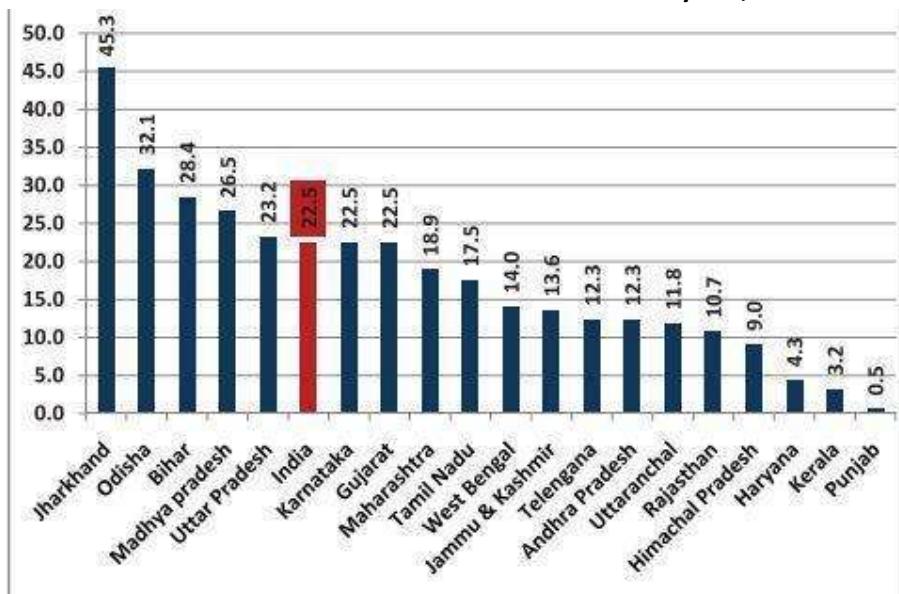
Source Agriculture Extension Officer, Bhankhla Village

Exhibit 7 Agricultural land utilization

Total Agriculture Area	Area cultivated during Rabi	Land utilization during Rabi	Area cultivated during Kharif	Land utilization during Kharif
2407.5	1065 acres	44%	1662 acres	69%

Source Patwari Office, Bhankhla Village

Exhibit 8 Farm Households with Income below Poverty line, 2011-12



Source NSSO Data, 2011-12

Mitesh's Ordeal with Anaemia

Shalok Kapoor IRMA

Challenge

Case Identifies for the prevalence of Anaemia and creation of a Woman-Centric Enterprise to combat the menace. Sonkiben has taken her daughter ailing with anemia to Mitesh, a respected doctor in Vadodara. While hearing out Sonkiben, Mitesh starts to feel that Anemia is a far deep-rooted problem which coupled with ignorance and myths amongst the villagers has led to the problem being termed as incurable amongst the villagers. Mitesh takes up the cudgels and visits the village where after gathering data and knowing the behavior of villagers concerning Anemia, he suggests the creation of a woman-centric enterprise that would manufacture an Iron enriched mixture that would help fortify food.

Background

Sanada

Sanada is a village panchayat located in the Chhota Udepur district of Gujarat, India. Gandhinagar is the state capital for Sanada village. It is located at a distance of 15.9 km from Chhota Udepur.

Sanada has nearly 906 males and 925 females with an average age of the population being close to 30 years.

Brief History of Sanada

The antiquity of the settlement dates back to the 1500-1600s. Hitherto, the Raja of Baroda, Fatesi Raja, and his confederate, Natwar Singh were the possessors of the village land. The Raja of Baroda, Fatesi Raja, gifted the 700 acres of the village land to Vohraji as a relic of reverence. Vohraji became the possessor of the land. The hitherto population of the settlement were Adivasis. They carried bows and arrows and wore lungis. The former societies were hunter-gatherer societies. They used to hunt and consume the quarry. They used to disintegrate the leaves of trees and used to boil them and consume them, as an adjunct meal. They used to commute bare-footed. Soon, things began to change. A plethora of people became apostles (bhakts) of Ramdev baba. They relinquished liquor and meat. So, the magnitude of money they could spend on farming saw a surge. This caused a surge in the household income of the villagers. The wealth of the households proliferated. Education became an imperative component of the change in the village.

Although Sanada developed from hunter-gatherer societies yet today it is not far behind when it comes to the use of mobile phones. However old beliefs and customs still house themselves inside the villagers. (Refer Table 1 under Annexures to understand the Village Profile)

Anemia

Anemia is a condition in which the number and size of red blood cells or the hemoglobin concentration falls below an established cut off value consequently impairing the capacity of the blood to transport oxygen around the body. Anemia is both an indicator of poor nutrition and poor health. Anemia impairs health and well-being in women and increases the risk of maternal and neonatal adverse outcomes. Anemia affects half a billion women of reproductive age worldwide. Many reports indicate that one in every two Indian women (56%) suffers from some form of anemia and 4 out of every 5 children in the age of 6-35 are anemic. While the causes of anemia are variable, it is estimated that half of the cases are due to iron deficiency (Refer to Annexure 6)

Iron and Folic Acid program (IFA)

The Iron & Folic Acid Program (IFA) introduced by the government in the 80s has been underway for more than 25 years now. It is aimed at reducing the levels of anemia among pregnant and lactating women; and children. The program is primarily prophylactic & not therapeutic (aimed to prevent, not to cure) and most of the health units are equipped only for the former kind of treatment. Both the Central & the State Governments are involved in this scheme. While the Central Government is involved in the procurement of medicines, the State Government is involved in the distribution to the various health units across the state.

Distribution of medicine in rural Gujarat and Sanada Village is done through multiple mediums. Young children below the age of 4 get the dose from the Anganwadi, a government-sponsored child & mother care center. The school-going children are provided iron & folic acid tablets in schools during the mid-day meals provided by the government. Adolescent girls and pregnant & lactating women are provided iron & folic acid tablets through the network of health care units spread across the state.

Key Observations and Challenges

1. Physical Observations of Anemia

During discussions about anemia Mitesh observed that a majority of people mainly adolescents had pale nails, a white or pale tongue, and the pallor of eye signs which were mainly seen when the body felt a lack of oxyhemoglobin. The above findings directly correlated the presence of Anemia in the village households.

2. Lack of widespread awareness and education

It was observed in numerous discussions that the villagers knew that their Hemoglobin levels were low, still they are reluctant in taking the Iron tablets which are provided. Some of the findings on the reason can be attributed to

- Unawareness of the long term problems caused due to Anemia and how its side effects will subside.
- Lack of information sharing along with the distribution of tablets and the consequent unawareness of their benefits, which has made them insignificant in households.

3. Lack of Monitoring mechanism

There was no monitoring of the work of the ANMs (Auxiliary Nursing Midwife) who are supposed to visit every house. ANMs were found to only visit houses of pregnant women. ANMs were expected to conduct a check for Anemia using paper tests which were not conducted regularly.

4. Poor testing and treatment facilities at the village

There was a lack of testing and delivery facilities at hospitals. All critical delivery cases were referred to hospitals at Chita Udepur, thus providing no permanent mechanism to test anemia levels of the general population.

5. Lack of breadth in the program

The programs were mostly focused on pregnant women and school children. It did not take into consideration children below 5 years, adolescent girls, women out of school or recently married women. There was no focus on un-registered and non-permanent (migrating workers) residents either.

Storyline

Sonkiben, the mother of three daughters, is perturbed by the health of her eldest daughter Laxmi. She is worried that her once healthy daughter now complains of being weak and without an ounce of energy

whenever asked to work. Her skin is going pale and her tongue is going white. She checked with the doctor in the village who visits once a week and got to know it is Anemia. After sitting for nearly an hour with the village doctor she could only grasp the pronunciation of the word.

The tension of her daughter's deteriorating health was taking over her. She could remember that her neighbor's wife was also diagnosed with the same. She remembered how the once beautiful Sumitra had gone pale and weak in a couple of months. From what she remembered Sumitra's husband used to regularly complain that the medicines given by the doctor under a program run by the government were bad. He said this because the stool of his wife after consumption of the tablets had turned to a shade lighter than black.

Helpless Sonkiben took it upon herself to save her daughter's life. She started from the village level ASHA worker who knew what was Anemia and tried her best to explain it to Sonkiben but no avail. Sonkiben was now burdened with ignorance. She thought that Laxmi would now stay weak and frail. Added to this was the tension that the supplies given by the government were not effective in combating the menace, Sonkiben wanted a shimmer of hope from somewhere.

Sonkiben's husband Bachubhai could no longer see the chaos in the house. He enquired that the son of a distant relative of the Sarpanch was a doctor in Vadodara. He left no stone unturned and took Sonkiben and his daughter there straight away. After waiting for nearly three hours they had finally got the appointment. Mitesh examined the girl in the presence of her mother and told Sonkiben that she was suffering from Anemia. Tears of helplessness rolled down Sonkiben's cheeks as she was finding it difficult to comprehend what was the actual disease that her daughter was suffering from. Mitesh realized and started to explain with the help of medical charts and diagrams that depict the human body.

A long session that explained everything from what anemia was to what were its causes was at least enough to assure Sonkiben that her daughter was not going to die and Anemia was curable.

Mitesh gave Laxmi some medicines and strictly told Bachubhai to continue medicines even if the stool changes color. After they left, Mitesh was immersed in thoughts. He thought it was Laxmi this time, her father and mother were worried about Anemia but what about other families? Families that had never given a thought to anemia were too shy or were too ignorant to consult a doctor. These questions made Mitesh turn in his bed. He knew about the causes of Anemia but was finding it difficult to pin one cause to the drawing board. Why Sanada was the question roaming around in his mind.

Motivated by these questions he packed his bags the very next day and left for Sanada. He planned to stay at his uncle's (The Sarpanch). His main motive was to find a link for the repeated causes of Anemia. It took him two days to forge a rapport with Raju Bhai, a school teacher who thought Mitesh had come to finally give them respite from Anemia; Sumitra, an ASHA worker in the village, Shardaben and Lal Singh, who was the most influential man of the village after the Sarpanch.

Mitesh made repeated rounds to several houses in the village and took note of weights and heights of female respondents. On several of these visits, the villagers who had a little knowledge about Anemia often told Mitesh that he could not do anything because Anemia was hereditary.

There were several other observations he made regarding anemia, the government-run Iron and Folic Acid program and also about the current level of awareness amongst the villagers. Mitesh found out that the IFA program had percolated to the lower levels in the village but it was the myths associated with the usage of tablets and how their consumption led to change in the color of stool led to the

villagers disapproving of the IFA program. The villagers often fed these tablets to their cattle. This often led to a consensus about the tablets not being effective.

He collated the above observations with data on weights. He compared the data on weights with the respective heights. With this, he could find households who would become his target group if he planned to put into place an intervention. One morning when Mitesh was on such rounds, he came across a boy who was fighting with his mother against eating the maize-based Roti (flatbread). Mitesh marveled at how the boy always had an argument to combat his mother's pestering.

It was here that it struck Mitesh that Anemia isn't always hereditary but can also be caused due to unavailability of proper nutrition to the body. The people of Sanada had always been victims of low rainfall which coupled with undulated terrain has often led to soil erosion.

This has led to lower water holding capacity of the land which doesn't allow them to go for long duration crops. The lower availability of water has pushed the villagers to farm for maize. The produce of the farmers in Sanada mainly goes to self-consumption and only a small part can reach the mandi via a local trader or an APMC mandi.

This coupled with the fact that nearly 79% of the farmers hold less than 4 acres in the village leads one to believe that they can plant only one crop in a season. (Refer Table 2 & 3 for Information on Magnitude of Land Holding and Profile of Crops grown in Sanada) Since the problem was found Mitesh wanted to go towards developing a sustainable solution. He had a couple of alternatives in mind.

Actions Taken

The first alternative came from trying to formulate a new system of agriculture which not only incentivizes farmers to grow new crops but also takes care of resource usage in terms of infrastructure availability. He believed that if the farmer grows new crops other than maize, the body gets the required amount of nutrition and any villager suffering from anemia due to lack of available nutrients would be cured in a matter of a few years given crop cycles and other timings in case of agriculture. He listed some triggers required for that push

Accessing Inputs and Credit Facilities

Mitesh found out that there was a dearth of infrastructure facilities (extension services providers) and service delivery mechanism in Sanada, concerning to the information on inputs, training, and technical assistance required for the capacity building of farmers to increase the yields and cope up with idiosyncratic shocks with effective coping mechanisms. Sanada's farmers were facing financial difficulties in borrowing money from banks and other conventional channels (Institutional credit facilities), instead, they opted for unconventional channels (Local buyers, middlemen, etc.) which resulted in high-interest rates, with the result of not being able to extinguish the debt and thus seeing their land expropriated. Credit is required to invest in the mechanization of farming activities (which is very low in case of Sanada), and to acquire seeds, fertilizers, and pesticides (inputs).

Risk Management

Average landholding in Sanada village was around 2 acres per household (marginal farmers), smallholder farmers were often characterized by a very low propensity in making investments or undertaking new crops unless they are pretty confident that these will generate higher returns of income (risk aversion).

Information Asymmetries

Information asymmetries can cause farmers to make bad choices. When information is not complete there is an absence of bounded rationality among the farmers. The contracting firms would provide specialized information on new crops, timing on planting and harvesting of produce to ensure better yields. The plan to provide an agricultural push seemed a long lost goal. The other alternative that he considered was related to the Fortification of food.

Food fortification or enrichment is the process of adding micronutrients (essential trace elements and vitamins) to food. It can be carried out by food manufacturers or by governments as a public health policy which aims to reduce the number of people with dietary deficiencies within a population. Fortification of food would be coupled with other activities that generate awareness that seemed like the action plan that he wanted to implement in Sanada. However, the major bone of contention here centered on dedicated and continuous cooperation by the villagers.

Response

The Action Plan

Interventions for the prevention and control of anemia can be implemented by leveraging existing health, education and food-production systems as a delivery platform in the following ways.

1. A coordinated and sustained health education approach to improve knowledge, attitude and practice concerning addressing iron-deficiency among women should be carried out useful in making
2. Intermittent iron supplementation for females can be delivered via a range of community and health systems, including schools (to adolescent girls using weekly “iron days”), adding iron to foods consumed by populations at particular risk of anemia (e.g. fortified biscuits for schoolchildren, adolescents, and women).
3. Food-based strategies to address iron-deficiency among Indian women includes encouraging appropriate dietary choices, diversification of the diet to include iron-rich foods, improving popularity and consumer accessibility to foods that contain vitamin C, which enhances iron absorption, as well as behavior modification to encourage women to avoid consuming tea with meals as tea may interfere with iron absorption. An iron-rich food source worth promoting is millet (Ragi ganji), either as roti bread or as a malt beverage. Ragi ganji has higher iron content than rice and maize, and less iron-inhibiting phytates than rice-wheat and maize

An Iron enriched mixture to help in fortification of food

Mitesh had read a research paper where he came to know that if certain ingredients were mixed in a certain proportion it would help create a mixture which is mixed with the flour used in the house and consumed for at least 5-6 months, it would help make up for the nutritional deficiency in the human body. Mitesh came up with a mixture that contained ingredients namely Wheat, Chickpea, Sesame seeds, Jaggery and Groundnut in a powder consistency. (Refer Table 4 for Information on Proportion of Contents of the mixture)

Mitesh wanted a sustainable solution hence wanted a committee that would oversee all processes from the procurement of raw materials to final implementation. Mitesh defined a structure with certain villagers and enlisted responsibilities to be undertaken by them. (Refer Figure 1 from the Annexures for Information on the structure proposed by Mitesh)

The structure would function in the following way

- The entire process will be first briefed to the stakeholders of the committee.
- Sonkiben who is already the head of an SHG in the village will be functioning as the supervisor of the entire process who would coordinate the operations between various other members.
- She would also work along with the other 8-10 women who would be starting the process of grinding and roasting the ingredients together to finally form the mixture.
- Raju Bhai, a teacher in the village would be coordinating the procurement of the 5 constituents of the mixture from the nearest mandi along with Bachubhai. They would also have the task of separating the components for the necessary proportion required.
- Shilpa ben and Sharda ben would act as a catalyst to generate awareness about the mixture and disseminate knowledge about dosage (25g-twice a day) and other necessary queries.
- The proportion of the components and the quality of the entire composition will be kept in check by Shilpa ben.
- The financial activities and cash balances will be kept in check by Sumitra ben who is an ASHA worker in the village.
- Once the product is ready, marketing and selling the product within the village will be done by Raju Bhai and Shilpa ben.
- Mitesh was happy by how the action plan was formulated by him and was going to meet the Sarpanch and other stakeholders to finally bring the entire plan to life. He had thought that he would want to fund this entire project as it would involve a cost of nearly 35000-50000 rupees.

Questions for Discussion

- 1) What challenges could Mitesh face while implementing the 7-member enterprise?
- 2) How can Mitesh ensure that the proposed member wouldn't shy away from working their designated responsibilities?
- 3) Why did Mitesh reject the alternative of improving agriculture?
- 4) What difficulties can Raju Bhai and Bachubhai face while procuring the ingredients?
- 5) To identify the base group and the target group, Mitesh would have to carry out Blood tests, how would Mitesh onboard villagers for the same?

About the Author

The above case has been written by Shalok Kapoor who is currently pursuing a Post Graduate Diploma in Rural Management from the Institute of Rural Management Anand (IRMA). He got the idea to write this case after witnessing the appalling cases of Anemia amongst women in Sanada after he had spent approximately 45 days in the village under the Village Fieldwork Segment. The author has also completed his graduation in Economics from Punjab School of Economics, Guru Nanak Dev University.

Annexures

Table 1 Village Profile

Name of Village	Sanada	
Name of Gram Panchayat	Sanada	
Name of District	Chhota Udepur	
Boundary	North	Dahod (Gujarat)
	South	Bharuch (Gujarat)
	East	Alirajpur (M.P.)
	West	Vododara (Gujarat)

Table 2 Magnitude of Landholding by Households

Type of Landholding	No. of Households
Marginal (0-2 acres)	204
Small (2-4 acres)	150
Medium (4-10 acres)	90
Large (>10 acres)	3
Landless	3

Table 3 Profile of crops grown in Sanada

Crops Grown	Rabi (acres)	Zaid (acres)	Kharif (acres)
Wheat	71	0	0
Maize	120	0	30
Pulses	28	20	70
Commercial Crops	0	2	5
Vegetables	2	2.5	4

Table 4 Proportion of Contents of the mixture

Contents	Composition (In 1 kg)	Iron Content
Wheat	100g	5.8 mg
Jaggery	300g	33 mg
Sesame Seeds	250g	36.5 mg
Groundnut	100g	4.6 mg
Chick Pea	250g	15.5 mg

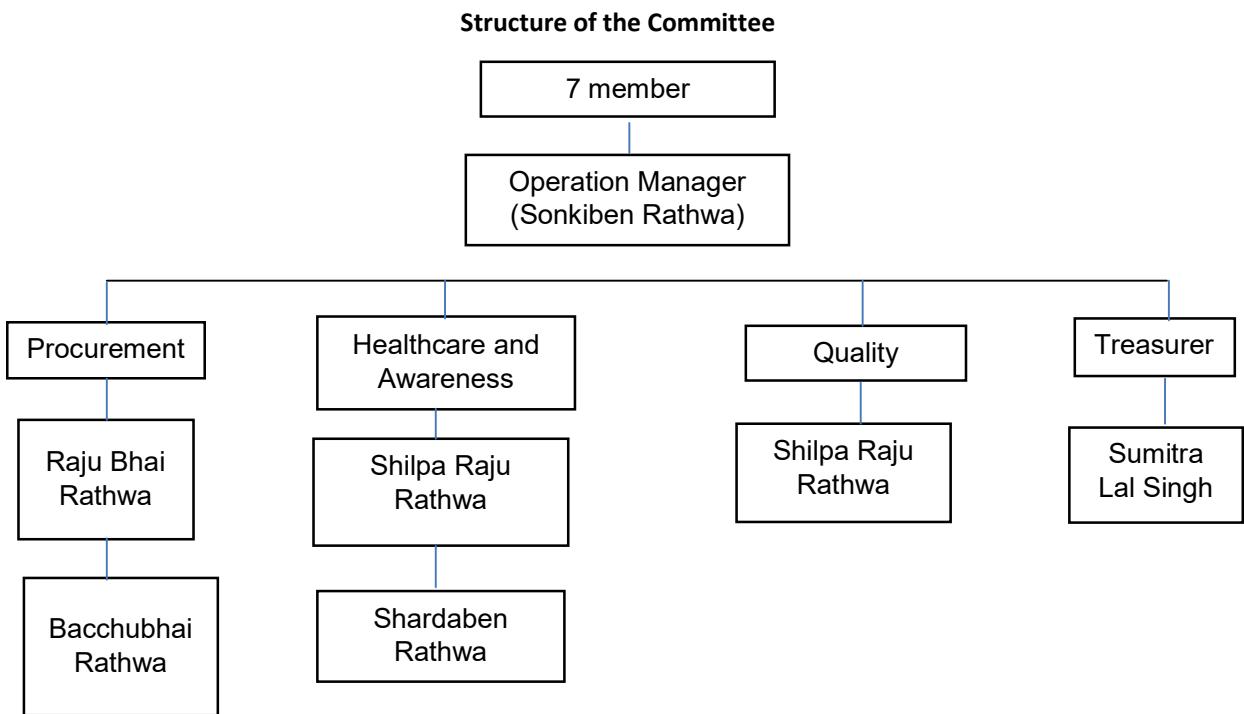


Figure 1 The structure of the enterprise as proposed by Mitesh

Annexure 6

Causes of Anemia

The most common cause of anemia worldwide is iron deficiency, resulting from prolonged negative iron balance, caused by inadequate dietary iron intake or absorption, increased needs for iron during pregnancy or growth periods, and increased iron losses as a result of menstruation and helminth (intestinal worms) infestation. An estimated 50% of anemia in women worldwide is due to iron deficiency.

1. Other important causes of anemia worldwide include infections, other nutritional deficiencies (especially folate and vitamins B12, A and C) and genetic conditions (including sickle cell disease, thalassemia – an inherited blood disorder – and chronic inflammation).
2. Anemia is common in severe malaria and may be associated with secondary bacterial infection.
3. Anemia is a particularly important complication of malaria in pregnant women. In moderate- and high-transmission settings, pregnant women, especially women who are pregnant for the first time, are susceptible to severe anemia.
4. Pregnant adolescents are particularly vulnerable to anemia because they have dual iron requirements, for their own growth and the growth of the fetus, and are less likely to access antenatal care.

Anemia and iron deficiency reduce individuals' well-being, cause fatigue and lethargy, and impair physical capacity and work performance. Median losses in physical productivity due to iron deficiency are important. Maternal anemia is associated with mortality and morbidity in the mother and baby, including risk of miscarriages, stillbirths, prematurity and low birth weight.

Anemia is interlinked with the five other global nutrition targets (stunting, low birth weight, childhood overweight, exclusive breastfeeding and wasting). In particular, the control of anemia in women of childbearing age is essential to prevent low birth weight and perinatal and maternal mortality, as well as the prevalence of disease later in life

Political Interventions in Rural Credit Markets

Rajni Vidhani IRMA

Challenge

As elections approach, there are many populist measures that are adopted by the political parties to attract voters. One of such populist measures is farm-loan waivers. They are announced by parties to give relief to farmers and help them get out of the clutches of debt. However, such farm loan waivers engender moral hazard and deteriorate the credit culture leading to an increase in defaults (Gene, X. and Kanz, M., 2017). Alongside, the banks resort to the practice of credit rationing and limit their lending to farmers. This defeats the purpose of the waivers i.e. providing relief to farmers and also create problems for them to get loans in the future as well. So, it becomes imperative to see if such waivers have any positive impact on farmers or if they are further creating problems in the rural credit market.

Setting up the Context

Farm loan waivers are one of the populist measures adopted by politicians to provide relief to the farmers from the clutches of heavy debt. Recent examples of this are the farm loan waivers announced in Rajasthan, Chhattisgarh and Madhya Pradesh in December 2018. Since April 2017, eight states have announced farm loan waivers totaling ₹ 1.9 trillion. Farm loan waivers are announced to give relief to the farmers but they engender moral hazard and deteriorate the credit culture leading to an increase in defaults. There are empirical pieces of evidence that loan waivers impact credit culture which leads to higher rates of delinquencies and defaults (Gene, X. and Kanz, M., 2017). This is primarily because farmers feel that there is no incentive in making timely repayment, and they would have been able to avail the benefit of waiver had they not paid back their loan in time (Jain and Raju, 2011). This is why they might end up delaying payments in the subsequent repayment cycles and defaulting at times in hope of next loan waiver. Thereby, borrowers' expectation of repeated bailouts by the government may vitiate credit culture among farmers and may further constrict farm lending (De and Tantri, 2016).

Farm loan waivers have differentiated impacts across different lenders. This is primarily because lending patterns differ and information play a great role in this case. Therefore, the impact caused due to such waivers is different for Scheduled Commercial Banks (SCBs), Regional Rural Banks (RRBs), Primary Agriculture Credit Co-operative Societies (PACS), Microfinance Institutions (MFIs). Not only this, but it has an impact on the expenditure pattern of farmers as well. So, it becomes important to find out how the spending by farmers change and how much of money saved is actually spent on productive purposes. Along with this, we have to see how the change in expenditure pattern impacts future credit availability for the farmers.

Background

During the early years of Independence (1947 to 1967), India was posed with several challenges which presented the case of classic market failure in the rural sector, where information asymmetry was restricting the foray of banks. Further, the non-availability of collateral made it difficult for people to approach banks. With the transfer of Imperial Bank of India to SBI, the banking infrastructure improved as SBI expanded in underserved areas and started facilitating credit in these areas. Thereafter proactive measures were taken such as credit guarantee and deposit insurance which promoted the spread of credit and savings habits to the rural areas. However, the problems of connected lending still existed as many banks were under the control of business houses.

The period from 1967 to 1991 was characterized by major developments, viz., social control on banks in 1967 and nationalization of 14 banks in 1969 and six more in 1980. This was the step taken by the government to use the scarce resources judiciously in promoting rural development and ensure the availability of credit in these areas. With the nationalization of banks, the government was able to set the norms for Priority Sector Lending under which banks were supposed to channel their credit to priority sectors. Earlier there were no specific targets, but gradually government started defining the percentage of credit that should be channeled towards the priority sector. These targets can be seen in Exhibit 1. Owing to these targets, SCBs have to channel their credit towards weaker sections of the society. This was a positive move as it helped the rural population to get credit from banks.

However, it is still not easy for these sections to get bank loan sanctioned. The reasons for the same are as follows

1. They don't have collateral and problem of high information asymmetry exists in these markets. Owing to this it is difficult for banks to approve the loans.
2. The ticket size for loans is small and the cost of making credit reach in rural markets is high and therefore, the loans don't get sanctioned.
3. The documentation process is heavy and difficult for these borrowers to complete. Therefore, it becomes difficult to apply for loans at times.
4. Repeated political interventions in these credit markets further make banks suspicious before lending because such interventions create moral hazard and thereby, banks start credit rationing to keep their portfolios secure.

Government Interventions- Farm Loan Waivers (History)

JP government in 1990, announced a first-ever nationwide waiver which cost Rs. 10,000 crores to the government. Thereafter, on February 29, 2008, P. Chidambaram, the then Finance Minister for United Progressive Alliance government led by Prime Minister Manmohan Singh provided loan waiver to farmers under Agricultural Debt Waiver and Debt Relief Scheme (ADWDRS), 2008. Under the scheme, direct agricultural loans disbursed to farmers by Scheduled Commercial Banks, Local Area Banks, Cooperative Credit Institutions and Regional Rural Banks were eligible. The loans taken between 1st April 1997 to 31st March 2007 overdue as on 31st December 2007 and remained unpaid until 29th February 2008.

Apart from this, since 2014, 10 states have announced farm loan waivers amounting to ₹2.4 trillion (1.4 percent of 2016-17 GDP at current prices). This is significantly higher than the two-nationwide loan waiver programs - ₹100 billion waiver Programme in 1990 (₹506 billion at 2016-17 prices using the GDP deflator) and ₹525 billion Programme in 2007-08 (₹812 billion at 2016-17 prices using the GDP deflator).

The features of loan waivers undertaken by state governments since 2014 are detailed in Table 1.1. Broadly, there is a higher focus on co-operative credit institutions in state-level debt waiver programs. Most programs cover short-term crop loans and prescribe an upper limit on the amount of relief granted.

Storyline

Is farm loan waiver an appropriate response to farmer distress?

The policy for farm loan waivers has been mainly justified by Government on the grounds of rural-urban divide in terms of growth, social unrest and farmers' suicide as the justifications for the national ADWDRS (Reddy, 2019). Climatic risk and market risk are well-established causes for agrarian distress in

India; state governments under various political dispensations have cited drought and/or price collapse of agriculture produce as the reasons for undertaking loan waivers.

The link between agrarian distress and adverse rainfall in India is well established in the empirical literature, as the irrigation infrastructure is still underdeveloped (Cote et al., 2013 & Burgess et al., 2011). At the national level, rainfall performance in the years leading up to the ADWDRS program was normal, with no significant deviation from Long Period Average (LPA) between 2003-04 to 2007-08, after three successive years of drought between 2000-01 and 2002-03. The recent state-level loan waiver announcements since 2014-15 co-incidental with poor rainfall. (Chart 1 - Annexure 2)

As for prices, they show high inflation in the three years (2005-06 to 2007-08) that immediately preceded the Agriculture Debt Waiver and Debt Relief Scheme (ADWDRS) program, though prices were depressed in five of the six years between 1999-00 to 2004-05. Another factor contributing to agrarian distress has been the higher increase in input costs vis-à-vis agriculture produce, thereby eroding agricultural margins (Ramakumar, 2018). Though margins for principal food grain crops (rice and wheat) rose significantly in 2007-08, the margins for the preceding year of ADWDRS program were low. This indicates the buildup of agrarian distress. Agricultural prices and margins remained elevated between 2007-08 and 2013-14. However, in the recent period from 2014-15 onwards, there has been a moderation in prices and margins that could have been a motivating factor for the recent state-level farm loans waiver programs (Chart 2.1 and 2.2. - Annexure 3). The price movements could be a part of the business cycle, where an upswing phase of higher prices is often followed by low prices and shrinking margins.

The data doesn't provide significant evidence in favor of the claim that deficit rainfall conditions and downswing in agriculture produce prices are the reasons for announcing loan waivers. However, the coinciding of loan waiver announcements and elections points towards political expediency, which doesn't really address long term issues in agriculture. The nationwide loan waiver programs of 1990 and 2008 were announced by the Union Government in the run-up to the parliamentary elections of 1991 and 2009, respectively. Similarly, eight out of ten loan waiver announcements since 2014 were made within 90 days of their respective states' election results.

Impact of Farm Loan Waivers on Agricultural Credit

The rationale for loan waivers originates from alleviating the debt overhang of beneficiaries and thus channelizing the savings towards productive purposes and boost economic activity. Loan waiver for highly indebted families can benefit them by relief from the debt that they are not able to repay and opening up new lines of credit for them by not reflecting their inability to pay in their credit score. However, the economic benefit for farmers lies in the extension of bank credit even after loan waiver announcements. The empirical evidence, however, suggests that after loan waiver announcements, the anticipation of adverse borrower behavior ex-post generates the result that the bank credit officers ration credit ex-ante leading to reduced lending post waiver.

Chart 3 (Annexure 4) below shows the impact of waivers on agriculture credit in terms of loan outstanding and disbursements. The impact was transitory, as growth bounces back to normal rate in subsequent years. The immediate decline in disbursements is on account of the inability of farmers to avail loans until the waiver program gets implemented.

Impact of Loan Waiver on the Performance of Banks

Loan performance of PSBs goes in tandem with the rainfall performance, except in 2008-09 and 2009-10 when loan waivers were announced and write-offs could have an effect in moderating the Non-Performing Assets (NPAs) despite high rainfall deficiency. However, recent trends in 2016-17 and 2017-18 are different and NPAs have shown a sharp increase (Chart 4 – Annexure 5), possibly due to strategic default by borrowers arising from state-level loan waiver announcements.

The chart 5 (Annexure 6) below shows that the shares of NPAs are higher than the share of outstanding in 2017-18 in states of Maharashtra, Karnataka, Uttar Pradesh, Punjab, and Bihar, implying higher incidence of NPA in these states. Chart 5 shows the state-level changes in the NPA level for 2017-18 over 2016-17. The data shows that NPA level increased for all the states where farm loan waivers were announced in 2017-18 and 2018-19. Whereas, in states such as Tamil Nadu, Kerala, Andhra Pradesh, and Nagaland, the instances of NPAs are low and their NPAs are lower than the national average. On the other hand, there are all other states (except Bihar, Odisha, and Haryana), have either not shown any material change or have actually reduced their NPAs. This can be indicative of the moral hazard, with borrowers willfully and strategically defaulting on their loans in anticipation of loan waiver.

There are a few empirical studies around assessing the impact of loan waivers. The first study was undertaken by Shylendra, H.S. (1995), where he used primary survey data to assess the impact of loan waiver of 1990. The study reveals that the distribution pattern of relief across households was skewed towards large farmers and also the fresh credit availability for these farmers increased. Kanz, M. (2012) analyses the impact of ADWDRS, 2008 on productivity, investment, household debt and expectations of future debt. The study finds that waiver did reduce the burden of household debt, however, the reallocation of money towards more productive purposes didn't happen. Also, the debt relief beneficiaries were of a belief that getting future accessibility of credit won't be easy both from formal and informal institutions. Another important study in this area is by (Tantri and De, 2013). They study ADWDRS, 2008 using a panel data of 16000 households and study three groups viz. one which received the full waiver, one which received a partial waiver and one which didn't receive any waiver. Further, it investigates whether the lending institutions cut their lending post waiver and if there is any evidence supporting the same.

The results show that all three groups were negatively impacted post waiver and the effect was mostly negative for the non-beneficiary group. For this group, the days of loan repayment days worsen, not only absolutely compared to the pre-waiver period but also relative to other groups. Expectations of similar debt relief programs in the future coupled with extensions granted by the bankers on the current loans drive the borrowers to strategically default leading to increased NPAs of these lending institutions. On the other hand, the anticipation of adverse borrower behavior ex-post generates the result that the bank credit officers ration credit ex-ante leading to reduced lending post waiver.

Exhibit 1

Another paper, “Perception of farmers post loan waiver” by (Jain and Raju, 2011) shows us empirical evidence that non-beneficiary borrowers were highly likely to default post waiver period and saw no incentive in repaying their debts at the right time. Also, they considered this as an encouragement to default in the future. The detailed results of the opinion of non-beneficiary farmers are presented in

Exhibit 2

The paper (Tantri and De, 2013) also presents and compares the data on Days outstanding for Beneficiaries and Non-Beneficiaries pre and post waiver period. The results of the same are shown in

Exhibit 3

The beneficiary farmers particularly were not able to avail loans ex-post from PACS, because of no land ownership or because of their past record of willful defaulting. This defeats the purpose of ADWDRS-2008 which was to revive the access of institutional credit to defaulters while providing relief to the farmers. Another serious matter reflected in the paper is the degradation of moral values among the farmers. The analysis shows, prior to the announcement of the scheme, nearly 90 percent non beneficiary farmers intended to repay their loans, but after the announcement of the scheme, only 3 percent farmers were interested to repay their future loans.

In another important economic study (Mukherjee, Subramanian, and Tantri, 2017), they study the impact of nationwide loan waiver of 2008 on distressed and non-distressed borrowers. For this, they use loan-level data of 39,000 accounts from 14 branches (3 states) of a public-sector bank. The study finds a strong link between agriculture distress and weather conditions (rainfall deficiency and drought incidence) in the pre-waiver period. (September 2005 to February 2008). They find that loan performance of non-distressed borrowers declined by at least 11% and that of distressed borrowers improved by at least 16%-20%. Thereby, they infer that targeting debt relief to distressed borrowers can improve their efficacy.

Looking at the Impact of Farm Loan Waivers from the Lens of Microfinance Institutions**Background on MFIs**

Trust and information are two important pillars on which the financial institutions function. There have been some attempts to look at various levels and scope of trust and its effects on defining relationships in terms of economic exchange (Humphrey and Schmitz, 1996). The lesser the trust, the higher the transaction cost (Fukuyama, 1995). It is argued that the trusting intention is likely to be fragile under the condition of a tentative and assumption-based nature of antecedent constructs (McKnight, Cummings and Chevany, 1998). Microfinance was introduced in order to reduce transaction costs by reducing information asymmetry between borrowers and lenders and is based on the model of trust which is attained through group or peer lending.

NBFC-MFIs play a huge role in connecting the low financial access households with the formal financial system. NBFC-MFIs lend to borrowers whose annual household income doesn't exceed Rs. 1,00,000 for rural households and Rs. 1,60,000 for urban and semi-urban households. The amount of loan cannot exceed Rs. 50,000 in the first cycle and Rs. 1,00,000 in subsequent cycles and the borrower shouldn't have an outstanding loan of more than Rs. 1,00,000*. Also, a borrower can have a maximum of 2 NBFC-MFIs loans at a particular time. The tenure of the loan cannot be less than 24 months for loans exceeding Rs. 30,000.

The lending is primarily done through JLG (Joint Liability Group) model which was adopted for the first time by Grameen Bank in Bangladesh. The genesis of this model in India can be traced to the SHG Model formally adopted & regulated by NABARD since the year 1992. In these models, each member of the group monitor another and also select members on the basis of caste, creed, religion or personal relations. In the JLG model, groups of 5 members are formed and there is a group liability which means if an individual borrower defaults then other members will have to bear the liability and repay the loan of a member who defaulted. Whereas, in SHG-BLP (Bank Linkage Program) model, 10-20 members form a group and save money on regular intervals and after 6 months they are eligible to avail credit from a bank. Group lending model is primarily adopted to ensure higher repayment rates with the help of social engineering and usage of social capital as collateral.

However, on examining the literature, it is found that there are divergent views on the effectiveness of JLG model for lending. There are a few promoters of the model that state social capital, endogeneity and peer pressure play a great role in ensuring that installments are paid at the right time (Al-Azzam, Hill, and Sarangi 2011; Mehrteab 2004; Wenner 1995; Zeller 1998; Wydick 1999, Shylendra 2012; Breza 2012). However, a few critiques of the model suggest that this mechanism can also backfire and when there is a large number of delinquents in the group domino effect may be observed. This could be because of possible collusion of members leading to strategic default by the group (Bratton 1986; Diagne and Zeller 2001; Godquin 2004; Sharma and Zeller 1997; Xavier and Karlan, 2006; 2011; Karlan and Zinman 2009).

How can Loan Waivers impact Micro Finance Institutions (MFIs)

Loan Waivers are not announced for microfinance borrowers. Therefore, there is not enough evidence that loan waivers impact the MFIs. However, it becomes imperative to understand if there is any impact because these institutions form a very important link in providing credit access to rural borrowers.

Loan waivers negatively impact trust regime and also bolster information asymmetry both for borrowers and lenders (M.S. Sriram, 2005) as evidenced over the past few years. Thereby, this increases the transaction costs for MFIs and results in reduced profits because monitoring the borrowers becomes imperative after such announcements.

Apart from this, there is literature suggesting that decision-making power in regard to using the loan amount primarily lies with male counterparts and therefore, females who are a part of the JLG Group don't have much say in how this money should be used. This leads to defaults being done by male members because they are not concerned about social pressure. So, in cases of loan waiver announcement also, when women might not be even aware of waiver, their male counterparts may default without taking her consent.

Though loan waivers are not announced for MFI borrowers, during election campaigns, local leaders start falsely announcing the waivers for these borrowers. This is primarily done for pooling the vote banks and attracts them to attend election rallies. Such instances happened during the recent elections in Madhya Pradesh, Chhattisgarh and Rajasthan, and Karnataka. Some of the few affected districts were Akola, Aligarh, Amravati, Bareilly, Belgaum, Deoria, Dharwad, Hoshangabad, Meerut, Moradabad, Nagpur and Wardha. In these districts, repayment rates stumbled and fell to almost 40% in one period.

The situation got contained after these MFIs held a meeting with government officials and MFIN, the regulatory body of MFIs intervened to clarify that such waivers don't apply to microfinance borrowers. Owing to the delinquencies, MFIs also stalled disbursals of fresh loans in these regions, which further slowed down their business in these regions.

Graphs (6.1, 6.2 and 6.3) attached in Annexure 7, show the Portfolio at Risk (PAR)¹ in different buckets for these states as compared to the national average. The graph shows that in quarters before December 2016, i.e. pre waiver period, the PAR values for these states were almost similar to the national average. However, after the waiver announcements, the PAR values for these states have been constantly higher than the national average.

However, this cannot be totally attributed to the waiver announcements, because there was demonetization announced in November 2016 which was another major economic intervention. But MFIs stress on the fact that with such interventions, their business takes a hit and there should be enough checks and balances from the government's end to prevent such instances.

Are loan waivers always a bad proposition?

Loan waivers are not always a bad proposition. In some cases, it might become imperative for the state to intervene in order to reduce the vulnerability of the exposed section and promote development. This can be supported with the help of the theory of 'debt-overhang' and 'risk-shifting' (Jensen and Meckling 1976, Myers 1977) which argues that indebtedness affects both level and risk-profile of investments. It states that heavily indebted borrowers may forego stable and sound investments because most of their earnings will be spent in debt servicing or they may engage in risky investment propositions because the risk will be borne by the creditors. Other relevant case in point is 'poverty trap' models (Banerjee and Newman 1993, Banerjee 2000, Mookherjee and Ray 2003) which argue that households may get trapped into vicious cycle of debt servicing thereby leaving them with insufficient income post debt service payment to invest in productive sources, leading to lower investments in physical and human capital, causing indebted households to remain in low-productivity equilibrium. In such cases, debt waivers may actually enhance efficiency by improving investments and productivity level.

Response

There has been a lot of hue and cry in the financial institutions' space as well around the discussion of loan waivers and their role in promoting or dampening the industry. Mr. Raghuram Rajan, former RBI governor, has time and again raised questions around the viability of farm loan waivers. He says that such waivers kill the credit culture. Referring to the issue of farm distress, he said loan waivers cover only those farmers who have taken loans from the formal system.

"I do worry about waiving loans because it only targeted to those farmers who have taken loans from the system, not the poorer farmers who have loans from the money lenders or an agricultural worker who never got a loan in the first place. So, I would rather have a better-targeted system," he said. "That is why I have always said that farm loan waivers are problematic and various bankers have also opined that it kills the credit culture. It's very difficult to lend to those people once again. So, they also suffer in credit down the line even though they may get some short-run benefit. So those are my objections," he added.

¹ An asset is classified under PAR, when the borrower fails to pay the EMI for the loan at stipulated date. PAR 30, thereby simply means that installment is overdue by 30 days.

Mr. Raghuram Rajan is not the only one to express such views around these waivers. Mr. Urijit Patel, who also happens to be a former RBI governor, said that "waivers engender moral hazard." He also said, "Waivers undermine an honest credit culture... It leads to crowding-out of private borrowers as high government borrowing tends to (impose) an increasing cost of borrowing for others."

Apart from these, other professionals who have expressed their opinions are

Mr. Devendra Pant, India Ratings' chief economist, wrote in one of his reports released on 6th April, "While the solution to the agrarian crisis facing the country is not an easy one, providing a debt waiver to farmers will only provide short-term relief to distressed farmers, but will also lead to a bad credit culture, besides exerting pressure on state finances."

Ms. Arundhati Bhattacharya, former SBI Chairman said, "Support to farmers is necessary but not at the cost of credit discipline as people who benefit from loan waivers often expect further waivers in future, which leads to many more loans remaining unpaid."

Mr. Raghuvar HKN, President - Inclusive and Outreach Banking, Equitas said, "Impact of Demonetization is completely behind us. Current issues around lower repayments are due to disturbance of the repayment cycle due to local elements and politicians and trend of waiver of loans. We are not funding new clients now because our data shows maximum defaults are happening with new clients"

These responses of the industry professionals also emphasize the need to think about the need for loan waivers.

Questions for Discussion

1. Do we need farm loan waivers and do they actually provide relief to farmers?
2. What are other policy alternatives which can be adopted by the government to provide relief and support to farmers?
3. How can financial institutions viz. Banks, Co-operative Societies, Regional Rural Banks, MFIs be better prepared for such interventions so their loan books don't get hit by such announcements?

Annexures

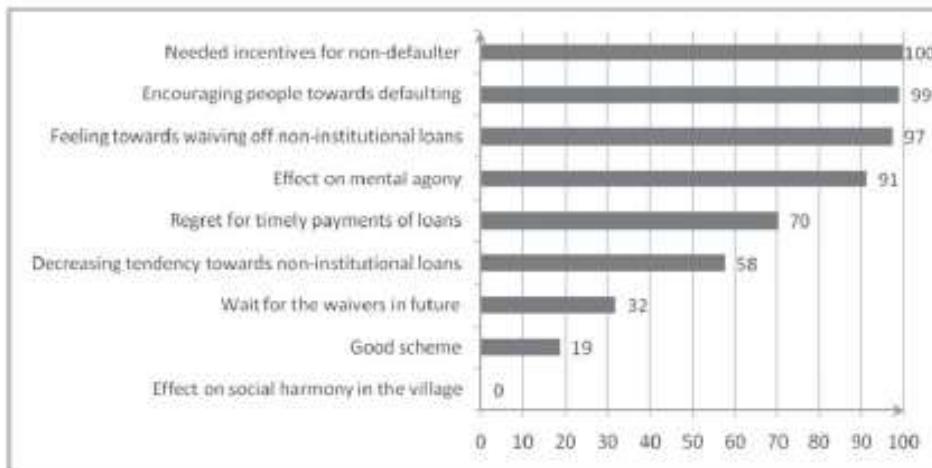
Exhibit No.1

Categories	Domestic scheduled commercial banks (excluding Regional Rural Banks and Small Finance Banks) and Foreign banks with 20 branches and above	Foreign banks with less than 20 branches
Total Priority Sector	40 per cent of Adjusted Net Bank Credit or Credit Equivalent Amount of Off-Balance Sheet Exposure, whichever is higher.	40 per cent of Adjusted Net Bank Credit or Credit Equivalent Amount of Off-Balance Sheet Exposure, whichever is higher, to be achieved in a phased manner by 2020.
Agriculture #	18 per cent of ANBC or Credit Equivalent Amount of Off-Balance Sheet Exposure, whichever is higher. Within the 18 percent target for agriculture, a target of 8 percent of ANBC or Credit Equivalent Amount of Off-Balance Sheet Exposure, whichever is higher is prescribed for Small and Marginal Farmers.	Not applicable
Micro Enterprises	7.5 percent of ANBC or Credit Equivalent Amount of Off-Balance Sheet Exposure, whichever is higher.	Not applicable
Advances to Weaker Sections	10 percent of ANBC or Credit Equivalent Amount of Off-Balance Sheet Exposure, whichever is higher	Not applicable

Domestic banks have been directed to ensure that their overall direct lending to non-corporate farmers does not fall below the system-wide average of the last three years achievement.

Source RBI Scripts- Priority Sector Lending-Targets and Classification

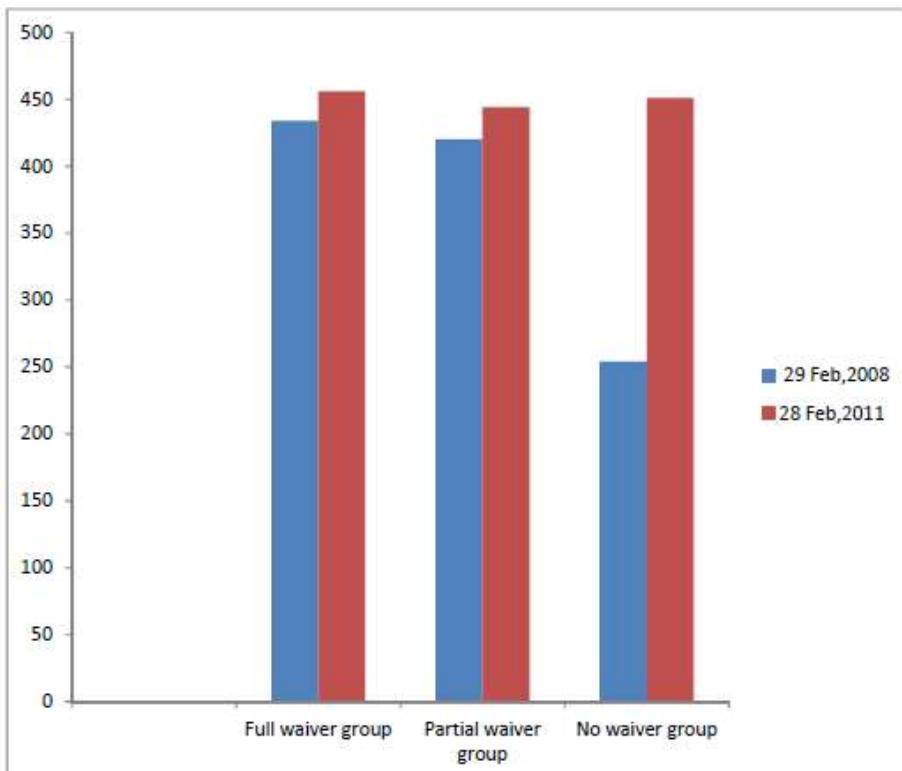
Exhibit 2



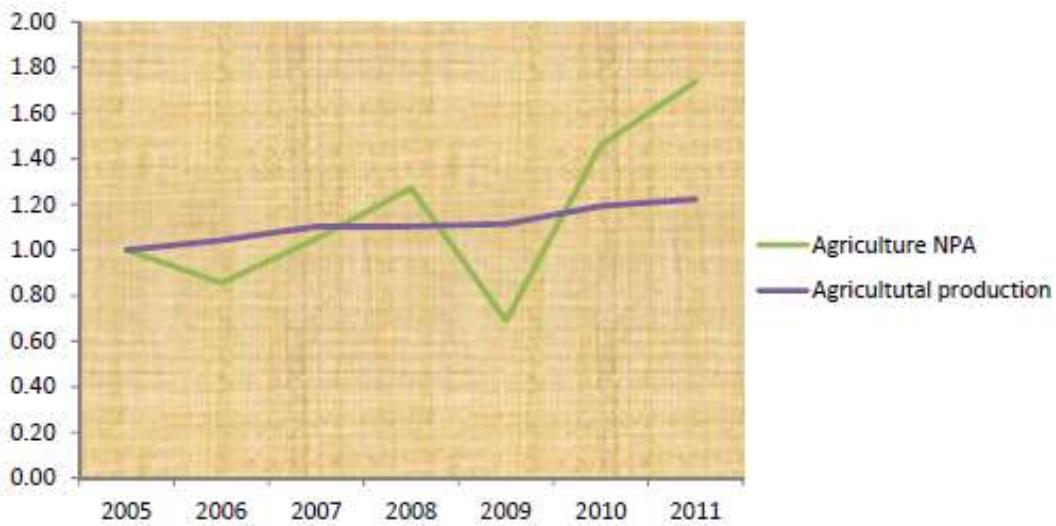
The opinion of non-beneficiary farmers on different aspects of ADWDRS -2008

Source Perception of farmers post loan waiver (Jain and Raju, 2011)

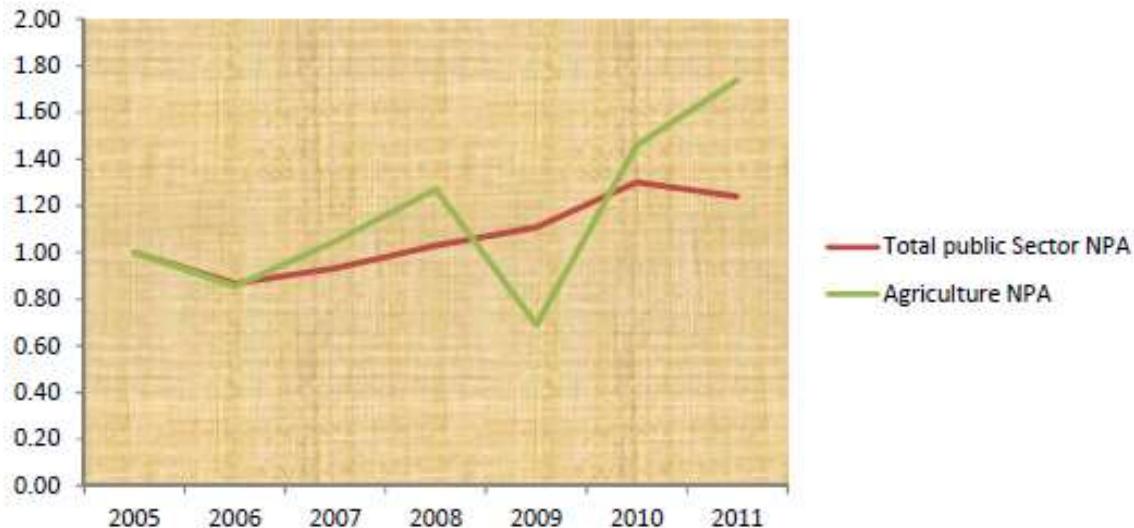
Exhibit 3



Within Group Comparison Days outstanding in pre and post-waiver periods
Source Borrowing Culture and Debt Relief Evidence from a Policy Experiment
(Tantri and De, 2013)



Agricultural production and agriculture NPAs of public sector banks during 2005 - 2011
Source Borrowing Culture and Debt Relief Evidence from a Policy Experiment
(Tantri and De, 2013)



Agricultural and total NPAs of public sector banks during 2005 - 2011

Source Borrowing Culture and Debt Relief Evidence from a Policy Experiment
(Tantri and De, 2013)

Annexure 1

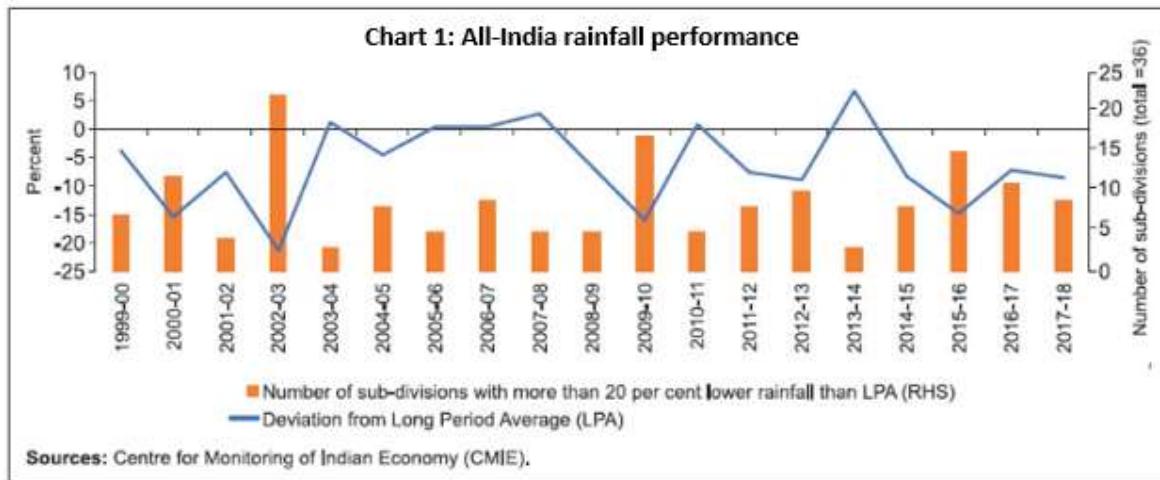
Table 1.1 Comparison of state-level loan waivers since 2014

State (Amount and announcement year)	Institutions covered	Types of loan covered	Farmer category covered	Cut-off date	Limit per farmer (₹)
Andhra Pradesh (₹240 billion; 2014-15)	SCBs, RRBs, Rural Co-operative Credit Institutions (RCCI)	Short-term crop loans, Medium-term loans	All farmers	March 31, 2014	1,50,000
Telangana (₹170 billion; 2014-15)	SCBs, RRBs, Co-operative Credit Institutions (urban and rural)	Short-term crop loans, Medium-term loans	All farmers	March 31, 2014	1,00,000
Tamil Nadu (₹52.8 billion; 2016-17)	RCCI	All short-term, medium-term and long-term agricultural loans	Small and marginal farmers	March 31, 2016	No limit
Maharashtra (₹340.2 billion; 2017-18)	SCBs, RRBs, Grameen Banks and District Central Co-operative Banks (DCCBs)	Crop loans and term loans	Small and marginal farmers	June 30, 2016	1,50,000
Uttar Pradesh (₹363.6 billion; 2017-18)	SCBs, RRBs, Co-operative credit societies / banks (excluding Urban co-operative banks)	Short-term crop loans, medium-term loans	Small and marginal farmers	March 31, 2016	1,00,000
Punjab (₹100 billion; 2017-18)	SCBs and Co-operative Credit Institutions (urban and rural)	Crop loans	Small and marginal farmers	March 31, 2017	2,00,000
Karnataka (₹180 billion; 2017-18)	RCCI	Crop loans	All farmers	June 20, 2017	50,000
Karnataka (₹440 billion; 2018-19)	SCBs, RRBs, Co-operative credit societies/banks (excluding UCBs)	Crop loans	All farmers	For SCBs and RRBs December 31, 2017. For co-operative institutions July 10, 2018	For SCBs and RRBs 2,00,000 For co-operative institutions 1,00,000
Rajasthan (₹180 billion; 2018-19)	Rural co-operative institutions and primary land development banks	Crop loans	All farmers	September 30, 2017	For small and marginal farmers 50,000 For other farmers pro-rata basis linked to prescribed landholding of small farmers, subject to a limit of Rs. 50,000

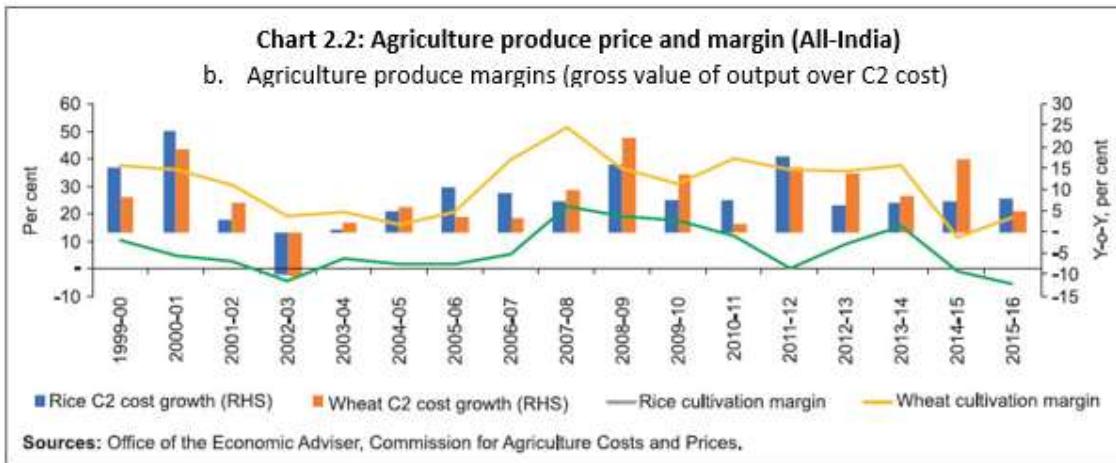
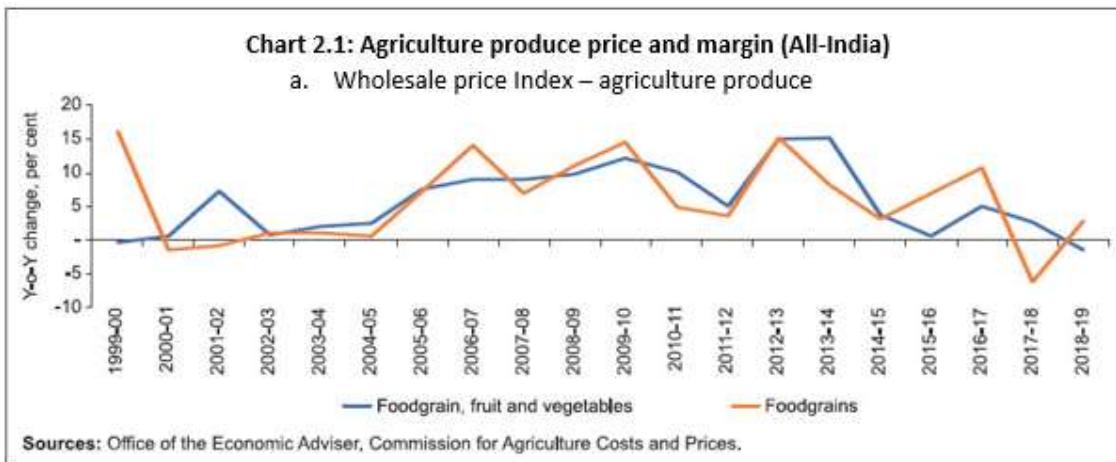
Madhya Pradesh (₹365 billion; 2018-19)	Pradesh SCBs, RRBs, Co-operative banks	Crop loans	All farmers	December 12, 2018	2,00,000
Chhattisgarh (₹61 billion; 2018-19)	SCBs, RRBs, Co-operative banks	Crop loans	All farmers	December 12, 2018	2,00,000

Source: Budget documents of state governments.

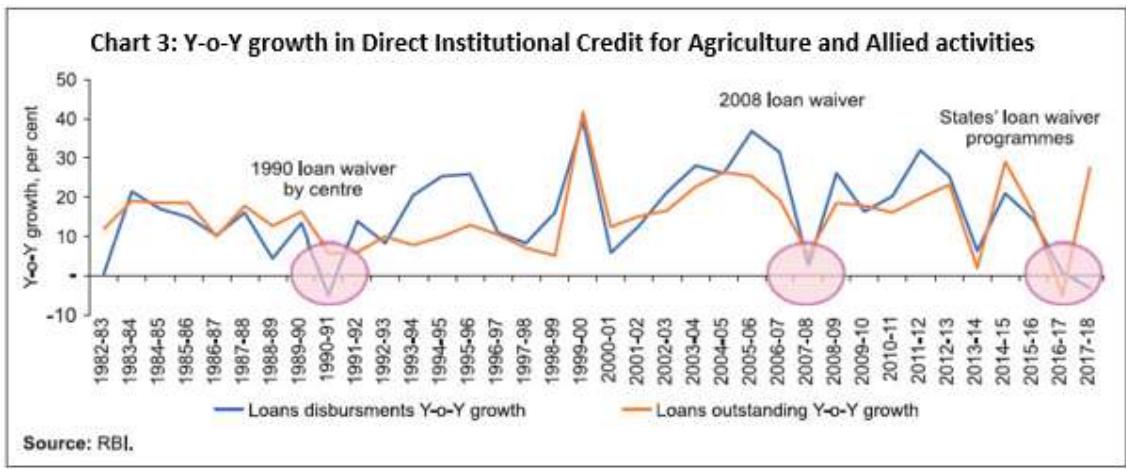
Annexure 2



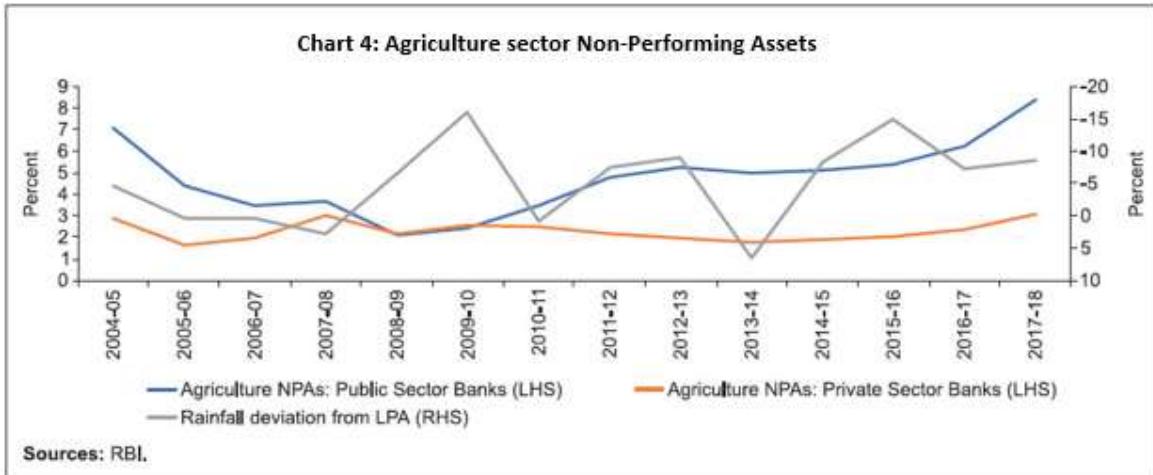
Annexure 3



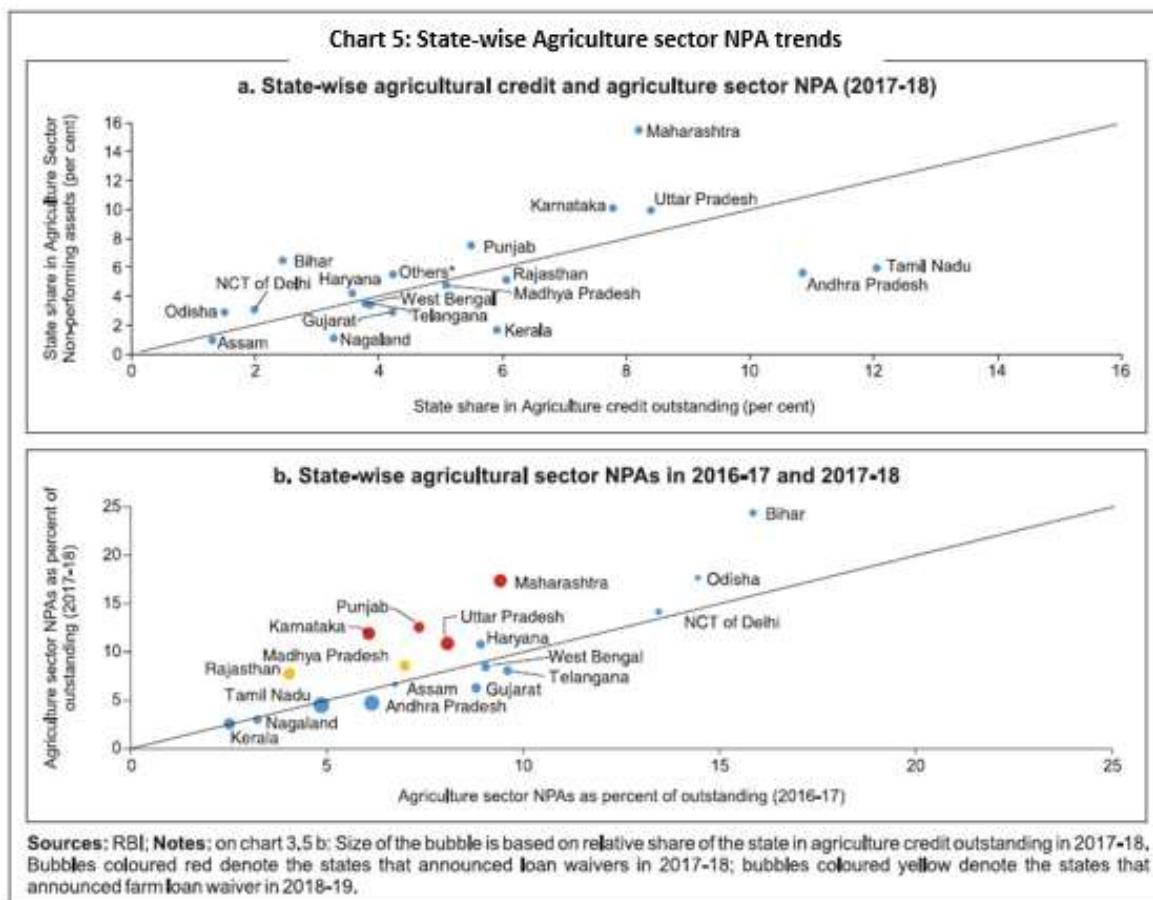
Annexure 4



Annexure 5



Annexure 6



Annexure 7

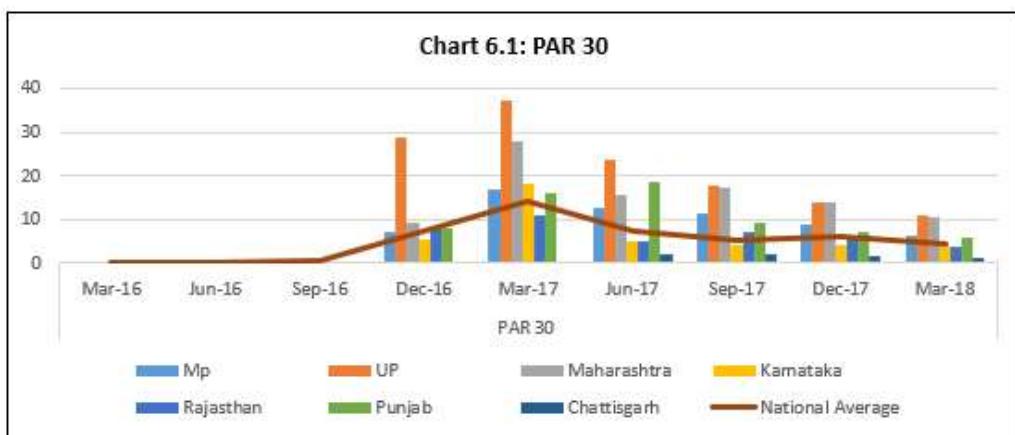


Chart 6.2: PAR 90

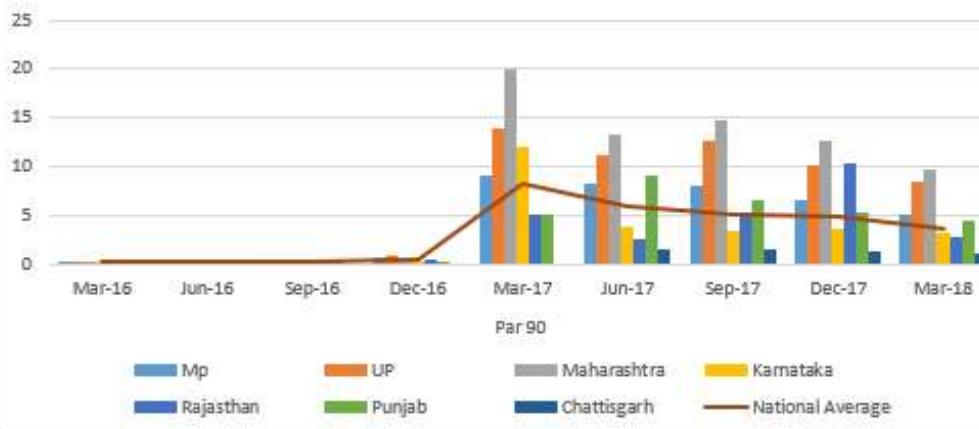
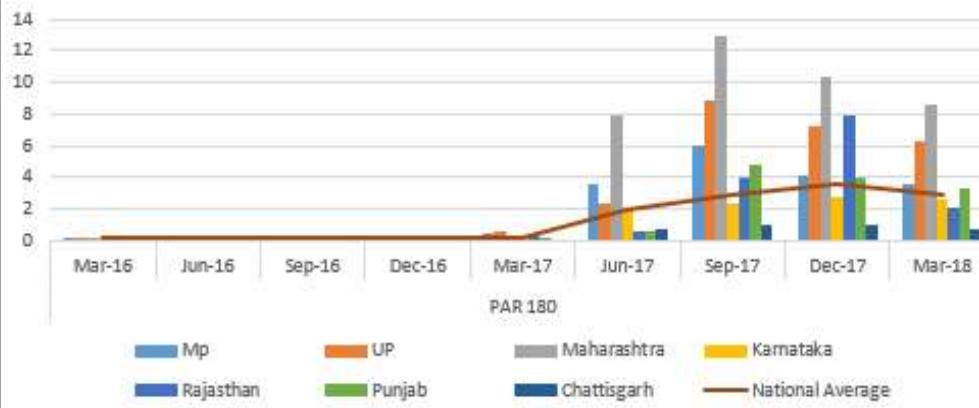


Chart 6.3: PAR 180



Tribal Women of Nilgiris Scope for Change

Arnelit Philip Mani IRMA

Challenge

The cold breeze was blowing through the windows. Cera rolled over again and glanced at her phone to check the time. It's 0200 am. It was a tiring day and she should have been asleep by now. Instead she was wide awake and restless. The whole events of the day were flowing through her mind and she could not stop thinking about the plight of those poor women she had met today.

Setting up the Context

Cera is a newly recruited program officer in a tribal welfare NGO. Cera did her masters from TISS Mumbai in Women Studies. She always wanted to work for this NGO since her 2 months' internship in the NGO. During the internship as a part of her project, she has suggested few potential interventions for improving the socio-economic condition of women. On joining she was very glad to know one of her ideas was given a shot. Only recently did she get a chance to go to the field and gain a firsthand understanding of the ground realities in the implementation of the project.

Pavattakai is a minor forest produce collected by the tribal from the forests. It has medicinal properties. As per the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, the minor forest produce can be accessed by the forest-dwellers. Pavattakai accessible only by tribal community is used by the pharmaceutical industry especially for the Ayurvedic medicines. It fetches only Rs.200/kg in the market when fresh. However, on drying it fetches Rs.450-500/kg in the local market.

The proposed idea was to bring together the women in the tribal hamlets and engage them in the collection, drying and sale of Pavattakai. The primary step will be collecting the Pavattakai from the forest. This is done by both men and women (predominantly men). The main role of women will be in collectivising the harvest, drying it and selling it in bulk. Increased quantity of Pavattakai will fetch them higher prices due to collective bargaining power. This intervention will enhance the income of the families and will improve their social status.

However, the outcome of the project was far from expected. Even though the project was focused on women, women had very little say in the collection and further processing of Pavattakai. The women did not have the agency to collectivize the harvested output. Drying it will fetch double the price. But unfortunately the men folk could not wait till it dries. They sold the fresh Pavattakai at a nominal rate of Rs.200/kg and rushed to the closest beverage outlet to buy their daily quota of liquor. Any differences of opinion from the women will be subject to the wrath of their drunkard husbands. As a whole, the project did not meet its predefined purpose and was rendered futile.

Background

Tribal community in Nilgiris

The district of Nilgiris covers an area of 2549 Sq Kms and it is considered as the meeting point of the Western Ghats and the Eastern Ghats. The height of the district is 6500 ft (average). It is surrounded by three states- Kerala on the west, Karnataka on the north and Coimbatore district of Tamilnadu on its southeast as its borders. For the ease of administration, the district has been divided into six taluks

namely Udhagamandalam, Gudalur, Pandalur, Coonoor, Kotagiri, Kundah. The district on the basis of blocks has been divided into Udhagamandalam, Coonoor, Kotagiri and Gudalur.

Exhibit-1 states that the population of tribal women is more in Nilgiris when compared to tribal men. There seem to be a high level of acceptance for female child. The major scheduled tribes in Nilgiri are shown in Exhibit-2. 34.86 percent of the tribes are Kurumbas, 29.34 are Irulas, 4.98 percent are Todas, 6.68 percent are Kotas and 5.49 percent are Kattunayakans. The higher altitude of the mountain is occupied by the Todas and Kotas. The foothills were occupied by Paniyas and Kattunayakans. And the middle portion was inhabited by the Kurumbas and Irulas.

The Particularly Vulnerable Tribal Groups (PVTGs) are the most vulnerable people in the district. Due to their declining literacy levels, high morbidity and shrinking population, they need a high level of attention. They comprise of only 2% of the population of Nilgiris. However, 6 of India's 75 PVTG reside in the Nilgiris Biosphere Reserve. The PVTGs in the state are shown in Exhibit-3.

Socio-Economic Condition of the Tribal Community

The Todas, Kotas, Kurumbas and Badagas (non-tribal) formed a social system in Nilgiris. They practiced different occupations for livelihood. The Todas were primarily pastoralists. However, the Kotas were engaged in a variety of activities such as arts, music and cultivation. The Kurumbas and Irulas lived near the jungles and were primarily forest produce gatherers, hunters and shifting cultivators. Apart from this, the other tribes were scared of Kurumbas and thought they were sorcerers. Until the sixteenth century, little did the tribes think that their territory will be intruded and later dominated by the Badaga agriculturists who arrived as refugees. Then the Kurumba became the sole supplier of honey, baskets, bamboo and rattan for constructing houses. In return the Kurumbas received dairy products from the Todas; pottery, axes and knives from the Kotas and food grains from the Badagas. Currently, the people from Mullu kurumba community are in a fairly improved state. However, Paniyas, Batta kurumbas and Kattu nayakkas are still in misery and poverty.

Exhibit-4 shows the current economic activities undertaken by the tribal community. It indicates the percentage of people involved in cultivation of vegetables and tea on their own lands, working as labourers in tea estates, marketing vegetables and fruits in the markets nearby, sale of baskets and milk etc. They also serve as priests and healers for their local community. A few people find employment in government and private bodies. Despite the ban on hunting, many people secretly take part in hunting of birds and small animals and sell them.

Tribal Women's contribution in Income Generating Activities

We have seen the different income generation activities undertaken by the tribal community in Exhibit-4. Tribal women are primarily engaged in agricultural and allied activities. A significant number of them work as daily wage labourers in tea estates and coffee plantations. Some of them are engaged in Mulberry cultivation and floriculture. The flowers have a potential market in Coimbatore. Apart from the above activities, animal rearing is also one of the income generating activities practiced by a segment of tribal women. Another unique field of occupation is that of traditional healers. They were called "Shamans". They treated an array of diseases ranging from migraines, fractures to reproductive health issues. However, there has been a considerable decline in the number of traditional healers as the new generation was not so enthusiastic about learning traditional healing methods. Tribal women in the

vicinity of forests collect raw materials from forests and make brooms and weave baskets. This served as a nominal source of income as it was done on a small scale.

The tribal women are in the compulsion to earn and save money for their future as in some of the tribal family the men are not much interested in earning money. They are just spending time in gossips, gambling and be in crowds just for chatting. Some men are consuming alcohol and opium which results in the decline of their entire generation. So due to such reasons the women has to take care of the families. So, they search for employment opportunities or else move towards self-employment.

They are in search of opportunities and makes maximum use of it when approached by self-help groups, NGOs & development officers. When enquiring about their expectations in their empowerment and community development, they expect basic services from the government like safe drinking water facilities, proper roads for the villages, electricity and education for their children. Many of them tend to form self-help groups, train themselves under an NGO and engage in income generation activities.

We could understand from Exhibit-2 that the population of Kurumbas and Irulas are more when compared with other tribal communities. Therefore, it becomes more conducive for the self-help groupsto spread among these communities. The tribal women, with the helpof these self-help groupshas performedthe following actions - tailoring, paths within the village settlements, constructing toilets, mushroom cultivation, milk booths, floriculture activities, making paper plates and tumblers, growing herbal & traditional tribal medicines, preparation of aromatic oils etc.

Failure of Development Programmersfor the Tribal Community

The state and central government has introduced numerous tribal development programmes and schemes. However, they have failed in providing the desired benefits to its targeted population. There are several potential reasons for this inefficient performance. It can either be the flaws in the scheme formation or inefficient implementation or lack of awareness. The search for ultimate solution should start at the grassroots level. Some of the major reasons for the mismatch in proposed results and outcomes in reality are as discussed below.

One of the primary reasons for failure of any intervention is the unawareness of the implementing agency about the tribal livelihood practices. Introducing a totally alien livelihood intervention will have very low level of acceptance among the community. Another reason is the lack of knowledge on the tribal culture. For instance, the tribal community has its own way of practicing beekeeping in pots and their own way of building homes. Any intervention in this regard without taking into consideration the practices currently followed by the tribal community will be unsustainable.

Many of the projects fail mainly due to the absence of proper planning, implementation and market linkages. Despite the unique self-sustaining practices, tribal are still apprehensive about using their skills due to lack of market linkages. Also, there is a vacuum when it comes to proper understanding of tribal development schemes. Many are unaware about the wide range of benefits that are accessible to them.

Ultimately, the issue of improper ideation of development programmes trace back to the lack of quality database on the tribal community. They live a very secluded life away from the chaos of the mainstream happenings. There are no correct estimates on the number of tribal living inside the deep forests. When

the first step of need identification goes wrong due to unavailability of data, everything else will deviate from its desired results.

Storyline

The next day, Cera forced herself out of bed, exhausted and still pondering about what went wrong in the implementation. She was still thinking about the lady in met in the Vettuvady hamlet. Naaniyamma has spent all her life raising her daughters after being abandoned by her husband. Minni and Karthu dropped out of school after fifth standard. They use to help their mother in collecting minor forest produce like Pavattakai, honey, bamboo etc from the forests. However, they barely found enough to sustain themselves. Due to the smaller volume of output, they never got decent prices. Minni is suffering from cardiac problems. They took her to the hospital run by ACCORD (Action for Community Organisation, Rehabilitation and Development). They advised them to go to Kozhikode medical college for better treatment facilities. However, their family is not even in a position to afford the transportation expenses and neither are they associated with a SHG or something to avail loans. 'The need for a livelihood intervention was very high among the tribal women', Cera thought.

Thoughts started consuming her mind and then she said to herself, 'Maybe I should first talk to Madhav. He was in charge of implementing the project. He might help me identify the black hole'. Madhav is also a program officer. He has been working in the NGO for the past 7 years. He finished his MSW from MG University. He initially worked as a field level officer in the NGO for 3 years. However, the founder found Madhav to be exceptional in his work and commitments and made him in charge of the livelihood projects. It was under his leadership the Pavattakai project was implemented.

Cera grabbed a cup of coffee to recover herself from the sleep deprived state and waited for Madhav to finish his phone call with the CSR executive of a pharmaceutical company. Once he was free, Cera went to his desk and asked, 'Madhav, will you be free to share a few details regarding the implementation of Pavattakai project?'. 'Yeah sure, why not?', said Madhav and asked, 'What is it that you are exactly looking for when you say the implementation part?'

Cera with a slight hesitation replied, 'Everything....'.

'Okay...', Madhav continued, 'the initial phase was to select a women tribal leader who would be capable of collectivizing the women. Yasodha, the one from the Mullu Kurumba community was chosen as the leader. She herself had 4 acres of land. Her husband also works in the agriculture department. They are educated people. So, she was called to our office and entrusted with the project implementation part. She was reluctant in the beginning. However, on insisting further, she agreed to it.'

'The next phase was our field officers going to hamlets and introducing Yasodha to the tribal women from other communities of Paniya, Batta kurumba and Kattu nayakka. The field officers took the help of Kanakam in this task. Kanakam is very popular among the tribal women as she was associated with different communities in a wide range of activities such as areca nut peeling, tea leaves plucking, and so on.'

'The third phase was in arranging logistics for other women to take their harvested output after drying to Yasodha's plot where there is a godown. The expected outcome was about 500 kg of dried Pavattakai collected from about 100 families. However, the final outcome that reached Yasodha's plot was barely 100 kg.'

The deviation was so high, that the project was considered to be ineffective in solving the issues in the proposed manner. Also, pavattakai is collected mainly by men. Women have very little say in the sale of a produce collected by men. As a result, the men used it as a means for ready cash for booze. Whenever, they ran out of money, they took the fresh Pavattakai to the market, sell it at a nominal price of about Rs.200/kg and bought a quarter from the beverage outlet. This practice continued. Thereafter, we withdrew the field officers assigned for this project. The collected 100 kg was sold in the local market and the amount was distributed to the respective families.' Madhav's phone started ringing. 'Is there anything more you wish to know?', Madhav asked in a haste.

'No, that is it. Thanks a lot for setting aside some time', said Cera and walked back to her desk.

Actions Taken

After coming back to her desk, Cera was rethinking the entire conversation with Madhav. She looked for potential pitfalls in the implementation. Many questions started coming to her mind. 'Wasn't Yasodha the right person to lead the project? Or was it Pavattakai and the autonomy men had in deciding its fate that led to the failure of the project? Will an intervention with an alternative livelihood option yield better results? Or is it the behavioural issues that need to be addressed first?' Cera found it mentally exhausting to pinpoint a particular cause for the failure.

Finally, on reaching home and reading about the different economic activities undertaken by the tribal women in Nilgiris, she came across basket weaving, beekeeping, floriculture and mulberry cultivation. She thought of goatery or poultry. However, the past experiences demotivated her from taking it up. The NGO has tried introducing backyard poultry. To their surprise, the hens provided for the poultry farming started disappearing day-by-day. The reason given was dogs or wolves preying upon the hens. On further investigation, it was found that the tribal themselves killed the hens and feasted on them during occasions. The same happened with goats.

She then came across an article on a lady named Josephine who started beekeeping with a few boxes and ended up being very successful. She was also training tribal women on beekeeping. Cera contacted Josephine and discussed about collaborating with her on this project. Josephine agreed to come on the first Saturday of the next month to train the tribal women.

Cera thought to herself, 'Before fixing a date with Josephine, I should get a preliminary understanding of how many tribal women are interested in the project'. She did not want to impose the project as in the last time. However, this time too, she thought of bringing people together with the help of Yasodha. She thought Yasodha might be the person who will be capable of translating the objectives into actions.

The next day she thought of holding a meeting with the tribal women. While thinking about the agenda to be discussed tomorrow, she fell asleep due to fatigue.

Response

The next day in the afternoon at 1 pm, about 70 women gathered in the meeting hall. In the meeting, Cera presented the idea of beekeeping. She was planning to form an SHG under the leadership of Yasodha. Cera was expecting an enthusiastic response from the side of the women. However, she was surprised to see the passive expression on the faces of the gathered women. The blankness in their face

denoted their lack of trust in any intervention and their lack of hope in the improvement of their current situation. There lacked a binding force and spark among the women.

Cera was now highly doubtful on going ahead with the project. To her relief few women like Kanakam, Guddavva and Karruppi expressed their desire in implementing the project. They belonged to the Kurumba community traditionally engaged in honey harvesting.

Again Cera was in a dilemma. She cannot go ahead with the project with very few supporters. Neither does she want to drop the project as it has huge revenue potential.

Questions for Discussion

- What exactly went wrong with the Pavattakai project?
- Will Beekeeping be a success?
- Are they missing some important element in their implementation part? If you were Cera, what would you have done?
- Comment on the development project for tribal women.

Annexures

Exhibit 1

S.no	Panchayat union	Number of Villages	Total Population	Total Tribes	Tribes Male	Tribes Female
1	Udhagamandalam	13	1,08,054	3015	1490	1525
2	Coonoor	6	37,983	944	482	462
3	Kotagiri	11	66,094	6197	3045	3152
4	Gudalur	5	98,460	12,611	6159	6452
	Grand Total	35	3,10,591	22,767	11,176	11,591

Exhibit 2

S.no	Tribal community	Population %
1	KURUMBAS	34.86
2	IRULAS	29.34
3	TODAS	4.98
4	KOTAS	6.68
5	KATTUNAYAKANS	5.49
6	PANIYAS & OTHERS	18.65

Exhibit 3

PVTGs OF TAMIL NADU	
1	IRULAR
2	KATTUNAYAKAN
3	KOTA
4	KORUMBA
5	PANIYAN
6	TODA

Exhibit 4

Sl.no	Economic activity	% of families involved
1	Agriculture and horticulture	16
2	Tea estate labour work	5
3	Marketing of vegetables and fruits	7
4	Household industry	16
5	Selling milk	4
6	Healing with tribal medicines	3
7	Priests in temples	5
8	Modern employment	12
9	Hunting of small animals	32

About the Author

Arnelit Philip is currently pursuing my post graduate diploma in rural management in IRMA. The motivation for the case study was my two months stay in the Erumadu hamlet of The Nilgiris district as a part of our village field segment. It was a unique experience and it exposed me to the dynamics of the tribal community and their unique practices. The case study was written taking into consideration the intricacies for designing and developing a livelihood intervention for tribal women.

Wadi Project - A Model for Sustainable Livelihood for Tribal Community

Ritesh Amar Singh IRMA

Challenge

Mr. Deva, project manager at Maa Bamleshwari Janhit Kari Samiti (MBJS) frantically gathered everything he needed for his field trip at Machandur village nearby Gotatola after receiving a call from one of Mr. Chiram regarding the distribution of seeds and other farm inputs to a group of farmers under WADI initiative. He was mainly concerned about the lack of support from farmers and lack of markets for fruits and vegetables grown under the WADI project. Mr. Deva has been working with MBJS since its inception.

Setting up the Context

The unique program of developing orchards, popularly known as WADI (Waste Area Development Initiative), on wastelands owned by the marginal tribal families has been launched by Maa Bamleswari Janhitkari Samiti, Rajnandgaon. This program ensures the participation of women along with her entire family. It ensures the complete authority of women over the income generated from cultivation in their orchard. This program aims to check seasonal migration and ensure women's empowerment, food security, capacity building and a clean environment for the tribal family. Amongst the various models for sustainable livelihoods being tried and tested in the tribal areas of India, the Wadi model shows a lot of promise to tribal women. The main measures taken on the Wadi plot are solar pump installation, drip irrigation, CPT Nali and wire fencing.

Background

About the Founder

Phoolbasan Bai Yadav is the founder of the organisation. She was born on 5th December, 1969 in Sukkul Dehan which is a remote village in the district Rajnandgaon in Chhattisgarh. She was married at the age of 10 to a cattle-herder. Her in-laws used to live in pathetic condition without pucca house. Her husband's occupation provided a meagre income due to which sometimes household used to sleep without food for the day. By the age of 20 years, she was the mother of two daughters and two sons. Her children were malnourished due to paucity of food which she was not able to bear their starved bodies because of hunger. In order to make sure that starvation and malnourishment doesn't happen to any children in her village, she organised and mobilized her first Self Help Group (SHG²) of 11 women who came together, pool their savings and reap benefits out of it. Apart of pooling their finances, they started contributing 2kg of rice each month to feed their undernourished children.

Within no time at all, Phoolbasan experienced first-hand the benefits of participating in such a group. Heartened, she decided to form her own groups, including 'Pragya Mahila Samooh', 'Kiraya Bhandar' and 'Bazar Theka.' This marked the beginning of Phoolbasan's foray into social activism, after which she went on to establish fair-price ration shops for the distribution of food among people below the poverty line. The SHGs started cleaning the village ponds and handpumps. They even started a community

²Self-Help Groups (SHGs) are informal associations of people who choose to come together to find ways to improve their living conditions. It can be defined as a self-governed, peer-controlled information group of people with similar socio-economic background and having a desire to collectively perform common purpose.

kitchen (Balbhoj) for the children in the village. Her efforts paid off when her efforts were started being acknowledged by villagers and she had the honour of hoisting the national flag on the Independence Day.

Since that day, she organized many more successful events in her village ranging from blood-donation camps and cleanliness drives against open defecation. After that, with the guidance of the then District collector, Mr. Dinesh Srivastav, she got herself enrolled as Prachar Prasarak to promote and propagate the benefits of SHGs. She travelled across villages to form new SHGs on a bicycle. They also started Padayatra of the women, where many women participated in this yatra and walked through various villages spreading the message of SHG, education, sanitation, nasha mukti (Liquor ban) and many more social activities. They have a slogan of Padhai, Bhalai, Safai which means education, goodness, and cleanliness. They had five key messages that they were spreading to change the norms of society and to make it a tool for its reformation. These five principles are education, health, cleanliness, employment, and nasha mukti. Later, she consolidated her numerous groups and social activities under the umbrella of the Maa Bamleshwari Janhit Kare Samiti, and NGO which started with 11 women.

In 2012, she was awarded the Padma Shri, the fourth highest civilian award in India. She was also given the Stree Shakti Govt. of India Award, S.R. Jindal Award, Bhagwan Mahaveer Award, LifeTime Achievement Award, India Pride Award, Surdutta Award, Aamodini Award, Sadguru Award.

About the Organisation- MBJS

The NGO, which acts as a watchdog and keeps a keen eye on the working of various government departments, is believed to have under its aegis, 19,000 women self-help groups (WSHG) and 2325 adolescent girls' groups, with over 200,000 members. By collecting Rs. 2 per member, per week, the organisation was initially able to accumulate an impressive corpus of Rs. 150 million. The NGO, and the many groups that worked under its banner, have played a crucial role in empowering women and ensuring their financial independence; while also improving the living conditions of the residents in the village. The groups participate in health and sanitation programmes like the Pulse Polio initiative, and encourage others to extend their support to the initiatives as well. There are more than 70% WSHG members in the Panchayat Health Initiative as Mitanin. The groups have also been instrumental in implementing the mid-day meal scheme in 1741 primary schools, and are also creating awareness about the Bal Bhoj nutrition initiative in schools and 4225 anganwadis. Further, they have helped to organise group marriages of 33 underprivileged girls, all under the leadership and guidance of Phoolbasan.

The Wadi Project

This Wadi project is implemented by Principal Implementing Agency i.e. Maa Bamleshwari Janhitkari Samiti Rajnandgaon from 2018 in the targeted region and assisted under Tribal Development Fund of NABARD (The National Bank for Agriculture and Rural Development). Under this project, a Wadi plot covers ten acres of land owned by ten marginal ST farmers, each having a share of one-acre land. This project targets 500 marginal farmers across 30 villages of Mohala block of Rajnandgaon district. At present, this project is implemented on 10 wadi plots. Each Wadi plot is planted with fruit trees like Mangoes, Custard apple, Guava, Drumstick etc with bamboo tree and turmeric. Two or more crops are strategically selected for intercropping in the Wadi model to minimize climatic, biological and marketing risks.

Household incomes and activities usually do not compromise as a single source but a multiplicity of sources. A similar pattern is observed in Village Machandur as well. It was observed that more than one

member of the family goes to work on the farm as a labourer. The majority of the population is engaged with farming as a primary source of income. Of the employed population, 300 out of 357 are engaged in farming either as a primary or secondary source of income. The rest are engaged in different sources of livelihood activities like teaching Blacksmith, and Barbering.

Agriculture is the primary occupation of the village. Almost every household of the village is directly or indirectly engaged in agriculture for their livelihood. The soil found in the village is Red yellow soil. The net cultivated area is 660 Acre whereas the Total Gross cultivated area is 720 Acre. Gross cultivated area is just 60 acres more because crop rotation is done only on a small patch of land. Only 30 acres is an irrigated area in the village which accounts for just 5% of the total agriculture area. The village faces the acute problem of irrigation, irrigation facility is completely absent in the village, only a handful of rich farmer owns an irrigation facility. So mainly rain-fed farming is practiced here due to the absence of an irrigation facility. Most of the farmers are directly dependent on nature for their farming. Paddy is the major crop grown in this area; however, few rich farmers also grow Wheat, Maize, Gram, Urad, Mung, Lakhani, etc. The government provides MSP³ for paddy i.e. INR1570/Quintal and INR1500/Quintal. Most of the farmers sell their produce to the cooperative Society at MSP.

The common livestock found in the village is cow, ox, buffalo, goat, and poultry. Almost every household owns livestock. The only traditional variety of livestock is present in the village. However, few hybrid varieties of poultry birds were also found. The traditional cow available in the village gives an average yield of just 500 ml milk; however, traditional buffalo yield is approx. 2 litres, which households generally use for their self-consumption. Ox is reared for farming purposes. Despite lower milk yield, the villager still rears cow and buffalo for dung to use in a biogas plant. Goat and Poultry are reared for self-consumption as well as selling purposes.

Machandur village does not have any hospital or sub-center. To access healthcare services a village household has to travel a minimum of 2 km to access the nearest sub-center. The nearest sub-center which is at Gidhali caters only to pregnant ladies. Also, doctors are available only after 6 pm and hence most patients prefer to visit the hospital at Gotatola which is around 10 km from Machandur. The Sub-Centre was established in the year 2012. Even though it remains open for all the seven days but it is operational only for two hours i.e. from 6 pm to 8 pm.

Apart from these two hospitals, the Chhattisgarh government also runs Mahtari Express, a clinic on wheels for the pregnant women. The Mahtari Express visits the village on the 9th of every month and provides the service of taking the pregnant ladies to the hospital and drop them to their respective villages after the check-up. Women residing at remote villages facing lack of transportation facilities to the hospital are the main beneficiaries for the scheme.

Besides these primary health care services, Machandur village also has two Anganwadi centres. The primary objective of these Anganwadi centres is to take care of children below 5 years of age. These Anganwadi centres also act as health check-up camps during any health drive. The Anganwadi workers also maintain a register which keeps account of all the pregnant ladies and the new-born babies of the village. Information like weight and height of the baby are regularly maintained and updated in their register.

³ MSP It stands for Minimum Support Price. It is the price at which the government purchases crops from farmers, whatever may be the price for the crops. The objective of MSP is to ensure remunerative prices to the growers for by encouraging higher investment and production.

Machandur village comes under the fifth schedule area as it is dominated by tribal, so it is in the preview of PESA (Panchayati Raj Extension to Scheduled Areas Act 1996). Machandur village comes under Machandur panchayat, Palandur is another associated village in Machandur panchayat. A regular panchayat election is being conducted in the village. Panchayat is headed by Sarpanch and the village is headed by Patel. Sarpanch is elected whereas Patel is selected by the villager. It was surprising to observe that Patel of Machandur village was being selected from a particular household for the last 37 years. Panchayat secretary is the government official to help gram panchayat in every matter. Although the 4-gram Sabha meeting is compulsory, Machandur panchayat organized 8-gram Sabha and 16-gram panchayat meeting to discuss various issues related to drinking water, Street light, Road construction, Drainage system, etc. and various government welfare scheme. Though these many Sabha & meetings were conducted it witnessed average attendance of 125 members which accounts for only 15% of the panchayat population. Women's participation in this meeting is also low. Lower people's participation was observed in local governance. Being a PESA village, the local government played a crucial role in all land transactions, without the consent of local government land transaction is not possible.

Storyline

Mr. Deva is the project manager at MBJS and has been working with organisation since its inception. He is very confident about the WADI project after visiting BAIF at Gujarat and observing their contribution to mitigating the shocks for the poor tribal community. The main objectives of a Wadi model are economic upliftment of the farmers through sustainable agriculture; prevent labour migration, social empowerment, improvement in the quality of life including health and women empowerment in tribal-dominated areas.

However, he was concerned about the adaptability by the farmers for this project as the project was at a nascent stage, only 5 months old project. At present Paddy is the central crop during Khalif season (June to November) and farmers are mainly dependent on rice cultivation. The Wadi project is one such intervention that would lead to diversification of their cultivable land. The Wadi project is 5 months old and still at a nascent stage. The operation of the Wadi project needs to be streamlined to realize the unique aspects of the Wadi project like the sustainable source of livelihood, local employment. However, currently, several challenges need to overcome to make the wadi project successful. Some of the challenges are mentioned below

1. Lack of willingness by the farmers

At present most of the farmers aren't willing to take up the Wadi project due to unwillingness to maintain the orchards and also farmers are more inclined towards the wage-based livelihood. To motivate the farmers to adopt this project as a sustainable and reliable source of livelihood, activities like field visits to another Wadi, screening of the short documentary, sharing success stories with fellow farmers are some of the good ways to make farmers understand the positive socio-economic impact on their lives. MBJS is very consistent in engaging with farmers and provides continuous support to the farmers.

2. Remote location for the implementation of the Wadi project

Due to the remote location of the orchards, access to markets for the produce would incur the high cost and also it can affect consumer acceptability. Hence, proper market linkage along with the mechanism for the inspection of the industry-standard the product can be implemented to cater to the current market demands. It will help in increasing the consumer acceptability and fetch better prices for their yield.

3. Wastage of the saplings during the sowing phase

Among all the horticulture crops, around 20-30 % of the total saplings are getting damaged in the initial phase of the plantation. To reduce the wastage, some alternative low-cost methods like pot irrigation etc can be implemented before the installation of solar panels as a primary source of irrigation.

Mr. Deva invited interns from the prestigious Rural Management Institution based in Anand, Gujarat to address this problem who visited their organization for their village field segment intending to understand the Rural economy and lifestyle holistically through village surveys. They intend to gain insights about the Rural economy from their Village Field Segment.

Actions Taken

Major crops under the WADI project were Moringa, Elephant Yam, Horticulture crops like custard apple, Mango and Guava. Based on the fieldwork, interaction with all farmers involved with WADI project, wholesaler, distributors and industry experts done by students of rural management institute, the following suggestions were given for the respective crops

Crop Specific Marketing Solutions

Moringa Leaves and Drumsticks

Moringa trees are multi-purpose medicinal trees. Each part of the tree is of some utility. Starting from the leaves, stems, pods, seeds, and roots have been applied to cure a diverse human and animal ailments. There are various companies which directly procure Organic Moringa leaves. Hence the first step that needs to be taken is immediately get a certificate of organic farming from Govt. of India. An organic farming certificate could be obtained from NPOP (National Programme for Organic Production). Once the certificate is obtained from the leaves of the Moringa tree can be converted to powder and sold to any reputed buyers. Through the certification, necessary training modules, it can be ensured that the final products meet the standards of the market and hence, consumer acceptability for the products increases. The pods could be sold to Wholesalers, distributors, weekly markets at the village level, online buyers like Big basket and Grofers as well as local sellers.

Elephant Yam

It is consumed in various forms, from pickles, crisps to vegetables, yam has found a distinct place in the Indian kitchens. Even though the cultivation of Elephant Yam is fairly easy and labour-friendly, yet there are few diseases that it is prone to and should be taken care of. One such disease that affects elephant yam cultivation is termites. Every year tons of elephant yam are affected by termite infestation. To prevent the spreading of termite infestation, farmers could use pesticides such as Bayer Regent. All they need to do is to prepare a solution of Bayer regent and dip the eye of elephant yam before planting it underground. This would prevent termite infestation in the yam cultivation. For the value addition, we need to introduce the grading and sorting of Yams. This would ensure only market-ready Yams are selected and also help the farmers to receive better payoff per yield. Besides we can diversify the Yam products by introducing Yam Pickles and Crisps in the market. Since these products are rich in nutrients and vitamins, they would easily find a buyer in the market. Also, once they are approved of the organic farming certificate, it would add value to the yams in the market allowing the farmers to demand a higher price than the market value.

Custard Apple

Its shelf life can be increased by 7-9 days by plucking it before ripening and storing it in a dark room. The pulp of the custard apple can be sold to ice-cream manufacturer. The pulp can also be utilized to prepare custard apple shakes.

Mango and Guava

MBJS can prepare mango pickle and aam pappad with the help of women SHG. Also, the pulp of Guava and Mango can be sold to various RTS producers.

Long-Term Action Plan

Apart from the above value addition, the organization should indulge in the awareness campaign by organizing farmers meet and showing awareness documentaries to the WADI members. It should also begin talks with prominent companies like Organic India, ITC, Big Basket, Grofers who would directly procure the raw materials from the WADI thus benefiting the farmers with better procurement prices. However, in the long run, an organization should focus on building its organic mandis which would facilitate the WADI farmers to sell their output. The women SHG should also involve in preparing value-added products like moringa powder, pickles and aam papad which could be then sold through organizations organic mandis.

Interns also advised Mr. Deva to mobilize the tribal community and set up the weekly bazaar at the village level itself. At present, villagers have to visit 6 Km to the nearest market to purchase goods and services for daily consumption which takes an ample amount of time and energy. In this regard, weekly bazaars at the village level would be able to reduce the transaction cost as well as it will serve as a platform for economic benefits, a great medium for information dissemination, transformation, and awareness creation. Apart from social services and social awareness campaigns, these weekly markets also can act as a place for promotional campaigns of some products by private agents.

Response

Keeping the current problems in mind, Mr. Deva liked the suggestions given by interns and accepted them with alacrity. To make the farm produce sellable in the market, he applied for the NPOP (National Programme for Organic Production) certification and started contacting major food aggregators. Workshops, field visits were organized for capacity buildings wherein farmers visit at other wadi projects and interact with fellow farmers. This kind of peer learning and interaction with fellow farmers and consistent support from MBJS was a great motivation factor for beneficiaries. To ensure the sustainability of the project, a committee will be formed democratically out of 500 farmers to ensure better forward and backward linkages for the farmer. Committee will be responsible for the marketing of output.

Questions for Discussion

1. What is the viability of the WADI Project?
2. What will be the impact of the WADI project on farmers?
3. How weekly bazaar will be useful to promote the WADI project and provide local market.
4. Will WADI project impact Women empowerment?
5. Assessment of Wadi Project through Coolie's Framework.

About the Author

Ritesh Amar Singh is currently pursuing Post Graduate Diploma in Rural Management from the Institute of Rural Management. He is a proud alumnus of Lokmanya Tilak College of Engineering and Sainik School Kunjpura. He has a keen interest in follower of Tribal culture and trends. He loves narrating an engaging story.

Annexures

Annexure 1

Solar Pump Installation To ensure a better irrigation facility in the wadi, a solar pump is installed by CREDA with 97% financial assistance by NABARD.



Drip Irrigation To ensure effective irrigation with no water loss Drip Irrigation facility is installed by Paras Drip Irrigation with financial assistance provided by NABARD.



CPT Nali To protect the fertile top surface runoff during the monsoon, and to increase the moisture retention of the Wadi plots, to check the groundwater levels and improved water harvesting in the rainy season, CPT Nali is constructed around every Wadi plot under MGNREGA Scheme.



Fencing Before plantation of trees a wire fencing is done around the Wadi plots to protect them from cattle with the financial assistance of NABARD.

Intercropping To optimize land use and cater to short-term needs, intercropping is used to cultivate a range of crops like Custard Apple, drumstick, jimmikanda, turmeric, vegetables, etc. which provide rich nutritional food to their family while the sale of the surplus crops will supplement their income.

Organic Farming The Wadis were supplied with organic manure for growth and soil revival. The rich compost improves soil fertility and reduces dependence on chemical fertilizers, thus facilitating the production of organically grown produce in the region. Measures will be taken to prevent termite, bacterial and fungicide attacks by using neem cake and cow urine. All these efforts will increase the natural fertility of the soil and boost production.

Annexure 2



Annexure 3

Table 1 Trend in major fruits and vegetable consumption

Crop		1993-94	1999-00	2004-05	2009-10	2011-12	CAGR
Banana (No.)	Rural	2.20	2.48	2.37	3.86	4.18	18.84
	Urban	4.48	5.00	4.14	6.65	6.69	11.48
Mango (g)	Rural	60.00	100.00	90.00	108.00	160.00	22.61
	Urban	120.00	160.00	110.00	158.00	202.00	10.84
Apple (g)	Rural	30.00	30.00	30.00	45.00	58.00	18.81
	Urban	110.00	80.00	115.00	158.00	191.00	19.53
Potato (kg)	Rural	1.24	1.61	1.33	1.67	1.97	10.02
	Urban	1.08	1.32	1.14	1.37	1.61	8.73
Onion (g)	Rural	460.00	580.00	560.00	741.00	842.00	15.65
	Urban	560.00	720.00	720.00	854.00	951.00	13.09
Tomato (g)	Rural	290.00	350.00	340.00	537.00	586.00	20.14
	Urban	460.00	550.00	530.00	757.00	806.00	15.50

Source: National Sample Survey Office

Annexure 4

Plant	No. of Saplings
Mango	300
Custard Apple	100
Guava	100
Moringa	500
Bamboo	200
Turmeric	40 kg

Annexure 5**Coolie's Framework**

BASIX, livelihood promotion institution, recognized that though a considerable number of livelihood decisions are taken by the HH, it is done within the substantial influence of the external context. Though the SLA made a serious attempt to factor in the context, by developing further development and detailing before it could be used practically in the field. Vijay Mahajan and Thomas Fisher³⁴ had extensively used Michael Porter's³⁵ framework for analysing the strengths and weaknesses of an industrial subsector. The authors then helped Sankar Datta adapt this framework for analysing livelihood intervention choices for the poor. They cheekily named it the 'Coolies' Framework', taking into account the fact that a porter is called a Coolie in Hindi! The main elements of the Coolies' Framework are the Internal Context and the External Context, under which livelihoods for a particular target segment are sought to be promoted.

Figure 1: The Coolie's Framework

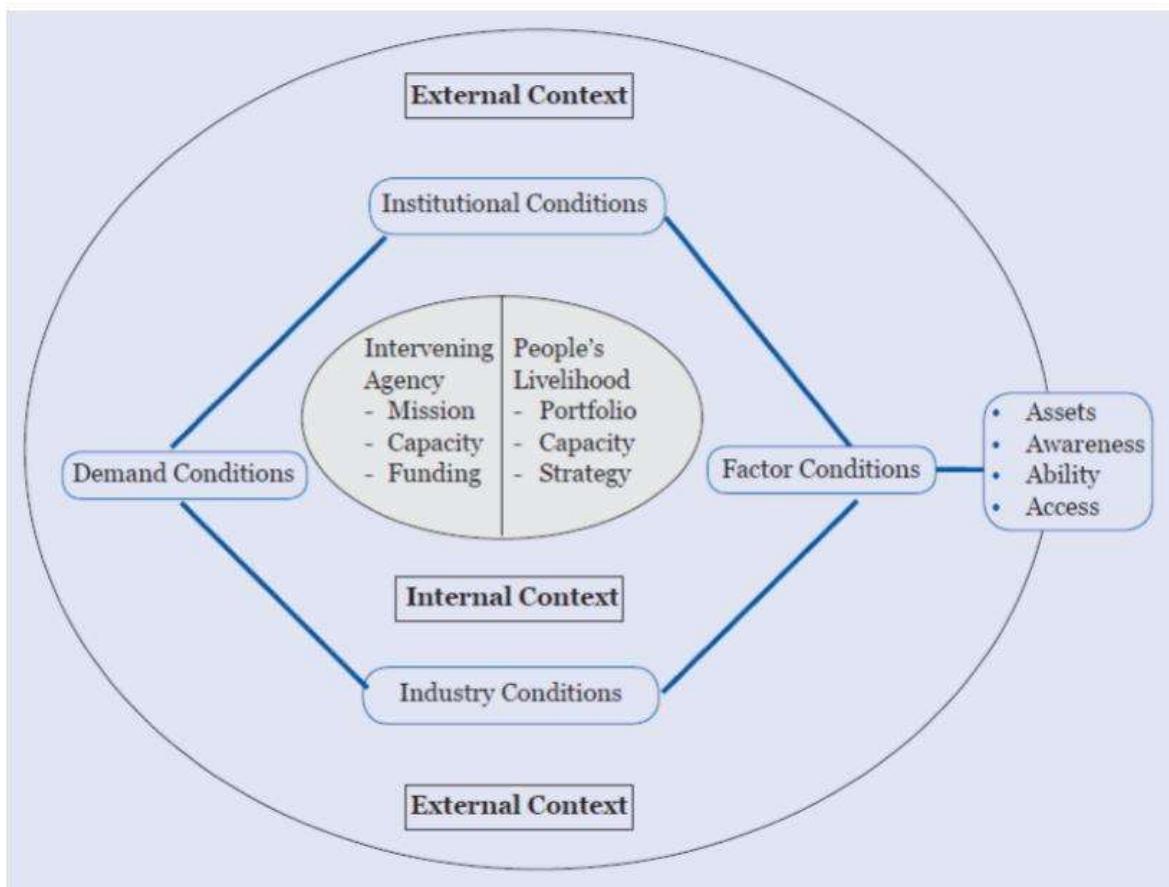
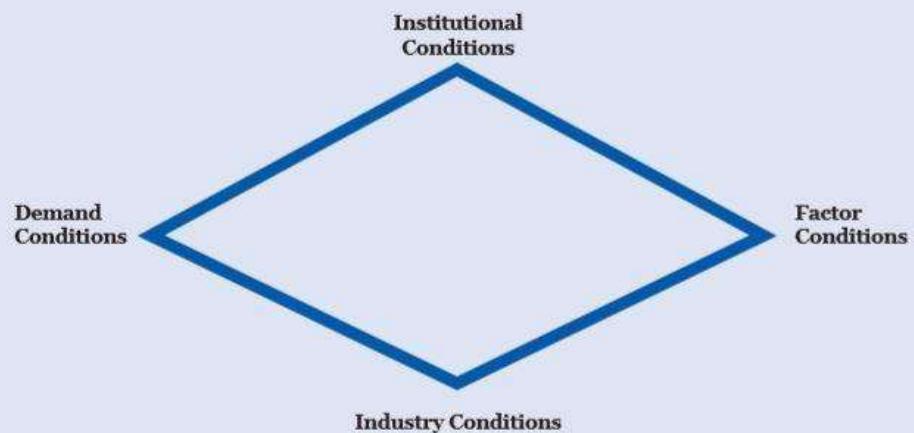


Figure 9: Elements of the External Context



Accessibility to the Healthcare Facility (Kayanna – Kerala)

Amjad PP, IRMA

Challenge

What does it take to transfer a sick man or woman to the nearest healthcare centers? Does accessibility to health care really a major factor for consideration? Or else we should create a health care facility in rural areas for the sake of creating it! Here the challenge for Nihas K V and Benny Varghese was how to solve the accessibility issue to Kayanna PHC.

Setting up the Context

It was a normal day at NRG National Rural Institute Gujarat. A participant of the program, Benny Varghese gets attracted to the news title in The Hindu online e-paper about “National quality certification for seven public hospitals”. (Exhibit 1- News) After reading the news he called his partner Nihas K V to share the news. The news was about Seven primary health centers (PHCs) in Kerala awarded the National Quality Assurance Standards (NQAS) certification from the National Health Mission, an arm of the Ministry of Health and Family Welfare in 2019

This news was not a surprising one for Nihas as he knows that the Kerala healthcare delivery system has put up the best example for other states to emulate upon. But he had noted many issues during his fieldwork at Kayanna village. One of those issues included accessibility to PHC in rural areas. The team (Benny and Nihas) visited all the facilities in Kayanna during the fieldwork. Everything was satisfactory except the PHC accessibility.

Background

About the Village- Kayanna (Kerala)

Kayanna is a high range village in north Kerala. Kayanna village is located 36.3 km away to the north-east side of Kozhikode city. The village surrounded by Koorachundu on the East, Perambra, and Nochad on the West, Kottoor on the North and Perambra and Chakkittapara on the South. Village location is shown in Exhibit 2-Kayanna village location (google map). The nearest town is Permabra and the village is well connected to both these places by frequent bus services. Kayanna bazar is the only major bazaar in the village. A map of the village is shown in Exhibit 4-kayanna village map. There are three PWD (Public Works Department) roads and several panchayat roads. Most of the roads are in good condition. The nearest railway station is 20.7 km away from the village and it generally takes around 45 minutes to reach there.

All the basic healthcare facilities including a public health center, two sub-centers, a homeopathic clinic, and a government ayurvedic hospital are available within the village. There is one ATM and one marvel store located in the village. There are many temples, four churches and five masjids inside the village. No alcohol stores are present in the village but there are many toddy shops. The nearest police station is Koorachundu police station, which is 2.6 km away from the Kayanna Bazar. A major private hospital, EMS hospital, is located in the nearby town Perambra, 10.5 km away from the village. The government taluk hospital is 11.2 km away from the village. (The achievements of Kayanna Panchayat is listed in Exhibit 2) The Kayanna panchayat consists of 13 wards and the average number of households in the ward is 250. There are a total of 3654 households residing in the village with each ward having 250 to 300 households on an average there are some primitive tribal also present in the village. There are some colonies called ‘Lakshamveedu’ colony and ST colonies are present in the village.

As per the 2011 census, the village population was 16776 and the current estimates from the panchayat show that the population has increased to 17855 and that the number of households is 3654. Ward number along with its name and other details are listed out in Exhibit 5-Ward wise details and road facilities.

Village History

The village was part of the Malabar district in the Madras Province during the colonial era. William Logan, the District Magistrate during the time had mentioned the village in his book 'Malabar', popularly known as 'The Malabar Manual'. Logan talks about a valley near Kuttyadi, which is filled with a special type of tree bearing a fruit that was crushed to get oil. The tree was really beautiful and people from even distant places came to get its branches. The fame of the tree gave the village its current name 'Kayanna' which means 'oil from fruit'. There is no verified document that describes the initial settlements in the village, but there are shreds of evidence citing habitations many centuries ago. There were only around 900 families initially. Ninety percent of them were Hindus belonging to Nair and Ezhava community. The rest ten percent were Muslims. The people were mainly farmers and casual laborers. 'Koyilamkandi Gopalan Nair' is an important name to note when going through the history of the village. He owned almost a quarter of the total land of the village and donated a major portion of his assets to the people who came to settle in the village. His ancestors played an important role in the construction of the Kayanna Devi Temple which is a very important landmark in the history of the village.

The first notable in-migration occurred in the 1800s when the Kottakkal family came. The family constructed a mosque in the village. There are tales about how 'Suppi Muthalali' of the Kottakkal family came to the village as a timber merchant with many elephants. The pathways created by the elephants while dragging logs became the first roads. In 1912, the Prince of Wales, during his visit to India established the first school in the village, which later became the Government UP School.

The impact of freedom struggle came to the village only in the second decade of the nineteenth century. This was mainly due to a lack of connectivity. However, there were various leaders who actively took part in the freedom struggle from then on. Puthuserry Kunjikkannan Nair, Govindan Kadavatt, A P Gopalan Nair, Thykandy Moideen are the most prominent names in the list. The farmers' union was formed in the 1940s and it played an important role in many social reform movements. It also led to the formation of the Communist Party in the village.

After independence, Kayanna was initially part of Athyoli village. Kayanna was made a separate village in 1969. The 1960s also saw a large number of Christian in-migration from Kottayam and Thiruvananthapuram. The migrants cleared forest in the hilly areas and started rubber and coconut plantations. The next decade witnessed revolutionary developments in the village. The first pucca road was constructed in 1968 and as a result, the first bus service started in 1977. One of the most important events in the village took place in 1974 when the construction of the canal started. It completely changed the agricultural sector of the village as the farmers got perennial access to water and they could cultivate in all three seasons instead of one. It also resulted in the migration of construction workers from Kasargod district. Electricity first came to the village in 1982. The 1980s also saw a lot of migration to the Middle East. Muslims were the first to explore the opportunity, followed by Christians and Hindus. Nowadays, almost ten percent of the households in the village receive income from the Gulf countries. The remittances from the middle east have remained the highest contributor to the village income for a long time.

Storyline

Available Modes of Transportation in the Village

There are two types of transportation available. One is transportation with the help of auto-rickshaws and the other one using a private bus.

Autorickshaw

There is only one auto-rickshaw stand in Kayanna village. That is in Kayanna Bazar. If we want any transportation, we have to call the driver over the telephone or we will get random autos from the road. Normally, the vacant random autos are the autos, which finished a trip and going back to the auto stand for a new ride. If we hire an auto from the auto stand, we have to pay the charge from the auto stand to the pickup location plus the normal charge for the trip. If the drop-down point is far or interior area (where the demand for a ride is low) then, the driver charges a fixed amount for return also. If we are hiring or picking a random auto, which is going to auto stand after finishing a trip, then the trip charge varies. If we are going to Kayanna Bazar or auto stand, the driver charges only 10 rupees (It is a standard charge). If the person is going for a location that is interior area, then the traveler has to pay an extra amount as said in the earlier case.

Minibus

There are three bus routes through Kayanna village. This minibus (Kutti bus) routes are narrow. The first route is Perambra to Balusser through Koottalida (It is through the valley). The second route is Perambra to Balusser through Kakkayam road. (Hill route) and the third route is Perambra to Koorachundu route through Kayanna Bazar. Normally, every 15-20 minutes there is a bus to Perambra and Balusser. PHC is situated near to Kayanna- Koorachundu road, where the bus service is only one minibus per hour.

Existing Healthcare facilities in Kayanna village

The village has a highly developed health infrastructure with a well-functioning PHC, which is situated in a hilly area, which is connected with PWD road by a small pucca road. The kayanna PHC location is shown in Exhibit 6. This PHC road is 800-meter long from the main road and also it 45-degree elevated compared to the PWD road. Near to the PHC bus stop only one Kirana store present. The village also has two sub-centers within the boundary. The system consists of a Health Inspector, two Junior Health Inspectors, three Junior Public Health Nurses, 10 ASHA workers, and 17 Anganwadi workers. Additionally, there is a government ayurvedic hospital and a homeopathy clinic present in the village. There are two medical shops within the village but there are no labs for blood, sugar or urine testing. Anganwadi workers are the first point of contact regarding any health issues for the villagers. They monitor the health environment efficiently as they are present at a very healthy ratio of one worker per thousand persons. They, along with the ASHA workers, are in charge of overseeing the health of pregnant women, ensuring pre and post-natal care, providing health supplements to mother and child, monitoring vaccinations, etc. All health supplements were distributed efficiently in time and almost all children were vaccinated, except for a few whose parents refused to vaccinate them citing religious beliefs. The villagers expressed a high level of satisfaction when enquired about the working of Anganwadi and ASHA workers.

The Efficiency of the Healthcare System in Kayanna Village

The ASHA workers and the Anganwadi workers were very efficient and proactive. They even cited an example of how the timely intervention of the ASHA worker prevented the outbreak of malaria in ward number five. A boy was suffering from malaria, He got affected from Karnataka, where he was studying for engineering. When this was reported in ward number 5, the entire Kayanna PHC team became alert and mobilized to the area. They distributed prevention tablets throughout the ward with the help of ASHA workers and Anganwadi workers and gave arrangements for the proper care to the affected family. Also, they conducted an awareness campaigning in that ward to mitigate the anxiety of the villagers.

‘Ardram’ is a cancer detection camp that is conducted occasionally by the ICDS for providing assistance for cancer patients. One of the households we surveyed had a member diagnosed with cancer in one of these camps and received support for treatment.

Another covariate shock in that area was the spreading of the Nipah virus. There was an outbreak of Nipah virus in the nearby town Perambra. The first case was reported in the sub-divisional hospital in Perambra village. It is believed to have been caused by bats in that area. The outbreak caught the attention of the national media when a health worker named Lini succumbed to death. She took care of the patients who were initially diagnosed with the virus. More than two thousand people were quarantined and kept under observation during the period of the outbreak. The period saw people being completely scared even to go out of their houses. People refrained from consuming pulpy fruits especially mangoes which were in its harvesting season. The prices of these fruits fell drastically. Shopkeepers did not open their shops and workers abstained from moving out for work. All this also led to the stagnation of economic activities in the whole Kozhikode district. However, the Taluk hospital did a commendable job in identifying the virus quickly and taking adequate measures to curb the outbreak. This kept the death toll from reaching huge numbers. The efficient manner in which the situation was handled can be attributed to the highly developed health infrastructure in and around the village. The PHC team conducted various awareness campaigns and related programs to guide and communicate with villagers. They were also joined with the district health care team to prevent the virus from spreading and related healthcare activities.

Issues with Healthcare Facilities

An important issue in the village is that of connectivity. Some of the most critical institutions like the PHC, veterinary clinic, schools, etc. are located in hilly areas and the roads are not in the best condition. Many people choose private clinics over the PHC because of the difficulty in access.

Accessibility/Connectivity with Healthcare facilities

As mentioned above, the PHC is equipped with all basic requirements and is functioning very well, it has a great disadvantage when it comes to location. The PHC is located in a hilly area of the fourth ward of Kayanna panchayat. This creates the problem of accessibility. The villagers have to travel 800 meters uphill from the nearest bus stop. The PHC pucca road is a 45-degree inclined road with a 3-meter width. There were no public transport facilities available to PHC. Also, there were no private autos available at the nearest bus stop. So many elderly patients, sick patients are not choosing PHC as their primary option for treatment. They are paying a huge amount for getting treatment in private facilities. Although the PHC has all the required facilities villagers are not able to utilize it when needed. Though average 40-50 patients used to visit the PHC during the normal day. But compared to the village population it is very

small. Villager's next best option is Perambra Government hospital, which is in Perambra town and has to travel about 14 km and needs multiple transport modes to reach there. Moreover, it is a very busy hospital with a lot of inpatients and outpatients. So, for normal consulting villager's best option is PHC itself. Healthcare centers near Kayanna including the number of patients visiting per day working days working hours are listed out in Exhibit 7. Also, the doctor's availability (male and female) is shown in Exhibit 8. The availability of different tests is listed out in Exhibit 9.

Since the connectivity was the major problem to reach PHC, then Benny and Nihas decided to discuss the issues with the concerned authorities. First, they had a discussion with the gram panchayat president and secretary. Panchayat was trying for a land that has good space parking and connectivity in Kayanna village. But they couldn't find any because of the land price and availability mismatches. So, they dropped the location changing plan and they requested us to suggest a feasible solution to resolve the issue. Benny and Nihas also had multiple interactions with the patients and the health inspector. The health inspector pointed out that, connectivity is the major reason for the smaller number of outpatients in PHC. Although the PHC is well equipped and has all the basic facilities still villagers are reluctant to come there. Patients also have the same opinion, most of the time they had to travel from the bus stop to PHC by walk. It is very hard to get any vehicle. Due to the geographical specialty (Inclined road), autorickshaw drivers do not prefer to come there. Otherwise, they used to charge extra. So, the villagers are facing difficulty to reach the PHC. Apart from that, some villagers are sarcastically told that after walking 800 meters through inclined road to PHC, and then they have to get admitted to the hospital to inject glucose for energy gain for the return journey.

Action Taken

As students of the National Rural Institute, Benny and Nihas couldn't just forego this issue, they came up with two ideas for the same. One was introducing a telemedicine facility, which can help the patients to stay in their homes and get consulting via telephone. The second one was to introduce an electric rickshaw exclusively for PHC.

After calculating the cost of implementation, they rejected the telemedicine solution. They tried to look at the feasibility of the electric rickshaw (Exhibit 10) service. Firstly, they divided the feasibility study into two parts. The first part was financial feasibility. After some research price of an electric auto was known to be INR 1.35 Lakh, which was financially viable compared to the other solution. As well as it does not have other fixed costs. The only variable costs are electricity and salary for the driver.

Then they started thinking about the implementation plan. After analyzing PHC's day to day operations, they came to know that the PHC has two drivers, one is the permanent driver of health inspector and the other one is a temporary ambulance driver. Normally ambulance does not have frequent work. It uses when any emergency comes into the village. That means the normal usage is 2-3 services per week. The driver is mostly free during the entire week. So, if the ambulance driver operates this electric rickshaw from 9 am to 2 pm every day like a shuttle service from the nearest bus stop to PHC and vice versa. Then this intervention can attract villagers to PHC as it remedies the major issue for the patients reach PHC. If the intervention can continue with the existing plan, the panchayat can solve at least the accessibility issues and the rickshaw can accommodate a maximum of 4 people. Hence it will take 5 minutes (as per our calculation) to reach the PHC and from PHC to the main road also. Patients could save their energy and time. As well as it will attract more patients to the PHC. This electric rickshaw will not cause any pollution to the environment; hence it is a sustainable intervention for Kayanna village's

health care accessibility. Whenever the ambulance driver has a trip, the health inspector's driver can substitute the role and make sure the service consistency and ensure the patient's satisfaction.

Response

Nihas and Benny discuss the ideas with the panchayat team and the health care department. They were very happy to introduce the intervention in the panchayat. They promised that they will include this proposal in the next budgetary meeting. They also met the higher governmental officials to check the financial viability of the project.

Questions for Discussion

1. What is the main issue in this case? What is the underline cause?
2. How we can overcome these issues?
3. Is this a failure of the PHC system or government? If yes, why? If not, who else is responsible?
4. Do you have any other alternative solution? If yes, Define them.
5. What are the criteria to judge the solutions and come up with the correct one for the case?
6. What is the feasibility study? What is the importance of feasibility studies and planning in the development project?
7. What are the metrics of development? How can we measure the development of the healthcare section in the rural sector?

Annexures

Exhibit 1 - News

THIRUVANANTHAPURAM

National quality certification for seven public hospitals

SPECIAL CORRESPONDENT

THIRUVANANTHAPURAM, APRIL 26, 2019 00:50 IST
UPDATED: APRIL 26, 2019 00:50 IST

Five of them become national toppers at PHC level

The State health system achieved yet another milestone when seven primary health centres (PHCs) in **Kerala** secured the National Quality Assurance Standards (NQAS) certification, with five of the institutions becoming national toppers at the PHC level.

The seven NQAS-certified PHCs are part of the 170 PHCs in the State that had been converted to family health centres last year under Mission Aardram.

Kayur FHC in Kasaragod, with an NQAS score of 99%, became the top PHC in the country. The other health institutions to receive the NQAS certification are Valapattanam and Therthally FHCs in Kannur district; Valiyaparamba and Karinthalam FHCs in Kasaragod district; Peruvembu FHC in Palakkad district, and Chemmaruthy FHC in Thiruvananthapuram district.

Exhibit 2 – Kayanna Village Location (Google Map)

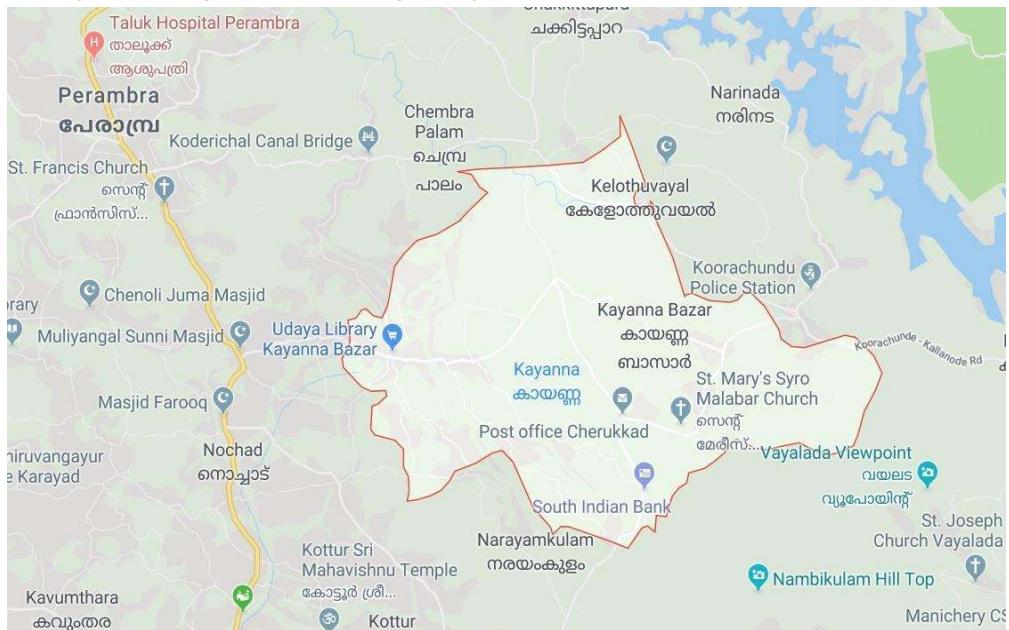


Exhibit 3 – Achievements of Kayanna Panchayat

- Kayanna Panchayat has been the recipient of the Swaraj trophy for three consecutive years (2012-15)
- Rashtriya Gaurav Gram Sabha Puraskar (two times 2014-15, 15-16)
- Kayanna has also received special acclaim for 100 percent budget utilization and 100 percent tax collection.

Exhibit 4 – Kayanna Village Map

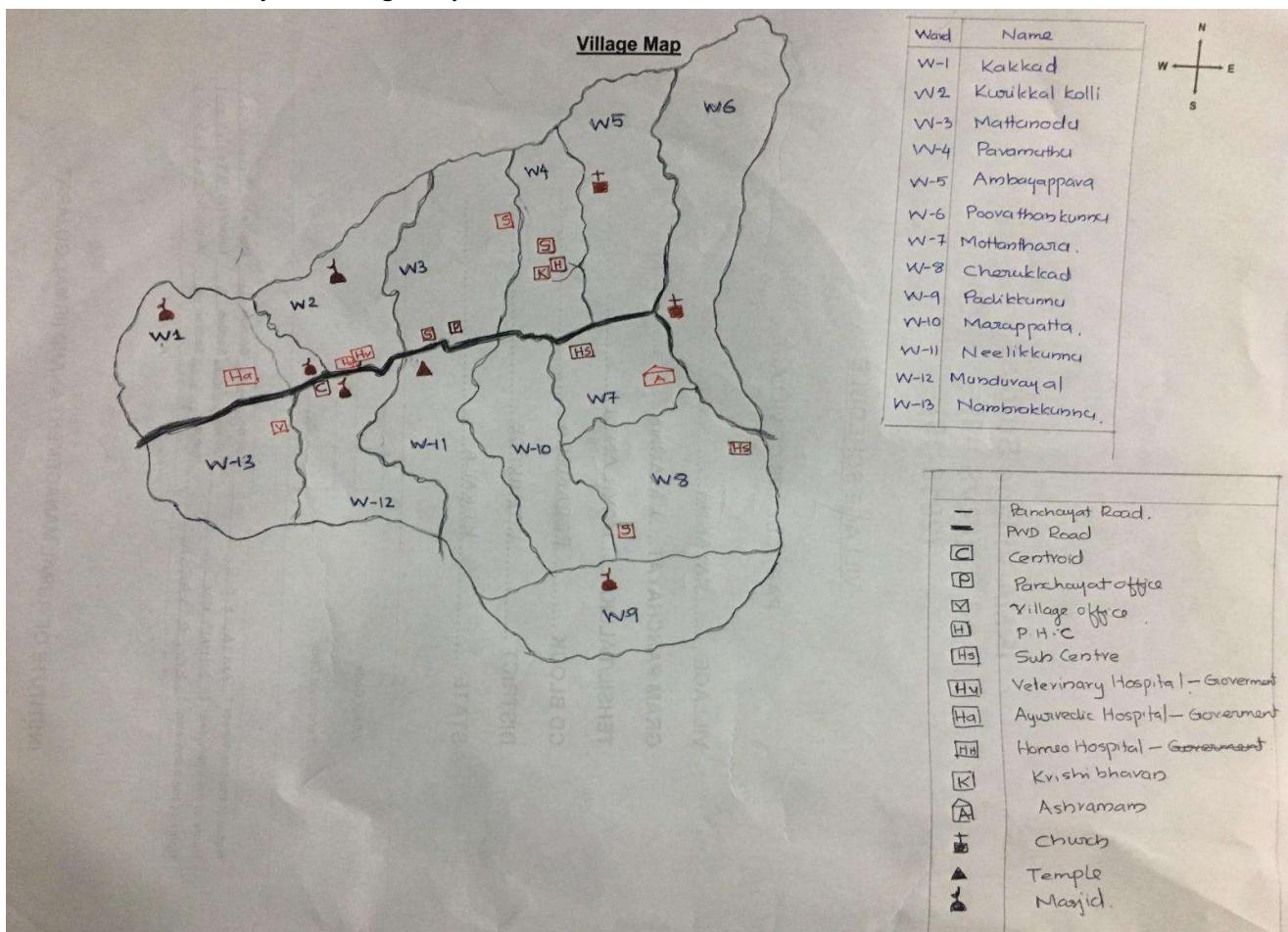


Exhibit 5 – Ward wise details and road facility

Ward Number	Ward Name	No. of Households in Each Street	Pukka Road since what year/ (enter 0 if no pukka road)

Missing Payments in Pachra

Prasanna Hambarde, Pratik Wankhede, and Ninad Buch IRMA

Challenge

It was a sunny afternoon in October when Mrs. Vimala, the field executive of KARM-PURTI in Pachra village was trying to make sense of what seemed like a chorus of complaints. About 60 women members from eight SHGs had joined this meeting organized by KARM-PURTI to discuss SRI implementation.

Mrs. Vimala had been working for KARM-PURTI for last three years. KARM-PURTI was a prominent NGO in this region, which had closely worked on livelihoods and sustainability in agriculture in this village; and currently working on implementing System of Rice Intensification (SRI) agriculture technique. For Mrs. Vimala, this meeting was a chance to explain the additional measures required while harvesting and ways to measure the change in the output for members who had grown under SRI before the harvest season begins. But to her disappointment no member was ready to discuss SRI, rather this meeting turned into an informal meeting where members started voicing their concerns regarding delay in payments for MGNREGS work. Leading them was Mrs. Parmeshwari Ji, an active member of SHG among the few progressive farmers in the village. Soon Mrs. Vimala understood that it won't be of any use to discuss anything other than the "missing payments of MGNREGS in the village". Though her work was restricted to KARM-PURTI's activities, she felt her duty to learn about villagers' problem and suggest something if required.

Current Situation

In October, it had been more than five months since villagers had finished working on the projects to de-silt and clean the water body (overflow site of Chaapi dam). As per the data (Prasanna Hambarde, 2018), of the 330 villagers in working age (157 job cards), 180 were assigned the work. Most of the remaining villagers who were not assigned the work had to migrate to the nearest town for work. The villagers had been meeting the Rojgar-Sevak Mr. Paikra and Panchayat officials to discuss this delay in payment quite regularly. If the monsoon had been good this year, villagers would not have thought of anything beyond the reminders i.e. the bad monsoon forced them for urgent measures to get their payments.

Below average monsoon had aggravated the situation. Villagers had severely curtailed their production forecast. Most of the fields barring few irrigated ones, had the paddy plants dried up, pale yellow and the panicles failing to stand erect. Now they needed their MGNREGS payments from the government (which were in the tune of few thousands for some of the villagers) even more urgently. This had caused major upheaval in the village, faced with such delay for the first time, the villagers did not know the ways to address this. Unable to find any guidance within, they decided to discuss this with Mrs. Vimala who had been visiting their village since last year and training them in implementing SRI technique. For many villagers like Mrs. Parmeshwari Ji, Mrs. Vimala was the only trusted person from the nearby city Bilaspur, who was well acquainted with government schemes and development activities; and they hoped that she could guide them through.

About Pachra

Located in central Chhattisgarh, Pachra village lies in Bilaspur district; it takes about 90 minutes from the district headquarters to reach this village. When coming from Bilaspur one has to travel through road passing through the jungle for 2 km to reach Pachra, which means restricted passage/ limited travel services to this village that increases the remoteness of the village (Exhibit 1).

The village with a population of 630 has 5 grocery shops and a bike repair center. There are 5 establishments nearby the village where the residents of this village go to earn wages (and return home the same day), four mason-establishments (contractors for construction and other works) in Ratanpur town and a brick kiln in Khasariya village. Few villagers from Pachra work there but on a contractual basis. Concern with these establishments lie in their inability to provide employment round the year, the brick kiln is closed during the monsoon and the mason-establishments are demand-based with work being available for approximately 200 days for the workers (Exhibit 2 explains the employment calendar of an average adult in Pachra). Of all these works, only the brick-kiln worker involved in making brick earns according to piece rate.

The lack of large-scale organizations and special setup like “Chhattisgarh State Industrial Development Corporation” in the vicinity has affected the employment prospects in the lean agricultural season. Owing to this, no secondary or tertiary employment benefits like serving food and other services to blue-collar and white-collar employees are found here. Lack of employment opportunities within and nearby the village, coupled with difficulties in cultivation during Rabi and summer season (Zaid) forces most of the marginal and landless farmers of the village to migrate during the lean season. In most of these families, teenagers and young adults migrate to the nearby town, while the head of the family stays within the village and participates in MGNREGS or as agricultural labor if any villager cultivates something during the Rabi or Zaid.

The yearly activity composition plan (Exhibit 3) indicates that this village relies heavily on non-agricultural labor for the employment; villagers spend 24% of the employment in a year towards the non-agricultural labor. Like many other villages, about 90% of the farmers are marginal or small farmers here and though most of their income comes from cultivation (agriculture-self) for this village, income from labor is essential to ensure sustenance. Income from MGNREGS formed about 14% of the total income of an average household here.

MGNREGS in Pachra

The water body formed as an overflow of Chaapi Dam served as a reservoir, which some of the villagers having an electric pump used for growing vegetables or Wheat during Rabi season. This overflow site was also used for ‘lotus farming’ which the teenagers used to collect with the rubber boat and earn considerable income during festivals; de-silting was crucial for the village. In addition to this, for the last two years, MGNREGS work included working for roads connecting the streets or ‘Para’ in the village. After completion of roads, the Panchayat could not come up with any additional work this year and only the desilting work (of overflow body of Chaapi Dam) was approved. It was already clear to the villagers that this work won’t be able to provide employment to all eligible workers (with a job-card in the family), even for five weeks. Also, there was no additional requirement of labor in the villages in a radius of 15 km of Pachra, this meant that the villagers either had to hope for being allocated work in this project (of desilting) or work for private enterprises in the Ratanpur town.

Mrs. Umadevi Uikey, one of the women members had another set of concerns. During the meeting with Mrs. Vimala, she highlighted the discrepancies in the work allocation. She alleged that instead of equitable representation of all the households in the work allocation, there was a clear bias towards the villagers associated with Panch of the wards and other office bearers of Panchayat. Pachra had a considerable tribal population, about 33% of the total population (Exhibit 4), but were sometimes inadequately represented in the Panchayat. Her tone indicated that this was a regular phenomenon in Pachra. Another woman member Mrs. Radhabai Uikey echoed Mrs. Umadevi's allegations and went on to explain the scheme of things. According to her the Rojgar-Sevak who was supposed to ensure fair allocation was himself biased. All the willing villagers related to Panch and other post holders surely get the work (for 7-10 weeks), while it is household like hers who gets work for a couple of weeks, if at all. Mrs. Chandra Das, wife of the Up-Sarpanch Mr. Nandan Das who was also a member of SHG seemed to disagree with this and tried to make her point, only to be overpowered by other members.

It was the second year when they were going to get Direct Beneficiary Transfer (DBT) for MGNREGS wage payment. With this, the time to receive payment after the completion (and inspection) of the work was to reduce considerably. But here in Pachra, only 10% of beneficiaries had received full payment, while 20% of the beneficiaries had received no payment, and remaining 70% had received partial payments till now, five months after the completion of work in May (Refer Exhibit 5). Rest of the beneficiaries had received partial payments. Incidentally, most of the beneficiaries who had received complete payment belonged to households related to office bearers of the village.

During the meeting, it was also alleged that while villagers were struggling to find a solution to this issue, the Up-sarpanch Mr. Nandan Das (Up-Sarpanch is one of the elected ward members, who acts as deputy to the Sarpanch. Whereas Sarpanch was ward member from the Panchayat village Umariya) was busy with preparations for upcoming Chhattisgarh Assembly Elections (2018).

MGNREGS, Objective and Execution

If you have the jobs available in the village, the person won't need to migrate; such opportunities if enough in number can save families from falling below the poverty line or starvation. With this program theory, the MGNREGA was introduced in 2005 and it aims at enhancing the livelihood security of people in rural areas by guaranteeing hundred days of wage employment in a financial year to a rural household whose adult members volunteer to do unskilled manual work.

The roles and responsibilities of implementing bodies are clearly mentioned. The Panchayat is supposed to suggest or propose the work to be done under the scheme (Refer Exhibit 6). The PWD Engineer checks these estimates and inspects the plan. On approval, the engineer sends it to BDO and upon his approval, the plan is sent to the District office for final approval. The approved plan is then shared with the Panchayat and the Rojgar Sevak/ Sevika assigns the work to the job cardholders. Upon commencement of the work, it is Panchayat's responsibility to ensure that prescribed basic conditions of work are maintained, and the work is executed smoothly.

Upon the completion of work and quality inspection by the appointed authority, the payment should be released (Bhanumurthy, 2018). Panchayat needs to ensure the payment and other aspects of the program. To avoid any malpractices, BDO (along with programming officer – PO) has been assigned the role of monitoring and supervision throughout the entire process, making him the gatekeeper of the MGNREGS program for that block. Further details of the flow of funds (material & wage payment) are provided in Exhibit 7.

Since its inception, two problems bugged this ambitious program. Lack of work generation has been a major challenge; the inability of Panchayat to identify the work generation opportunities is the first roadblock towards implementing the program. Complaints of fraudulent payments and cases of bribes for receiving payment from the authorities became mainstay instead of being the exceptions. The situation became quite serious when this became the accepted norm and the word 'bribe' got replaced with the 'cut' or fees. In 2015, after the success of Jan Dhan Yojana, the government decided to curb this corruption and introduced DBT (Amendments in MGNREGS, 2018). This was supposed to solve the problem of corruption by directly transferring the total wage payment amount into the accounts of the beneficiaries. This meant the MGNREGS had got another gatekeeper in the form of DBT system.

Actions Taken

After braving the barrage of complaints for minutes, Mrs. Vimala was able to pacify the members and now the members were making their points one-by-one instead of huddling up. As the meeting progressed, she found that the villagers had officially approached Panchayat much earlier, and the office had responded by sharing that there had been some issues with recording the attendance and other details of the work on some days. Upon repeated visits the response remained the same, "some paperwork at the Block Development Office has been missing and it will be resolved soon." Meanwhile, some of the beneficiaries received the payment (as per Exhibit 4). But most of the villagers had been convinced that this was a clear case of corruption, rather than a technical issue.

Mrs. Vimala though silent, had been thinking on similar lines. In her long career with NGOs, she had come across many such instances, but she was rather surprised with this case. To prevent payments of so many beneficiaries for so long, this could be a planned effort she thought. She knew that usually the fund (total payment) for the work is made available with the Block even before the work completion, to avoid any delay in payment to the beneficiaries. The Block level officials just need to inspect the work and release the payments.

She spoke to herself "With the clear and robust system like Direct Beneficiary Transfer being in place, it is impossible for someone else to have withdrawn the money. Either the records of job-card holders and work done by them have been manipulated or the DBT system has been hacked". Later it seemed quite unlikely to her. Manipulating job records (i.e. either the name or number of days a beneficiary has worked) and transferring some of the funds to the accomplices (who either never worked or worked less than what they are receiving payment for), who in turn returned the money with a cut, was a common practice before DBT. With DBT, a clear tracking mechanism had emerged, or that's what Mrs. Vimala believed.

She was far more worried about the other possibility, she started asking the members about their interaction with the officials at the bank kiosk, which was in the village. Being the only formal financial institution in the village, villagers opened and managed their accounts there to collect the wages earned from MGNREGS and scholarship for children (Exhibit 8 highlights the convenience kiosk offers to the villagers). This, along with the other activities necessitated them to provide their thumb imprints at the time of the transaction; sometimes multiple times due to impression detection failure. She feared that the funds were transferred to the beneficiaries and the person managing the kiosk may have been involved in the corruption. He would've asked villagers to visit a kiosk to complete some formalities, got them to provide their thumb imprint/s; only to withdraw money (or transfer to his account) without

their knowledge. This, if true put all the benefits of several schemes the villagers received at risk. She tried to shrug this thought and started asking the members about their next step to address this delay.

Situation at Tehsil Office

Mr. Deo Sahoo, the Block Development Officer (BDO) of Kota block was aware of the concerns raised by the beneficiaries in the Pachra village. With increasing inquiries about the status of pending payments from Mr. Paikra who was Rojgar Sevak of Pachra, Mr. Deo was becoming frustrated. It was not that Mr. Deo did not respond to him, but Mr. Paikra found it very difficult to believe that the fund insufficiency was the reason behind the delayed payments. Successful payments in some of the nearby villages like Pudu made it further difficult for him to believe Mr. Deo's contention. Recently, Mr. Deo along with the Programme Officer, MGNREGS had sent fund allocation request to Ministry of Rural Development, India for expediting the fund transfer for making MGNREGS related payments. While Mr. Deo had faced similar situations earlier, it was the lack of communication from the higher authorities which concerned him. He acknowledged the urgency in receiving the payments owing to the below-average monsoon.

Response

After repeated meetings with Rojgar-Sevak and Panchayat officials, they were convinced that the matter had to be escalated if any solution was to come. Mrs. Parmeshwari Ji rose from the rather settled meeting and determinedly announced that they are going to take up this issue in the upcoming Gram Sabha, which was to be conducted this month. According to her this would indicate the seriousness of the matter to the concerned authorities and help them get their due payments. Mrs. Vimala had her doubts about the effectiveness of this option, she saw no point in highlighting the same issue in front of the same people; just the setting of the meeting was to change. She just quipped "Let us hope that we don't have to visit BDO sahib to take this issue forward. I have full faith in you". After which she tried to ready the women members with the arguments to be made in the Gram Sabha, by trying to provide requisite knowledge about MGNREGS and its provisions.

Mrs. Vimala refrained herself from sharing her opinion, as she felt that the current drought-like situation could make the authorities sensitive towards the issue. Also, she knew the impact of escalating the issue to block-level without representing it on Panchayat's official platform – Gram Sabha may have on these women members. It was hardly a year since women had started actively participating in the Panchayat's functioning. And to expect men in the village to leave their fields even for a day in such condition and participate in a protest was a foolish thought.

While all this was going on, one member was quite calm, perhaps with a faint smile. Mrs. Vimala noticed this and asked her if she had anything to suggest. She was their 'Dadi-Amma', one of the few senior citizens in the village who had been in the village for more than 70 years (married within the village); she was highly respected by all. Staring at some other direction, Dadi-Amma started speaking. "It is better that the stupid payment does not come; more the money, more the Mahua and all our efforts are in vain", she said. She was referring to alcoholism that was prevailing in the village. Graduating from the Mahua based drinks which had been traditionally part of their life, inflow of money had exposed them to other alcohol types like Desi (IMIL) and Videsi (IMFL). Mrs. Vimala recognized this 'Non-purposive sending' as a serious issue and decide to address it sometime later. Now was definitely not the time to discuss this issue. Soon it was time for Mrs. Vimala to catch the only bus to return home in Ratanpur.

Road Ahead

Mrs. Parmeshwari Ji had invited all the women members and affected beneficiaries to her home this evening, to decide further course of action. While she was sure that their next step was to put this as the first issue in Gram Sabha and hold it up till some concrete action is promised, she was unsure about many things. What if the block and Panchayat officials had colluded and their money was already gone and consumed? What if there was some modification in MGNREGS which the village was not aware of? Though unlikely, it had often happened with other programs and schemes, they got modified or canceled and the village received the information much later, only to delay the corrective action. She had also been receiving information about the Central Government trying to reduce the MGNREGS spending, thanks to the upcoming Assembly Elections which had flooded Pachra's people with claims and counterclaims. It was too much for her, as the list of unfavorable scenarios went too long. She quickly engaged herself in arrangements for hosting the villagers.

Questions for Discussion

1. What do you think is the role and importance of MGNREGS for villagers? (Is it just an additional income, way to reverse migration or complements their overall welfare?)
2. What could be the possible reasons for the delay in payment of wages?
3. Do you believe that corrupt practices have been followed in the village? How would you ascertain or confirm this?
4. Is it right to blame the system for the delay, which may be a one-off event?
5. Where do you find the role of Panchayat missing, if at all?
6. What do you think are the options available with the villagers to get this issue resolved quickly?
7. What do you think is the future of MGNREGS in the country?

Annexures

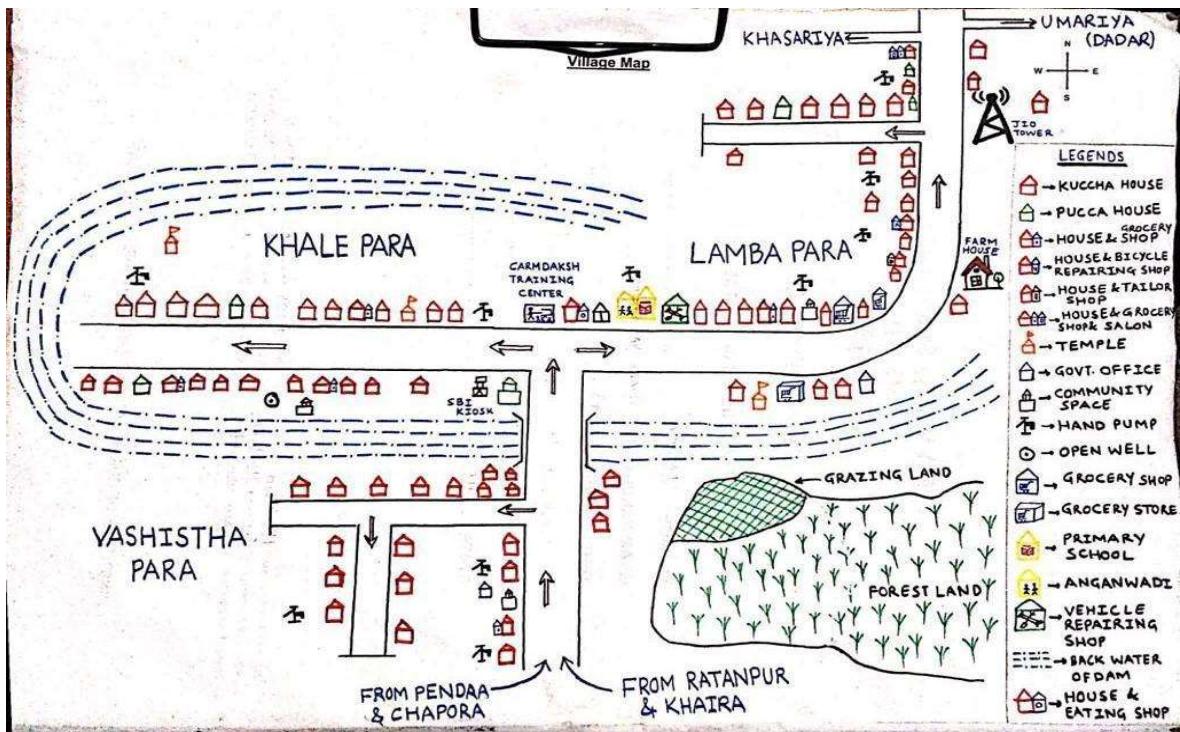


Exhibit 2 Employment Calendar, Pachra

Employment/ Month	Jan- Feb	Mar- Apr	May- June	July- Aug	Sept-Oct	Nov-Dec
Agriculture & Agri-Labour	■ ■ ■	-	-	■ ■ ■ ■ ■ ■	■ ■ ■ ■ ■ ■	■ ■
Mason	■	■ ■ ■	■ ■	■	■	■
Collection of Mahua flower	-	■ ■ ■	-	-	-	-
Brick Kiln	■ ■	■ ■ ■	■ ■	-	-	-
MGNREGS	-	■ ■ ■ ■	■ ■ ■	-	-	-

Exhibit 3 Yearly Employment Composition of Household

Yearly Employment Composition of Household

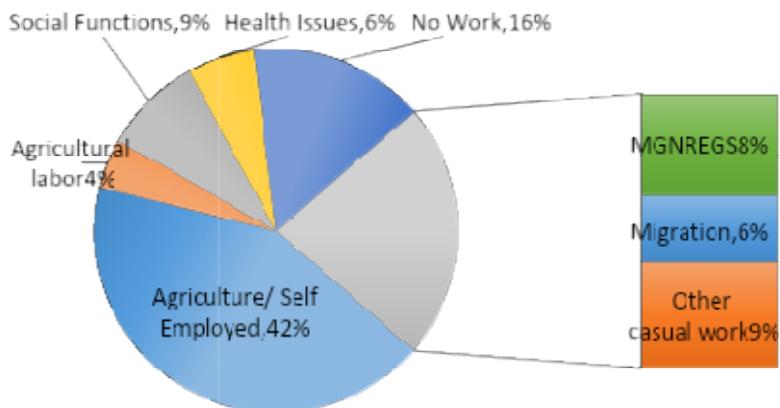


Exhibit 4 Caste composition of Pachra

Caste Composition of Households

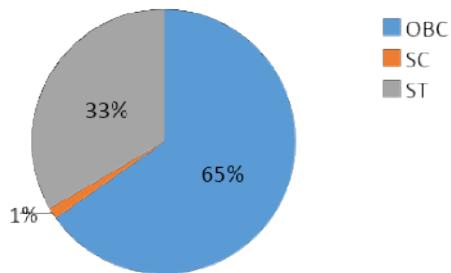


Exhibit 5 Payment Status of MGNREGS work in Pachra (October 2018)

Payment received	Percentage of beneficiaries
100%	10%
50% or more	30%
30% or more	80%
No payment	20%

Exhibit 6 Process for work generation in MGNREGS

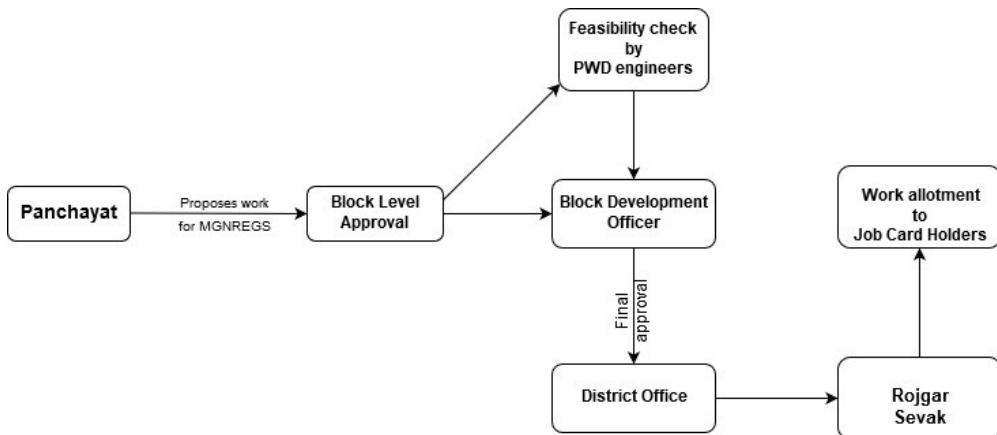


Exhibit 7 Flow of funds in MGNREGS

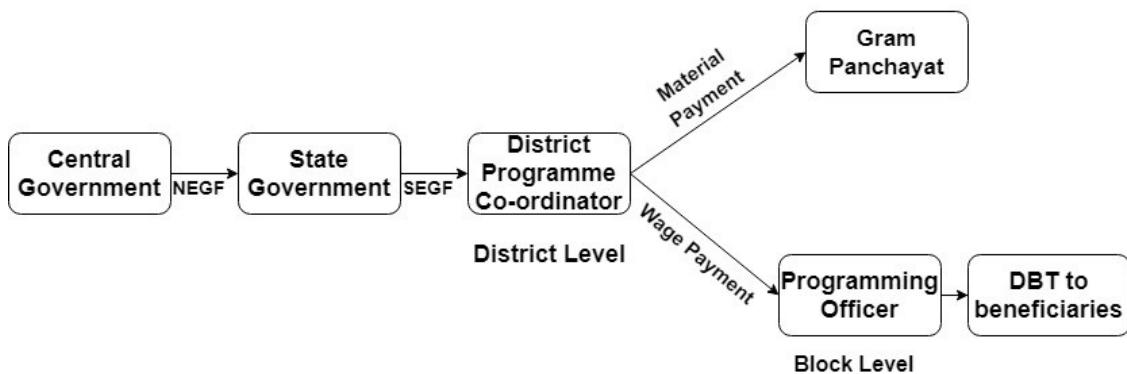
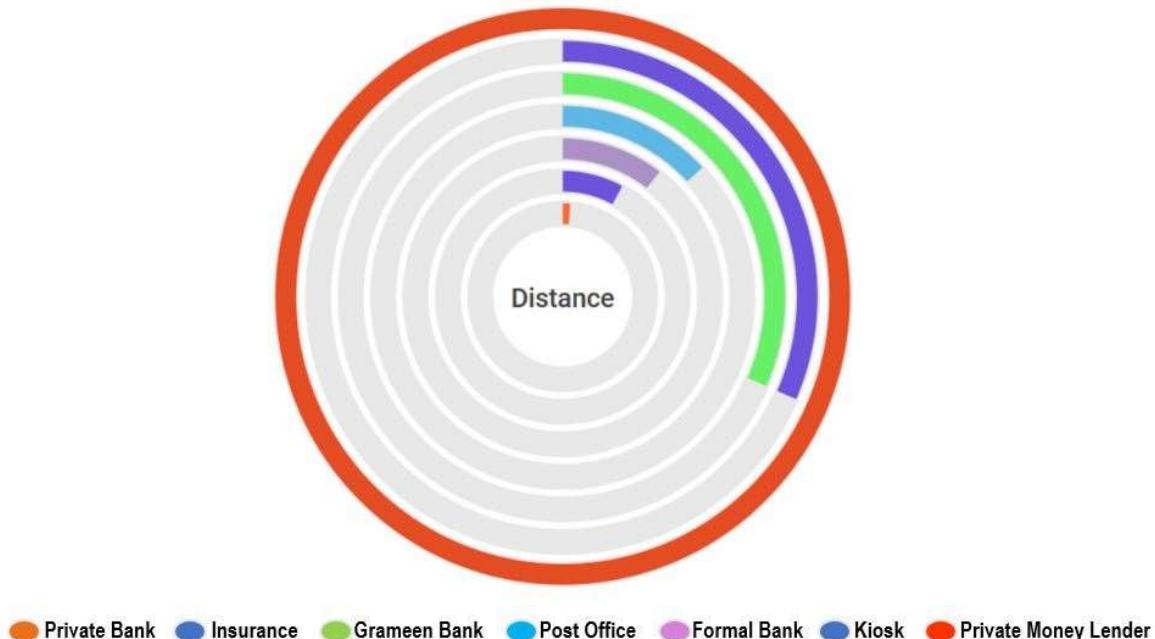


Exhibit 8 Radial graph of distance of financial institutions



About the Author

This caselet is written by Prasanna Hambarde, Pratik Wankhede & Ninad Buch. They got the inspiration to write this case from their village fieldwork experience in Chhattisgarh.

A Study of Traditional Farming Based Livelihood Intervention at Sholayur

Gokul S IRMA

Challenge

It was just one week left before the final presentation of the Sholayur Development Project (SDP) proposal before the Board of Directors (BoD) of Tribal Development Society (TDS). Vedika was worried whether the development approach that she proposed would be accepted by the BoD, as the approach was not in line with the general project proposal structure briefed by her reporting officer, Mr. Neelakantan. The projects proposed by TDS were generally based on the Conventional Top-Down Approach of Development. After spending around two months in the village Sholayur, she had realized that the conventional, irrelevant and non-participatory development interventions have questioned the self-sustenance of the village and it can be revived only through interventions that create livelihood and ensure participation. She developed a traditional farming-based livelihood intervention and the proposal was sent to her reporting officer for approval. However, the next morning, she was amazed by seeing the reply mail from Mr. Neelakantan directing the revision of the proposal with a conventional intervention approach which she understood to be counterproductive.

Vedika

Vedika was a highly talented professional who had secured a post-graduate diploma in rural management from one of the best management institutes in India. After the completion of the course, she joined TDS by the end of August 2019 and completed two months of training. Being the first task after joining, she wanted to put her maximum efforts to bring the best outcome. She even spent around six months in the village Sholayur for understanding the political, social and economic conditions.

Tribal Development Society (TDS)

Tribal Development Society (TDS) was a government aided organization, which had its head office in Attappady, Palakkad district, Kerala. It had been working for the welfare of the tribal people since 1982. It was primarily involved in planning and executing multifarious rural development projects to improve the living conditions and general welfare of the tribals. However, TDS devised interventions in line with government policies which mainly focused on the subsidy driven model of intervention. The government interventions and schemes like PDS, AHADS and Community Kitchen generally were fitted in the framework of the conventional top-down approach of development. These schemes focused on the distribution of subsidized goods rather than sustainable livelihood creation. Moreover, they never ensured the participation of the community in the successful implementation of the schemes. As a result, the tribal community lost its self-sustenance and became totally dependent on the aids of the government.

Sholayur

Attappady is an extensive mountain valley between the Bhavani River and Nilgiri hills. It is bordered to the east by the Coimbatore district, on the north by Nilgiri, south by Palakkad Taluk and west by Mannarkad revenue village. Located in Palakkad district, it is one of the major tribal belts in the state of Kerala. It has three-gram panchayats which are Agali, Puthur, and Sholayur. Sholayur village of the Attappady block is included in the manipulation zone of the Nilgiri biosphere reserve by the Department of Environment, Government of India (CWRDM, 1994). It is situated in the easternmost part of Palakkad district, close to the Kerala-Tamil Nadu border. It is located in Mannarkad Taluk of Palakkad district,

Kerala and is administered by Sholayur Grama Panchayat which was formed in 1968. It is surrounded by Puthur gram panchayat in the North, Tamil Nadu in the East, Thachambara village in the South and Agali gram panchayat in the West (Annexure 1).

Sholayur Gram Panchayat covers an area of 150.67 sq. km. with 50% of its area under forest cover. There were two villages under the Panchayat namely, Sholayur and Kottathara. Since 2010, there are 14 wards under the Panchayat. It had 52 tribal hamlets or 'ooru' inhabited by the Irula tribe.

A Brief History of Settlement Patterns

The Sholayur village was earlier known as 'Cholayur', a Tamil word denoting 'ooru of Chola' which means a settlement in the forest. During the 17th century, the Irula tribe migrated to Sholayur forests from Tamil Nadu due to war and conflict. In the 18th century, Attappady was the Janmis property of Zamorin of Calicut. The Zamorin entrusted the administration of large areas of land in Mannarkad including forest areas of Attappady to a Nair chieftain, Mannarkad Moopil Nair. The tribal folk became tenants of the chieftain. Later the Britishers invaded the area and started cultivation in this region. As a result, plantation of tea and coffee began. The job opportunities in the plantations attracted people from Tamil Nadu and other parts of Kerala who later constituted the settler population of the village. The plantation was later sold to Bhavani Tea and Produce Company (Siruvani Group Estates) in 1945.

Till 1957 Attappady remained as a part of the Malabar district under Malabar Presidency. During the 1960s another episode of in-migration of settlers happened. Later, the Attappady region witnessed significant events such as Save Silent valley people's movement in 1973, the Chittoor dam project in 1975 and the inauguration of Silent Valley National Park in 1985. In 1995, liquor was banned in Attappady due to the extensive use of liquor by men, women and even children resulting in a high infertility rate. JICA funded AHADS project for the rejuvenation of degraded forests was implemented during 1996 - 2012. It also helped in upgrading the social, educational, health and financial status of the tribal people.

In 2013, Community kitchens were introduced in tribal hamlets of Attappady to reduce infant deaths and pervasive malnutrition by assuring at least one complete meal a day. Moreover, in 2013 the National Rehabilitation Centre was started in Sholayur, Pudur and Agali Panchayats of Attappady. This move has helped in reducing the number of children with severe acute malnutrition from 613 in 2013 to 26 in 2018. These were some of the critical events which took place in the Sholayur village (Annexure 2).

Demography

Sholayur village has a geographical area of 96 sq. km. It had a population of 7012 of which 3507(50%) were males while 3505 were females (as per population Census, 2011). The population density of the village was 73 persons per sq. km. It was 3rd least populous village in the Mannarkad sub-district. This is because 75 % of the total village area (71. 87sq.km) was covered by forest. The population records have not been updated post Census, 2011. Out of the total population, there were 3658 tribal people, 594 belonging to Scheduled Caste and 2760 settlers. The settler population had grown from 10% to 44% and the tribal population had significantly reduced from 90% to 50% during the period 1950 to 2011. Among the settlers, 28.6 % population were Tamil settlers and the rest were Malayalee settlers. There were 1885 households in the village and an average of four persons live in a family. The major religions in the village were Hinduism with 78% followers and Christianity with 22% followers. There were no Muslim inhabitants in the village.

The total number of literates in the village was 4493. Among them 2420 were males and 2073 were females. The literacy rate of the village (excluding children under the age of 6) was 71. 43% which was lower than the state literacy rate of 94%. This was because the tribal population followed the tribal language, Irula, which did not have a written form and were also not interested in learning Malayalam. The total sex ratio and child sex ratio of the village was 999 and 1040 respectively, which were at par with the state ratios.

Employment Opportunities

Agriculture was either a primary occupation or a secondary occupation for about 90% of households in the village. Other secondary sources of income were animal husbandry with goats, cows, and poultry being the main livestock reared, MGNREGA, agricultural and non-agricultural labor and plantation labor. There were 64 establishments in the village. Major employment within the village was provided by Bhavani Tea Factory. It offered employment to 130 people, out of which 95 people belonged to this village. It was also the source of major in-migrations that happened in the village from different parts of Kerala and Tamil Nadu. An Alternative and Innovative School also existed within the estate, which provided education to children until the fourth standard. The workforce consisted of 98 women employees with daily wages of Rs. 312. There was no difference in the wages given to male or female employees. Other establishments that offered employment were tailors, grocery shops, tea shops, etc.

The main occupation of the villagers was agriculture. They mainly cultivated perennial commercial crops like Black Pepper, Cardamom, Coffee, Banana, Tea, Arcanut and practice intercropping. So Net and Gross cultivated areas were the same, covering a total area of 2500 acres. The famous Siruvani plantation of Bhavani Tea and Produce Company of about 1200 acres was located in the village. They cultivated tea, coffee, and cardamom. The farmers mainly practiced rain-fed cultivation. Only about 400 acres of land was irrigated and natural streams and bore wells were the sources of water. Moreover, these crops did not require intensive irrigation unless there was an incidence of severe drought. The fertilizer application was quite less due to the fertile nature of the land.

Livestock was a secondary occupation for many villagers. They mainly reared traditional breeds of goat, cow, and poultry. The tribals did not milk their cow or goat. They believed that cow's milk and goat milk were only for feeding their offspring. Grazing was the main mode of feeding the livestock. They considered the livestock as an asset which they held for selling when the need for money arose. However, the settlers followed the normal practices of livestock management. They mainly reared cows and poured milk in the dairy cooperative society at Sholayur. The functioning of society was based on the Anand pattern. There was a veterinary hospital in Sholayur with a resident veterinary doctor. Dairy farmers of the settler community followed artificial insemination for breeding while most of the tribal farmers followed traditional mating techniques for breeding their cattle.

An Integrative View of the Village

Sholayur village is remotely located surrounded by thick forest cover. This badly affected the livelihood of the villagers. People were charged high for all commodities by convenience stores due to extra transportation charges. Villagers were forced to pay a margin of Rs. 40 above the market rate of Petrol. This, in turn, increased their household expenditures.

The village was mainly inhabited by tribal and migrated settler communities. Although the two communities interacted and cooperated with each other, tribal communities had deep down

resentment towards the settlers. They claim that the settlers have robbed their land and were responsible for their present plight. While the settler community argued that the government schemes were skewed towards tribal welfare only and they were deprived of benefits.

The human-animal conflict was a frequent phenomenon in Sholayur. The wild animals were one of the main causes of huge agricultural losses to farmers. Though large farmers adopted measures like electric fencing, it was not affordable to small and marginal farmers. Moreover, villagers preferred to avoid movement during the night fearing the attack of wild animals. Most of the tribal households in Sholayur owned traditional breeds of cow and goat. But, they did not milk them as they believed that the milk was meant for the offspring. This was an untapped potential that would have provided an additional source of income. The consumption of alcohol was banned in the village in 1995 by the state government. However, alcohol consumption was still rampant and had even increased over the years.

The major decision-making authority of the village was Gram Panchayat. But the ruling political party exercised significant influence in Panchayat decisions. Though Gram Sabha meetings were held at regular intervals, it has turned into a ritual to fulfill the constitutional mandate rather than ensuring fruitful discussions regarding issues in the village. Sholayur village had a well-coordinated network of healthcare facilities. The measures like Community Kitchen and NRC have helped in reducing IMR from 31 in 2013 to 12 in 2017. Hereditary diseases like sickle cell anemia were prevalent in the village.

Sholayur is a stark reminder of the backfiring of incentives and how visionless developmental models can place a chokehold on self-sustenance. JICA funded AHADS program was initiated in 1996 with an aim to rejuvenate the degraded forests and to create employment opportunities to promote livelihood. The program functioned for sixteen years. However, the latter aim was not successful as very low priority had been given in the income generation activities (0.34 % of the total budget) and the program was winded up abruptly in 2012. This led to the loss of jobs for many tribal youths who had left their traditional agriculture as well as higher education, in turn making them incapable to strengthen themselves. It made tribal cultivators mere wage laborers. Community Kitchen was another program introduced in 2013 with an objective to curb malnutrition and IMR. Though it partially succeeded in achieving its objectives, it backfired as it became a negative incentive to work for the working class, as free food was available to all tribals

A Search for a Way out through Interventions

During two months spent at Sholayur, Vedika tried to understand the socioeconomic impact of various developmental interventions from the inhabitants. Through observation, PRA, interviews, and surveys of villagers, she understood the drastic upheaval in livelihood patterns with major traditional livelihood trends like millet farming usurped by developmental interventions like AHADS and Community Kitchen ensuing severe identity crisis and a violent metamorphosis of dietary patterns. Such imposed and innate transitions have resulted in changes in dietary patterns resulting in the health anomalies of high infant mortality rate and malnutrition. She realized the need for projects having a bottom-up, participative orientation for developing self-sustainability through livelihood generation.

Attappady region is blessed with lemongrass which grows naturally and available in plenty. Tribal women of the village, during times of financial distress, collected the grass and extracted oil traditionally which was then supplied to the forest department. The forest department then marketed it under the brand name "Vanashree" for which a reliable market was available. However, due to the lack of a

mechanized extraction facility, the volume of output was generally minimal earning them only nominal income. Moreover, with an intention of rejuvenating the traditional tribal millet-based diet and agriculture and thus to curb the malnutrition concerns of the region, the state government initiated a project, “Millet Village” in October 2017. The project promoted the cultivation of ragi (finger millet), thina (foxtail millet), cholam (sorghum) and kuthiravaali (barnyard millet). There was a huge demand for value-added retail products in the Palakkad market which was unmet due to lack of processing facilities. Understandings the available market opportunities, Vedika designed the livelihood intervention using the Rural Livelihood Systems framework- Coolies’ Framework which she learned in Environment and Livelihood Systems course during Rural Management studies. Based on the framework, assets were realized in the internal and external context. She developed two interventions for tribals – lemongrass oil extraction and, millet processing and millet-based snack production which focused on the formation of self-help groups of tribals with the financial support by TDS for extraction unit and a processing unit.

With the outcomes of the past developmental interventions being alarming, it was quite clear for Ms.Vedika about the need for an out of the box intervention. However, after reading the mail, she was wondering whether she should propose the participatory livelihood-based development intervention over the conventional approach.

Stage 1 Understanding Internal and External Contexts - Coolie's Framework

External Context
1. Factor Conditions in Sholayur <ul style="list-style-type: none"> • Climatic condition – Erratic rainfall (prevailing drought conditions), warm in summers to mildly cold in winters • Infrastructure – Complete electrification, well-connected road system, and telephone network connectivity in almost all areas • Skills of Villagers – millets farming, NTFP collection, honey extraction, livestock rearing
2. Demand Conditions <ul style="list-style-type: none"> • Steady demand for vegetables in Sholayur as well as nearby townships of Anaikatty, Agali, and Palakkad • Emerging demand for healthy organic milled based snacks in urban areas of Kerala and TN
3. Industry Conditions <ul style="list-style-type: none"> • An overall increase in the market for vegetables • Favorable market trend towards consumption of organic snacks
4. Institutional Conditions <ul style="list-style-type: none"> • Tribals engaged in daily wage activities while settlers had varied livelihood portfolio • Both sets show immense interest in agriculture and allied activities • Government employment schemes include MNREGA and Millet village program

Internal Context

1. People's Livelihood

Tribal People

- Portfolio – 1. The processing unit 2. Value addition SHG units
- Capacity – Traditional skills for growing millets and capacities for making value-added products to be given
- Shocks – Epidemics and drought
- Strategy – Home-based industry

2. Organization – Government institution or an NGO

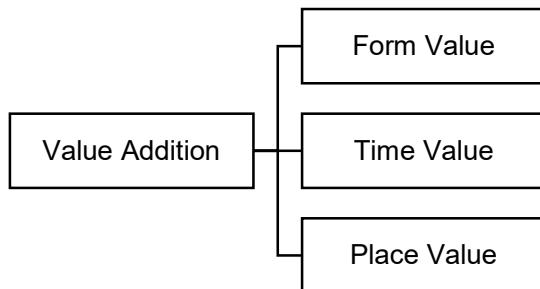
- Mission – To become a catalyst for the integrated development of society and to facilitate the harmonious growth and welfare of the people irrespective of race, community, caste or creed
- Capacity – Building on local knowledge and practices, using naturally available resources in innovative ways, better market reach, and bargaining power
- Funding – Government schemes, community funds, donor agencies, and international grants

Stage 2 Deciding Livelihood Intervention

1. Exercise 3-E (Explore the External Environment)

The scope for cultivation was tremendous due to the large availability of arable land and the intent of the population. Adequate skilled manpower and raw material were available and the requirement of capital and collective cultivation spirit was minimal. Organic products such as lemongrass oil, millet snacks, and vegetables have huge urban demand as well as growing rural demand.

2. Value Addition



Value addition opportunities available in the intervention can be of three types

- a) Form Value The utility of lemongrass oil or processed millet is much higher than the lemongrass or raw millet as the former form creates more consumer convenience in using it.
- b) Time Value The utility of lemongrass oil or processed millet is much higher than the lemongrass or raw millet as the shelf life of former is longer which in turn ensures the availability of products during the most desirable times of consumers.
- c) Place Value The utility of lemongrass oil or processed millet is much higher than the lemongrass or raw millet as the accessibility of the customers to the former form is much easier as the product can be distributed smoothly and can be made available at convenient locations in the targeted market.

3. Understanding Economies

The intervention enables three economies namely

- Economies of scale** The per-unit production cost of lemongrass oil and processed millets gets reduced as the mechanized production units yield higher output.
- Economies of scope** The total production cost of the unit (SHG) gets reduced as the same facility is used for the production of two or more millet products
- Economies of Integration** As the members of the SHG are involved in the cultivation of lemongrass and millet and TDS provides market linkage through procurement agents, economies of both backward and forward integration are enabled in the intervention.

4. Analyzing Value Chain

Target Group	Intervention	Output
Tribal People (through SHG formation)	Lemon grass Cultivation and oil extraction	Lemongrass oil
	Cultivation of Millet grains and its processing for value-added product production	Millet grains/ flour and ready-to-eat millet based snacks

Figure 1 Value chain of Lemongrass oil production

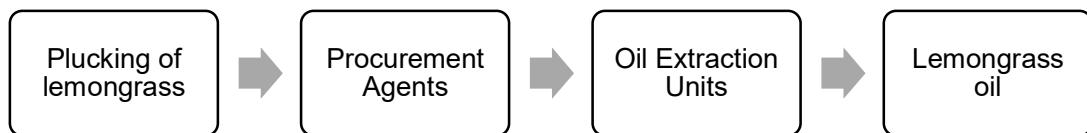
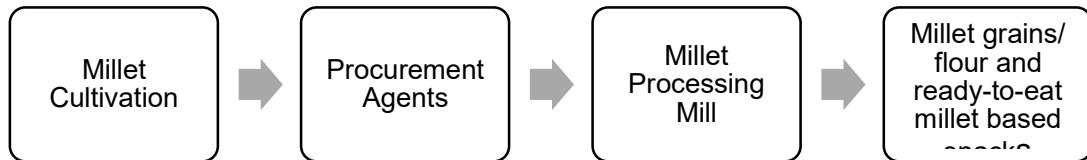


Figure 2 Value chain of Millet product production



Stage 3

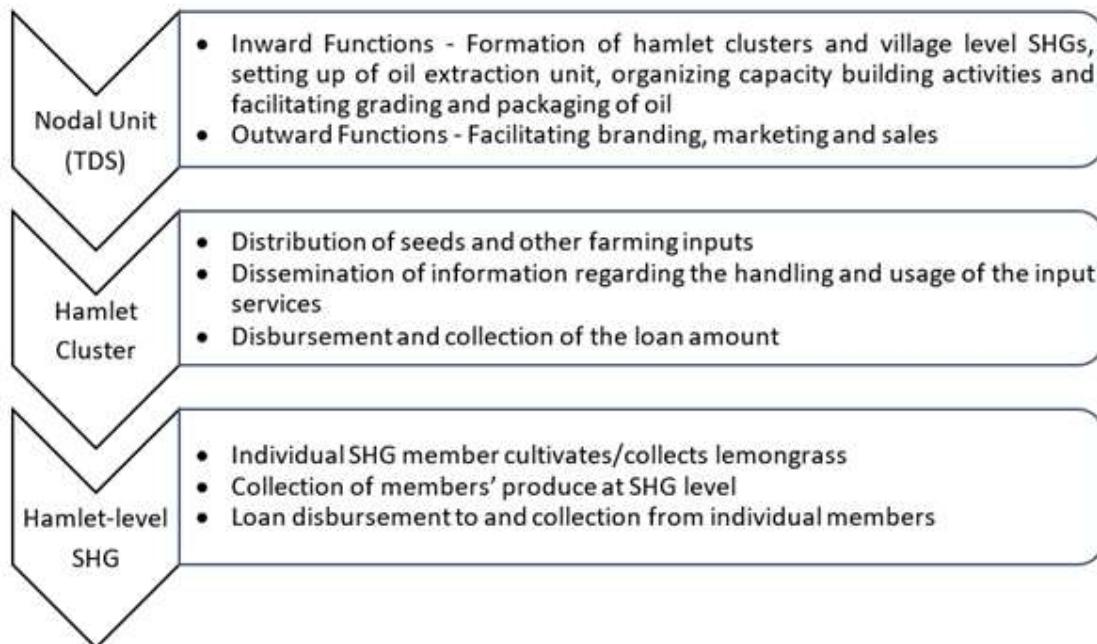
Designing the Intervention

1. Lemongrass Cultivation and Oil Extraction

Vedika, when she conversed with the chieftain or 'Oorumoopan' of Sholayur hamlet, realized that in earlier days, a large portion of the Irula and Valayar community used to extract oil from lemongrass. It was extracted using an indigenous distilling mechanism and sold in the Mannarkkad market. Such operations have come to a halt due to conflicts arising between the forest department and tribals regarding forest rights. Large plots of land with ST ownership remained uncultivated due to human-elephant conflict. However, lemongrass could be freely grown in the uncultivated areas without installing additional electrical fencing or watchtowers as Elephants won't trample with lemongrass. The equipment required for distilling and extraction was minimal and could be easily operated. Training of the tribal SHG members could be imparted in less than four sessions, which could be facilitated by TDS. The oil could be marketed using the tagline "from the hills of Attappady". With the wide range of uses of lemongrass oil as a food ingredient and for medicinal purposes, the intervention could enable the tribal to realize a fair price for their efforts.

Organisational Design of Intervention

The organizational design of the intervention involved three tiers, Nodal unit, Hamlet cluster, and Village level SHG. The nodal unit was responsible for performing both the inward and the outward functions. The inward functions included the formation of hamlet clusters and village level SHGs, setting up an oil extraction unit, providing capacity building activities, grading, and packaging of oil produced and for the provision of a loan to clusters. While the outward functions including branding, marketing, and sales. In the first phase, only 4-6 village hamlet clusters were formed. The distribution of seeds and other farming inputs, dissemination of information regarding the handling and usage of the input services and disbursement and collection of the loan amount were done at the hamlet cluster level. Each of the hamlet clusters would have around 5-10 farmers who cultivate and collects lemongrass. Once the collection was done at each of the clusters, they were aggregated and transported to the processing center for oil extraction and producing other value-added products.



The scale-up plan in the future could include the production of other beauty products of lemongrass oil such as soaps, shampoos, creams, scrubs, etc. and herbal beverages. The promotion of lemongrass leaves in the diet could be another scale-up option.

2. Millet Processing and Millet-Based Snacks Production

As the state government has shown a special interest in the successful implementation of a recently initiated project, Millet Village, Vedika believed that an intervention that converges with the project could complement the success of both the interventions. Moreover, unlike conventional government interventions, the Millet Village project encouraged the participation of tribals and focused on the creation of sustainable livelihood. So, she designed an intervention of "Millet processing and Millet based snack production, which focused on the value addition of the primary producers, millet grains.

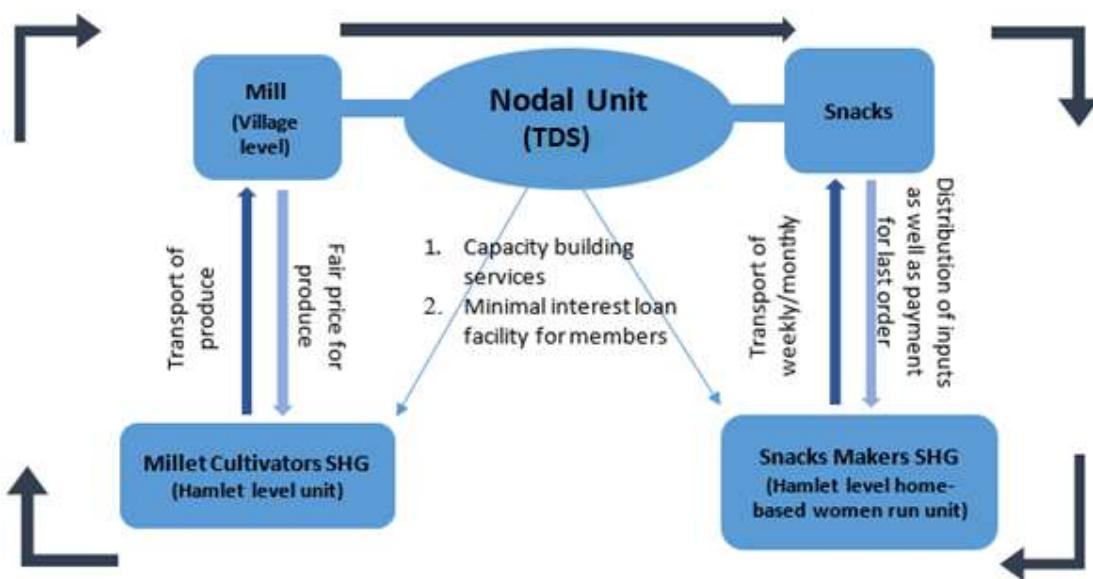
Factors Favoring the Intervention

- The intervention converged with the objectives of 'Millet Village' program of State Government
- Millets, being drought-resistant crops could easily be cultivated by farmers, particularly in rain-shadow regions of Eastern Attappady

- Awareness among STs that infant mortality issues, rampant anemia, etc were due to a change in their dietary pattern would act as a motivating factor to readopt the millet cultivation and diet.
- Increasing health consciousness and consumer awareness about the importance of coarse grains in diet would attract huge demand for the products based on millet.

Organisational Design of Intervention

The organizational design of the intervention involved the formation of two SHGs, one for the cultivation of millet and the other for snacks production. The nodal unit (TDS) provided the required capacity building practices and minimal interest loan facility to the SHG members. The hamlet level millet cultivators produced millets and the extra production after subsistence was transported to the mills for processing and the payment for the supply was made immediately to the farmers. The nodal unit would provide the linkage between the processing mills and the snacking units. The SHGs of tribal women were formed at the hamlet level and were given required training to produce the snacks. The snacks were distributed to the retail outlets and the market linkage was facilitated by TDS.



The scale-up plan of the intervention could include diversification of product lines into bakery items such as bread, cookies, muffins, and cakes using millets. The distribution could be also extended to retail outlets in several locations in Attapady, Mannarkad, and Coimbatore under a single brand name. The thoughts of the mail disturbed Vedika throughout the day. She reviewed the mail, again and again, not knowing the reason for it. The turbulence further built up as the words of Valli echoed in her mind, “We had led a happy life and never cried for any help. It’s your greed that made us malnourished. And now, we are your slaves”.

Clause The mini case is developed for Mission Grameen Gyan Initiative by MGNCRE, Ministry of Human Resource Development. The case is prepared as a basis for class discussion. The case is not intended to serve as endorsements, source of primary data, or illustrations of effective or ineffective management.

Questions for Discussion

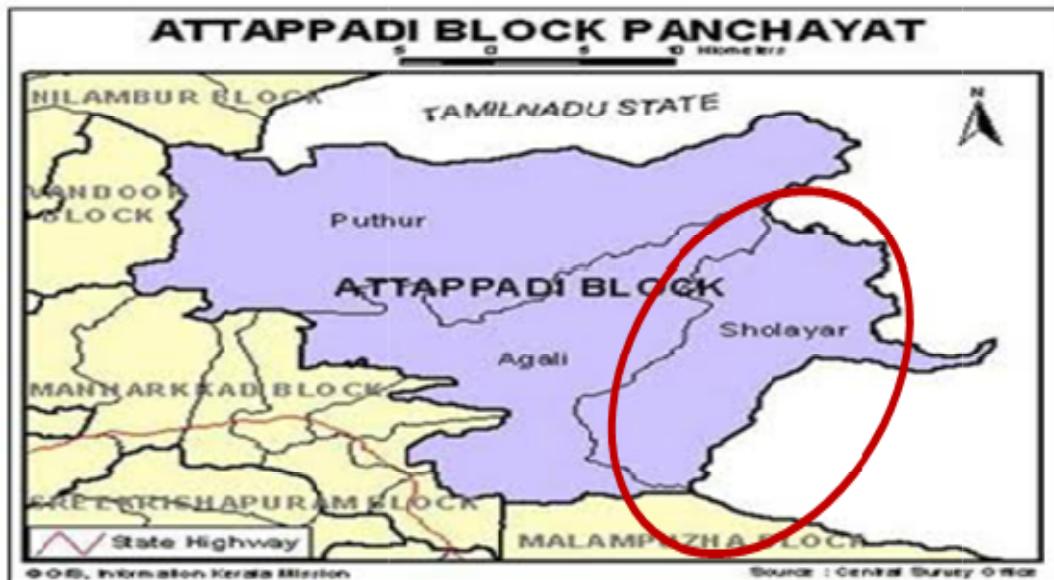
1. What are the fundamental differences identified between the conventional subsidy driven development intervention and the livelihood based participatory development intervention?
2. What are the arguments that can be drawn to support the proposal of Vedika before the Board of Directors?
3. Explain the various livelihood intervention approaches. Identify the approach (es) which are applied in the case context.
4. Explain the fit of Coolies' Framework in the context of designing livelihood intervention.

About the Author

Gokul S is a Post Graduate Diploma in Rural Management (PGDRM) candidate at the Institute of Rural Management Anand (IRMA). The author is qualified for Assistant Professor (UGC NET December 2018-Management). The case is developed based on the experience and information gathered by the author during the Village Field Segment (VFS) at Sholayur under the Attappady Social Services Organization (ASSO) as a part of IRMA-PGDRM program.

Annexures

Annexure 1 Map of Attappady Block Panchayat



Annexure 2 Timeline of Critical Events at Sholayur

17 th Century	<ul style="list-style-type: none">Migration of Irula tribe to Sholayur forests from Tamil Nadu due to war and conflict.
18 th Century	<ul style="list-style-type: none">Zamorine of Calicut entrusted large areas of land to Nair chieftain, Mannarkad Moopil Nair.
19 th Century	<ul style="list-style-type: none">Britisher's invasion. Tea and coffee plantations began
1945	<ul style="list-style-type: none">Plantations sold to Bhavani Tea and Produce Company
1996 - 2012	<ul style="list-style-type: none">JICA funded AHADS project for Eco-restoration & Tribal Empowerment
2013	<ul style="list-style-type: none">Community kitchen introducedNational Rehabilitation Centre started in Sholayur, Pudur and Agali Panchayats

Tribal issues through the lens of Cherangode

Arun Prabhakar S IRMA

Challenge

On one of the misty evenings of October, Arun, Arjun and Abhishek has called the Kaimdas chetta, tribal leader of paniya community to discuss about their feasibility of conducting an awareness program in the hamlet and to discuss about the problems that the tribe has been facing for decades from the non-tribes, Government and also nature. Now, Arun has started reflecting his experience regarding the social issues in the villages and the ways that can be addressed.

Arun, Arjun and Abhishek are the students of a premier business school mainly major on rural development. As a part of their curriculum called Village field segment, they have to stay in a village for two months and to conduct a study on the village. The study attempts to understand the village and its operations from various dimensions through observations and data collected. The household data along with the village level data gives a holistic picture. The evolution of the village through history is explored, understanding the settlement patterns and evolution of livelihood systems. The economic activities of the village are analyzed taking into consideration the pattern and efficiency of use of factors of production. The study attempts to identify bottlenecks in enriching village economic activities in terms of lack of technology, resource constraint, collective action, etc. The job opportunities within and outside the village is analyzed along with migration pattern and study attempts to understand the rationale of decision making of landless farmers and its impact on household income. The governance structure of the village is studied, observing the decision-making structure and power distribution pattern. The study attempts to understand the underlying dynamics in the village and draw out meaningful conclusions out of it. The study was conducted in Cherangode village belonging to the same panchayat in Pandalur taluk, Nilgiris district from the state of Tamilnadu. Finally, they have to do a Rural action component (RAC), as per the problems they identified in the village. The students have decided to conducts an awareness program on the problems they are facing. By this way, they have decided to create a general awareness among the people about being exploited and other socio - economic conditions. Arun and his team is currently staying in Athichal, a tribal hamlet in the village and decided to invite other tribal leaders and people to the program to be conducted in Athichal.

About the Village

Cherangode is the largest village in southern India. It is located in the district of Nilgiris in Tamilnadu under Gudalur block, Pandalur Taluk. Cherengode village is bordering the wayanad district of Kerala with Wayanad reserve forest on the east. The Village is a tri-junctional situated between Tamil Nadu, Karnataka and Kerala. There are four important tribal groups with diverse tradition, economic adaptation and culture as well as language in this village. These tribal groups are announced as "Primitively vulnerable Tribal groups (PVTG)" by the government of India. The village has a total geographical area of 18518.08 acres, with 74 hamlets. The village is rich with its biodiversity. The diverse flora and fauna ranges from elephants, tigers, wild boar to Tamilnadu's state animal Nilgiris Tahr. The Eucalyptus, commonly known as "Nilgiris" tree is one among the commonly growing coniferous trees. There are three major centroids for the village namely Kolappally, Ayyankolly and Cherambady. Cherangode Mountain is the identity of the village and hamlets are located around the mountain.

Cherangode is located at a longitude & Latitude of 11°32'56.4"N 76°18'07.1"E and at an average altitude of 1000m above the sea level. The village is 87 km from the district headquarters, Nilgiris and 13 Kms from Pandulur. The village is bordering Kerala in the west, north and south, then Munnanad village and Karnataka in East. The village comes under the buffer zone of Mudumalai tiger reserve which is 30 kms away. The village is bisected by National Highway 12 which connects Kozhikode and Ooty. Frequent bus facilities are available from Pandulur, taluk headquarters and Sultan bathery, Kerala, which is 12Kms away. The Nearest railway station available is at Nilambur, Kerala, which is 35 km away or in Tamilnadu it's in Metupallayam which is 133 kms away.

The Village has an approximate population of 43867 (estimated 2018) whereas per census 2011 it is 33506. As per 2011 census, male population is about 16475 and female population is 17031. Wide diverse communities have settled in Cherangode village. The main population constitutes of four tribal communities such as the paniyan, the Kattunaickan, the Mullakurumban and the Bettakurumban and other communities like Chetty's and Nair's. There are few minor communities of Christians and Muslims settled here. Each community has a distinctive culture. The Chettys' were considered as aristocratic groups by the tribe due to their economic and political powers. The Paniyas are the major labour force for the agricultural activities. The word Paniya originated from the Tamil word "pani" means work. The Kattunaickans are good hunters; they roam in the forest and collect honey and herbal roots. They show interest in cattle breeding and poultry. The Mullakurumbas are the most dominant group among the tribes; they are basically agriculturalist from whom the Nairs and Chettys acquired land. The Bettakurumbas are the artisans who make iron tools, bamboo crafts, and pottery and Iron smiths.

Brief History of Settlement Pattern

The History of the Village dates back to Cheran dynasty of Ancient India. The name of the village originated from the etymology "Cheran""Gode" meaning Cheran's place. The village used to be Cheran's hunting ground. The dynasty was followed by a lot of small kingdoms such as vedar kings and Kottayam Rajas. Later during the late 18th century, there were a lot of foreign invasions by sultans from Mysore, finally Tipu sultan created a military base in a town 27 kms from the village called Sultan's Bathery. This scene was quoted in Census of India, Kerala, 1961 (Vol. VII. Part VI A page 175-177) as a scene of bloody wars between Vedar kings and Kottayam Rajas, then between Pazhassy Raja of Kottayam and Tipu sultan of Mysore and lastly between Pazhassy and British east India company which ultimately ended with the death of Pazhassy Raja in 1805. Then the Britishers came to Cherangode via Kozhikode and captured a vast land and introduced coffee plantation to the villagers. And later the coffee plantations are converted into tea plantations. Along with the British people, Malaria entered into the village due to which large number of people migrated to the plains. The malaria was then controlled by the Britishers, which resulted in lots of opportunities for the people here. Hence once again a huge migration happened, which invited lot of people from Kerala to enter the village. During this period, the village is in Wayanad under Madras presidency.

The Wayanad started experiencing the flow of immigration from Travancore and Cochin. The immigrants belong to Nair, Ezhava, Christian, Muslim, Cheruman and Puliyam communities. These communities captured large amount of land from the tribes and become landlords, they were called as "Muppan". There is another major incident, the landslide of Cherangode Mountain, which forced

the tribal communities around the village to scatter into several hamlets. After the independence, there was a ceaseless flow of immigrants and they started encroaching forest, which was declared by government as reserve forest. In 1956, the state reorganization happened, and the village is added to Nilgiris district of Tamilnadu. In Late 1970's, another large settlement of Sri-Lankan repatriates happened in the village, to work on the tea plantations. A part of village is added back from Wyanad district in 1990's. The village has transportation facilities from 1940's from sultan bathery which is operated by Kerala state department. First Primary school was started in 1954, with upgradation to higher secondary school in 1986. The Immigrant agriculturist introduced mixed cropping pattern emphasizing the optimum use of land. The Tamilnadu state government started Government Tea project across Nilgiris in 1968 to rehabilitate the Sri Lankan repatriate; out of which plantation of Tea started in 1969. As a result, eight tea factories were constructed across the district out of which two are constructed in the village. The first factory was constructed in 1978 at Cherangode, then in 1984 at Cherambady. These factories were the main livelihood means for the Sri-Lankan repatriates till to date.

Employment of the Village

The major occupation is Agriculture and related labour. Owing to the high population, their occupation spectrum ranges from bonded agricultural labor to Indian army officer. The agricultural labor activities include tea plucking, Pepper and Areca-nut collection, banana plantation, areca-nut peeling etc. The employment opportunities are diversified based on the communities. As mentioned above, the Paniya tribes are bonded agricultural labors and still they are. The Kattunaickan and Bettakurumbas owns a very few land holding below one acres, which provides them a self-employment, with Kattunaickan involve in cattle breeding and poultry. The Mullakurumbas are marginal farmers and considered as more evolved among other tribes; they also occupy few positions in the government sector. Most of the Sri Lankan repatriates are permanent workers in TANTEA factories in Cherangode and Cherambady. Few tried to move out of factory environment and started driving auto rickshaws or started their own small shops in and around the village. The Chettys, who are the landlords, involved in cash crop agriculture and few are politicians and in some government sectors as well (Exhibit 1&2). The other communities were involved in local small-scale business and shops. The Overall Simpsons index is 0.75 indicating the good diversification among the occupation of the village members. The villagers primarily engage in agricultural related activities. However, about 17% of them are engage in non-agricultural activities such as factory laborers, barbers and tailors, agricultural workers, government employees and other skilled labor. Overall Januszewski index is 0.369607 indicating the difference among the occupation of the village members. There is a shortage of skilled labourer. Majority of the villagers are more into the production of cash crops and plantation crops. It is because it yields better revenue than other menial skilled labors.

Income and Expenditure of Village Families on a Monthly Basis

The tribal family has more labour force compared to all other communities. Since the children after opting out the schools join family's income force. The income of a typical paniya family is more compared a Sri Lankan repatriates, due to the above-mentioned reason. The Non-tribal families with one or two working members, tries to earn a considerable amount of income to substantiate their expenditure. The Chetty's (Landlords) in the village earns maximum compared to any group in the village especially from the agriculture, here in Cherangode it a cash crop economy, where plantation

crops earn more than any other occupation. Whereas contrast in the economy happens in the expenditure, the lowest income groups tribal spend more money compared to any other group. The Exhibit 3, indicate the splitting up of expenditure for a tribal community. The tribal group spends more money on alcohol consumption. This is habituated due to their culture and way of living, whereas the Sri Lankan repatriates who earns same amount of monthly incomes, spend much money on food and consumption and interested in savings as well. Few of the Tribal communities like Mullakurumbas and Kattunaikans are mostly trying to improve their standard of living but fails on the huge savings part. The lack of awareness regarding the savings will often lead to unwanted expenditures. The Sri-Lankan repatriates, prefer investing their savings on Children's' education (Exhibit 4).

Problems Identified

Arun and his team expressed thoughts on major problems that they found in the village.

1. High level of dropouts from schools. Among the drop outs, majority of them were tribal students. The major reasons for the dropouts were migration of family, alcoholism, lack of encouragement from parents and disinterest in studies.
2. The number of absentees to schools was notably high. Because during harvesting season of areca nut, coffee and pepper, they stay at home and help their family by contributing to work. It is a reason for them to stay at home for weeks. Migration of family makes them absent in the schools.
3. Consumption of alcohol has an effect on their lives. Nearly 70 percent of the earned money spent on alcohol. There were several incidents of violence and death happening due to alcoholism.
5. Lack of proper future planning and savings. Even though Sri-Lankan repatriates earn fewer wages per day than agriculture casual labor, they have better lifestyle due to their saving habits.
6. Narrow livelihood opportunities make them vulnerable to seasonal unemployment. They work as casual labor or post-harvest works like areca nut splitting, de-husking coffee beans, etc. Hence, they migrate to other places or left with no work in the summer season.
7. Some tribal have land (less than 1 acre), but most of them don't have proper land records. Hence, they are deprived of government schemes such as PMAY-G (Pradhan Mantri Awas Yojana-Gramin), PMFBY (Pradhan Mantri fasal Bheema Yojana) and availability of agriculture loans.
8. Exploitation of tribes by the non- tribal land lords. Tribes ration cards are confiscated by the landlords and provide their own ration from PDS to them as term of wages and in other terms they provide liquor as a wage, in other terms they encourage alcoholism to lure the tribes.
9. Lack of Government intervention and exploitation of government officials

Kaimadas chetta shared his experience of being humiliated by government officials while getting community certificate from block development officer. He was asked to dance and sing his tribal song and dance to prove that he belongs to that particular community and was heavily bribed while getting birth certificate for his both the sons. He explained how the problems are just been passed on from generation to generation and expressed his fear of leaving the same conditions to his sons. Arun and his team decided to take upon two issues from the hamlet and decided to address the issues, through simple solutions

1. Issue Related to Dropouts and Absentees

Illiteracy, lack of awareness among the parents regarding the education and future perspectives, hence they don't compel their children to go to schools. At the time of harvesting season, they seek their children's help as it adds additional labour to work. During summer season, they will move to relatives' homes or to faraway places such as Coorg and Calicut in search of work. During this period student will be absent for the school. Even the teachers will mark them as present despite their absence, to show the low absentee rate of school and also female students will get the scholarship of 500 rupees if they are attending schools. Some students cite distance as one of the hurdles for them to go to school.

2. Issue Related to Alcoholism and Savings

Tribal people usually consume alcohol, sometimes including women and children will also consume alcohol. There were few instances noted such as drunk woman killing her own baby by dipping in water, one of the 7-month pregnant ladies became unconscious on drinking, etc. Teenage children will observe their parents and start to consume alcohol at a very young age of 12-15 years. This is a reason for increase in student drop-out rates in Athichal. As they spend all their earned money, they hardly have savings. Sri-Lankan repatriates (TANTEA) who gets 301 rupees of wages per day are well off than tribal. They are sending their children to the private schools and have basic amenities like television, fan, furniture, etc. in their home. This is because they have invested the money in these things instead of alcohol. Tribal earn 400 rupees on a day out of which 300 rupees will be spent on alcohol. According to survey they spend an average of 9000 rupees on alcohol. The consumption pattern of both the tribal and Sri-Lankan repatriates is as given in the graph below

Generating Alternatives and Analyzing Solution

1. Dropouts and absentees

Tribal people lack awareness. The best way is to create awareness among them through street play, dramas, mimes etc. It should aim at encouraging them to send their children to schools. In schools, teachers have to be trained to conduct creative teaching aids, so that learning becomes easier and interesting. Slow learners have to be taken extra care, once they start learning they will be interested and they will attend the classes regularly. In tribal hamlets, we should inspire the literate adults to take tuitions for them to ease their learning. There are Government tribal residential schools in nearby towns (GTRS Ayyankolly, GTRS Ambalamoola) which provide a free hostel for tribal students. NWTWS organization has been facilitating tribal students by providing accommodation and food. The organization conducts many creative activities to keep them interested and active. Hence, transportation might not be a major problem; they can reside there and attend school. We found the prevailing problem as difficulty of students in learning and illiteracy among dropouts. We aimed at teaching them basic things such as calculations, reading, and writing. The other initiative was aimed at teaching basic information, money calculations and useful English words in daily life. To retain their interest, we planned to conduct some activities.

2. Alcoholism and Savings.

As we mentioned in the problems, they earn 400 per day. Instead of drinking alcohol daily it can be reduced to twice a week; then gradually to once a week. By doing this they can save nearly 5000 rupees per month. They can save this money in bank or can invest in better facilities for home. This

will be convincing for them as they don't quit drinking meanwhile saving the hard-earned money. To create awareness regarding the same, we planned to convey the message through an awareness program regarding what differences it will make by savings and providing education.

Awareness Program at Athichal

They have organized the children in the village and conducted an awareness program on a November evening in the hamlet. The event was conducted jointly with the help from an NGO based out of Cherangode. Students from the organization belonging to various tribal communities also performed various traditional and cultural programs which helped the children in the village to get inspired. Dinner was also arranged by the organisation which was cooked in the village. They also invited some officials from the government offices and influential people from nearby hamlets. The main event in the program was a drama that we wrote in the local tribal language (Paniya) with the help of the tribal leader. The theme of it included the effects of alcoholism on education and savings; it was acted out by the children in the village itself. Through this drama we were able to give insights regarding the excessive consumption of alcohol and ways for saving that money for improving their way of life. Even though the theme was contradicting to their way of life, they took it in a positive way and women in the village appreciated the children and us for the initiative.

Though the program may be conducted well but the success of the program depends on how the villagers carry forward towards their growth. The economy of the village is experiencing growth due to increase in the cultivation of cash crop oriented economy. Penetrations of cash crop economy into the tribal communities are also very obvious. The Communities are interdependent with each other, with tribes supplying the labour force and Chettys provides them income in return. The tribes were always over exploited by Landlords as well as the bureaucrats. The paniyan continue to be serfs even in the wake of cash crop economy. Their economic conditions have worsened because of an increase in unemployment. The Labour market is highly competitive and politically organized. The frequent mobilization of paniyan and other tribal agricultural labour by the political parties, to protect, their wages and labour rights, throughout from employment as immigrant agriculturalist job. They maintain the balance of nature by living with the nature and the disturbance has been started. When the balance between the nature and man is been disturbed, that leads to the abnormalities. One such abnormality is animal attacks, which seems to be more now a day compared too few decades back.

The alcoholism has another impact on the life of the people here, especially the tribal communities which have been a constant prey for this habit. This results in so many impacts on the life. The concept of savings was totally void here. Their future has been threatened by this habit, number suicides and domestic violence has occurred due to alcoholism. High number of dropouts is identified in the village; this is a huge toll the village is paying. The remoteness of the tribal hamlets is one of the barriers for the tribes to communicate with the outside world. The main socio-economic barriers with tribes are their lack of education and awareness. Their lifestyle is designed in such away, that they have no savings, spends more money on alcohol, lack of interest towards children's education and future. This can be eradicated only by creating proper awareness among the parents and by providing quality education to the children.

There is another community which is much more deprived than the tribes, they are the Sri-Lankan repatriates. They were given job and settled down in the village by the government but under the control of TANTEA. This led to their circle limited with the TANTEA, and the organization started exploiting them, by keeping the daily wage constant for a much longer period. Poor management, lack of further diversification of product, the company's market share has been occupied by the private players like Parry Agro. This has a direct impact on the worker's economic condition. But there are few outliers from the community, moved out of TANTEA and started their own small shops and driving autos. They started showing great amount of interest towards the children's education. This shows a positive sign from their side.

The Chettys' and Nairs', have learnt a lot from their counterpart immigrants about the mixed cropping pattern. They have improved their economic conditions by adopting these changes and the impact of the cash crop economy has provided a huge benefit to them. There is no untouchability or any kind of discrimination practiced by the tribes but landlords exploit them in financial way. They hire them for cheap labour and bonded labour. This still stands as a huge wall between both the communities.

The Cash crop agriculture is a boon to the villages' economy, but on the other side the same cash crop economy still pushes the tribes much further down. The proper utilization of these advantages would try to improve the tribes' socio-economic status.

Arun and his team, as acknowledged that huge social impact starts from few individual steps and encouraged Kaimadas chetta to continue the good work in bringing out the problems to the outside world. This will turn the attention of this busy population to look around and understand the nature and people who are still with nature and preserving it. On the other hand, this will throw a light on how outsiders exploit these people for their individual benefits, which not only affects the people over there but also imbalance the entire ecosystem.

Annexures

Exhibit 1 Wages for agriculture and Non- agriculture labour

Labor	Activity	MEN (Rs/day)	WOMEN (Rs/day)	Child (Rs/day)
Agricultural Labor	Pepper Harvesting	400	200	400
	Arecanut Peeling	200	200	200
	Arecanut Harvesting	400	200	400
	Tea plucking	250	200	250
Non-Agricultural labor	Casual Labor	350-450	200-400	200-400
MGNREGS	Casual Labor	210	210	-

Exhibit 2 Workers Distribution

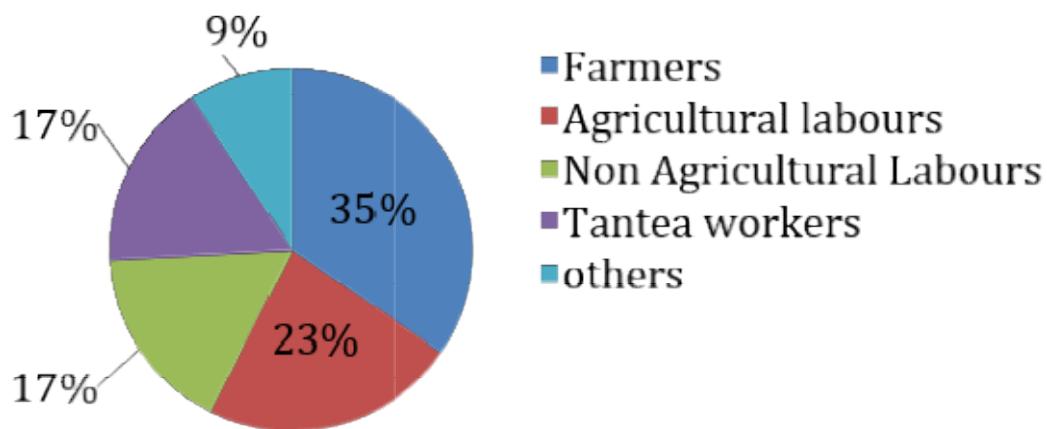


Exhibit 3 Income and expenditure of village families on a monthly basis

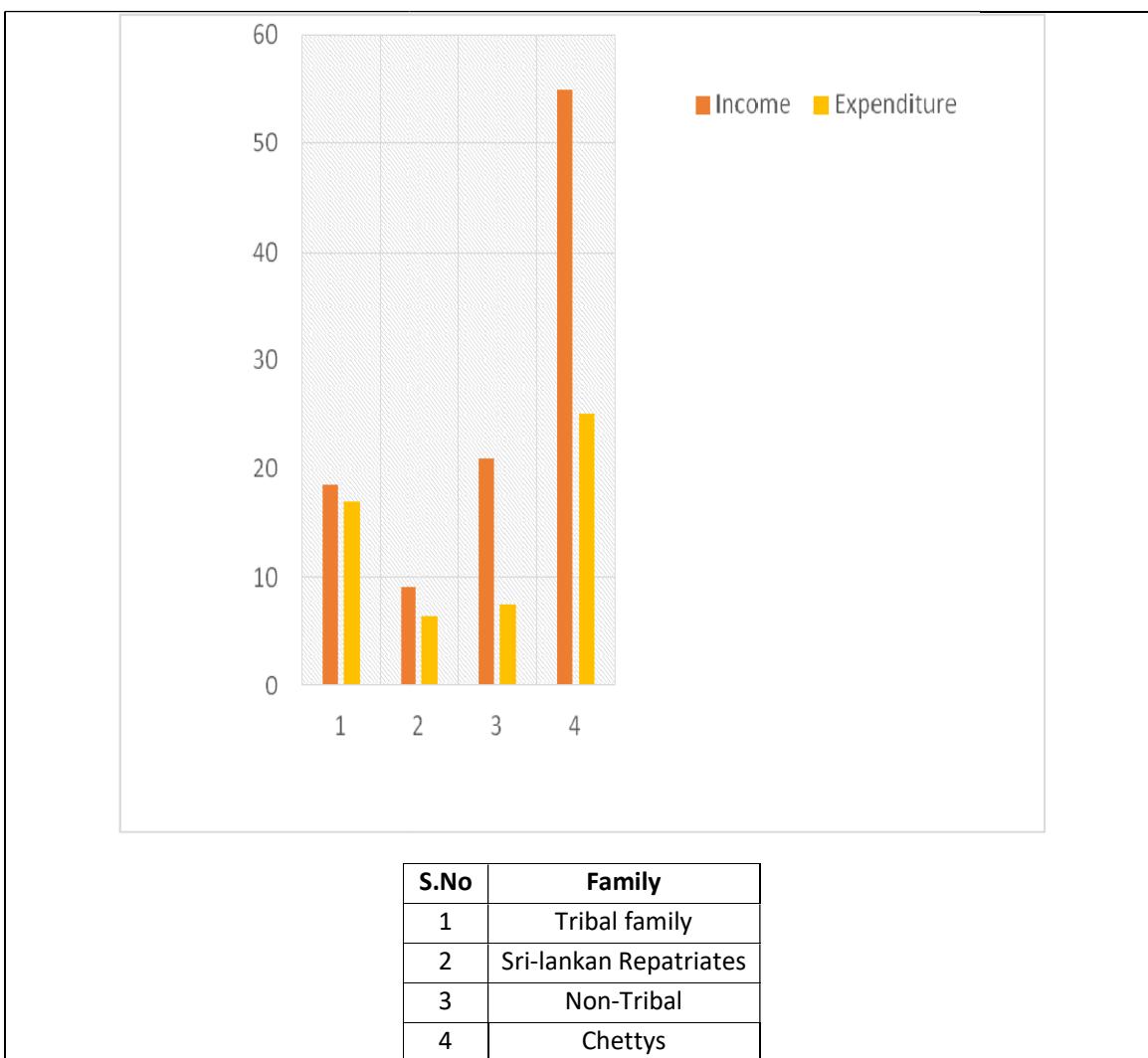
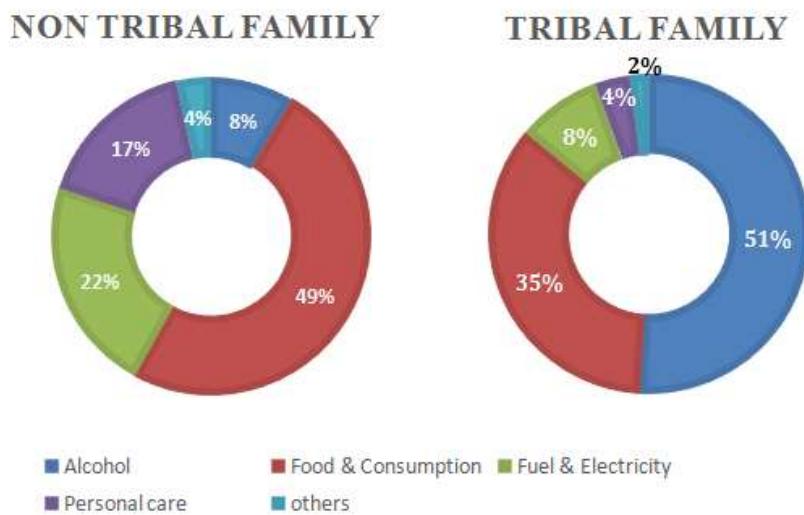


Exhibit 4 Expenditure of a typical Non-Tribal and Tribal family



Questions for Discussion

1. What is the socio-economic status of the tribes in the Cherangode village?
2. How they are exploited by various parties in the same village?
3. Is location and demography are the reasons for exploitation?
4. Recommendation on how the tribal issues are identified?
5. What are the Sustainable solutions that can be provided to the tribes in this area?

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About the Author

Arun Prabhakar S, a Mechanical engineer who worked with corporate for more than 4 years and later joined Institute of Rural Management Anand to pursue his Post Graduate Diploma in Rural Development. The case was a real-life incident during the Author's village field segment while pursuing his post-graduation and conducted an impact study survey on four major primitively vulnerable tribal groups in the region. This case let is one of the reflections of his study conducted in Nilgiris.

Part 3

Caselets



Mahatma Gandhi National Council of Rural Education

Department of Higher Education

Ministry of Human Resource Development, Government of India

Hyderabad - 500004



Where there is Rural Wellbeing
there is Universal Prosperity

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A Dairy Cooperative in Chhattisgarh

Pradhnya Bhakre, Sanchi Agarwal, Sonam IRMA

Challenge

The case revolves around a village in Chhattisgarh named Chhoora. It is situated about 70km from Rajnandgaon district and 30km from Khairagarh, the nearest big town. Khairagarh is famous for Indira Kala Sangit Vishwavidyalaya- Asia's only university dedicated to visual and performing arts. The inhibition of villages, which spreads across 70 acres, is concentrated at the center and the agricultural land of 1500 acres surrounds the inhabited area. There is one artificial pond, called as Joba Bandh, built by the State Government for irrigation purposes. Households mostly consume rice, pulses, and tomato. There is a very low consumption of milk, milk products, eggs, meat, and fruits. (see exhibit 1, 2, and 3).

Agriculture is the prime source of employment in the village with 93% of the total number of households being involved in agricultural practices. Due to large dependency on agriculture as major source of livelihood, irregular rainfall is serious threat to the farmers' sustenance.

Response

Few villagers decided to diversify the source of livelihood and came up with the idea of starting a dairy in their village. This dairy meant a new avenue for earning a livelihood. They approached Maa Bamleshwari Janhit Kari Samiti (MBJS), an NGO working towards the development of socially and economically backward women of Chhattisgarh. The organization focuses on bringing social reform and empowering rural women by mobilizing women into self-help groups.

Action Taken

With the help of MBJS, and CG Grameen bank, Chhoora Mahila Doodh Sahkari Samiti was formed two years ago (May 2016). The NGO provided financial assistance to the society with the help of Grameen bank for purchasing high yielding breeds and crossbreeds of cows. The society works under a tripartite agreement between, Doodhmala, Grameen Bank and the cooperative society itself. Doodhmala, Chhattisgarh State Cooperative Dairy Federation Limited, purchases milk from the dairy cooperatives in Chhuikhan and other blocks all over Chhattisgarh. It is a major supplier of milk products in the state (see exhibit 4). It provides facilities for milk collection, transportation, processing and marketing of milk and milk products. The members receive payment in their Grameen Bank account.

The Path Traveled by Milk

Men milked their cattle and brought milk to the milk collection center (popularly known as dairy) twice a day- every morning and evening. The milk was weighed and collected in cans. The weights were noted (in lit) and farmers were supposed to be paid on the basis of the pre-decided rate per liter at the end of the month. There were 9 such milk collection centers in the block. The milk van collected milk from all these centers. It took almost 2 hrs to collect all the milk. The centers had a varied capacity from 120 liters per day (at a time) to 25 liters per day. The collected milk was transferred to the chilling plant in Khairagarh and took around one hour to reach there from the block. The milk was brought to this chilling center along with milk from other blocks. The milk was then sent to Doodhmala Dairy pasteurization and packaging plant in Raipur which was about 100km away from Khairagarh.

Problems Faced by Farmers

There were few internal and external shortcomings due to which the dairy was not very successful and members were not receiving expected results. The two prominent internal problems were the absence

of a fat testing machine and negligence about cleanliness in the collection centers. There was no fat testing machine available at the collection center. Payment to the members was done on the basis of the weight of the milk they are providing. The fat content of the milk provided by individual milkmen was not taken into consideration. As a result, members providing milk of better fat content lost the fair rate for their milk. Furthermore, there was a lack of hygienic conditions in the collection center as well as in the maintenance of milk containers. The floor and the furniture were covered with dust. We spotted various unnecessary materials/store materials in the collection center. Milk containers were not washed properly. Also, many members brought milk in plastic containers. All these practices deteriorated the quality of milk and sometimes spoil the milk, making it unfit for human consumption. This spoilt milk was returned to the society which was not utilized for any purpose, and hence the society didn't receive any revenue for this milk. Another shortcoming was the lack of technical knowledge and skills among members as well as workers about cattle rearing and dairy management. All the nearby collection centers had similar problems.

There was a delay in the payment from Doodhwala. There was a frequent delay in payment to the society members. This demotivated the dairy farmers and they found no incentive in increased milk production and contribution in milk selling. Furthermore, delay in payment reduced liquidity for purchasing better cattle feed which in turn negatively impacted the quantity and quality of the milk produced. Sometimes milkmen took formal borrowings for cattle feed which created stress on these members as repayment of debt became difficult.

Learning

1. Villagers should have diversified livelihood profile to reduce both, idiosyncratic as well as systematic risk.
2. NGOs can play a crucial role in diversifying livelihoods of villagers.
3. It is important to study the demand conditions and feasibility for the output of the livelihood activity. Setting up a dairy cooperative in a geographical location with a low demand for milk questions the sustainability of the livelihood intervention.

Questions for Discussion

1. Is it still profitable to run the dairy or should the villagers just close it down? What should be the future course of action?
2. What are the various challenges while designing livelihood intervention?
3. What are the basic steps to be taken before deciding upon the livelihood intervention?

Course Positioning

The case is suitable for courses like Rural Livelihood Studies, Rural Development Interventions, etc.

Annexures

Exhibit 1: Milk consumption pattern in 2006-07 (State-wise)

Average consumer expenditure per person on selected food groups in 2006-07

State	Milk & milk products		Egg, Fish & Meat		Vegetables		Fruits	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Andhra Pradesh	40	74	32	42	40	48	15	28
Assam	24	56	69	107	57	78	10	26
Bihar	39	62	13	25	44	56	5	16
Chhattisgarh	9	44	12	18	42	63	5	17
Gujarat	98	143	8	11	55	70	16	32
Haryana	199	180	6	10	45	55	19	33
Jharkhand	24	69	21	30	48	81	6	18
Karnataka	40	69	24	29	30	38	19	27
Kerala	48	60	84	94	41	46	48	57
Madhya Pradesh	45	84	7	12	29	44	7	21
Maharashtra	46	107	23	34	40	60	23	44
Orissa	12	45	20	36	42	63	6	16
Punjab	167	185	5	8	55	64	19	30
Rajasthan	130	145	7	11	37	52	9	24
Tamil Nadu	35	64	35	43	43	49	16	24
Uttar Pradesh	68	96	10	17	40	49	10	19
West Bengal	21	51	55	95	55	76	7	21
India	56	97	24	34	43	57	12	28

All values in Rs. per month per capita

Source: NSS Household Consumption Survey 2006-07

Table is taken from a report on Milk and Dairy Products in India – Production, Consumption and Exports, September 2009, Author – Anil Chawla, Hindustan Studies & Services Ltd, Co-authors – Nidhi Chawla, Yogita Pant, Pankaj Kandhari, Infolitics

Exhibit 2: Milk consumption pattern in 2011-12 (State-wise)

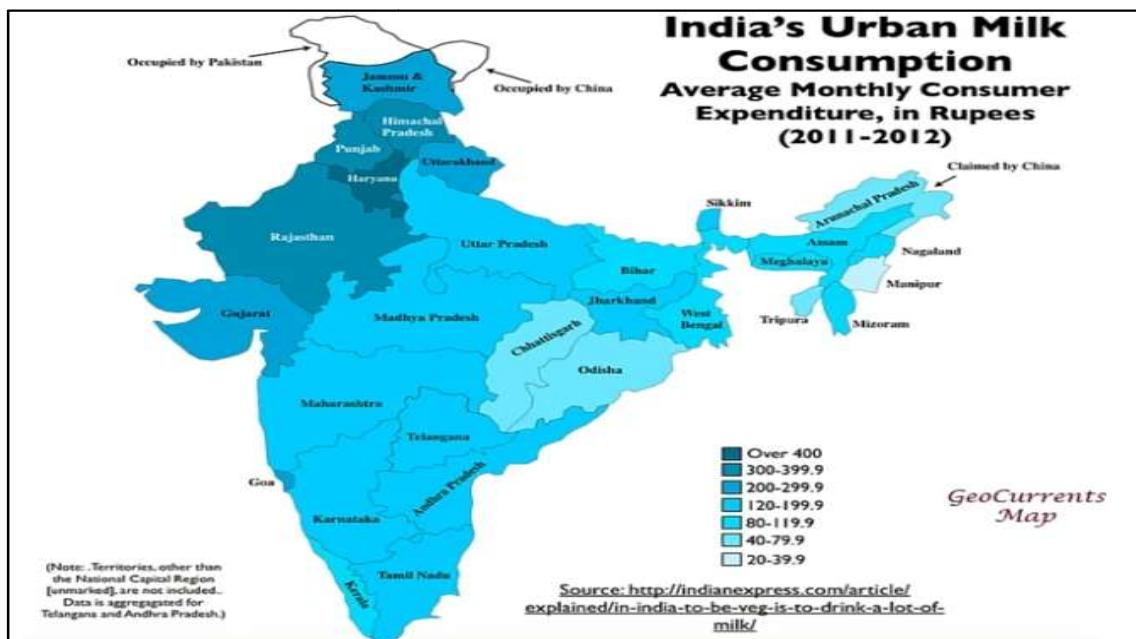
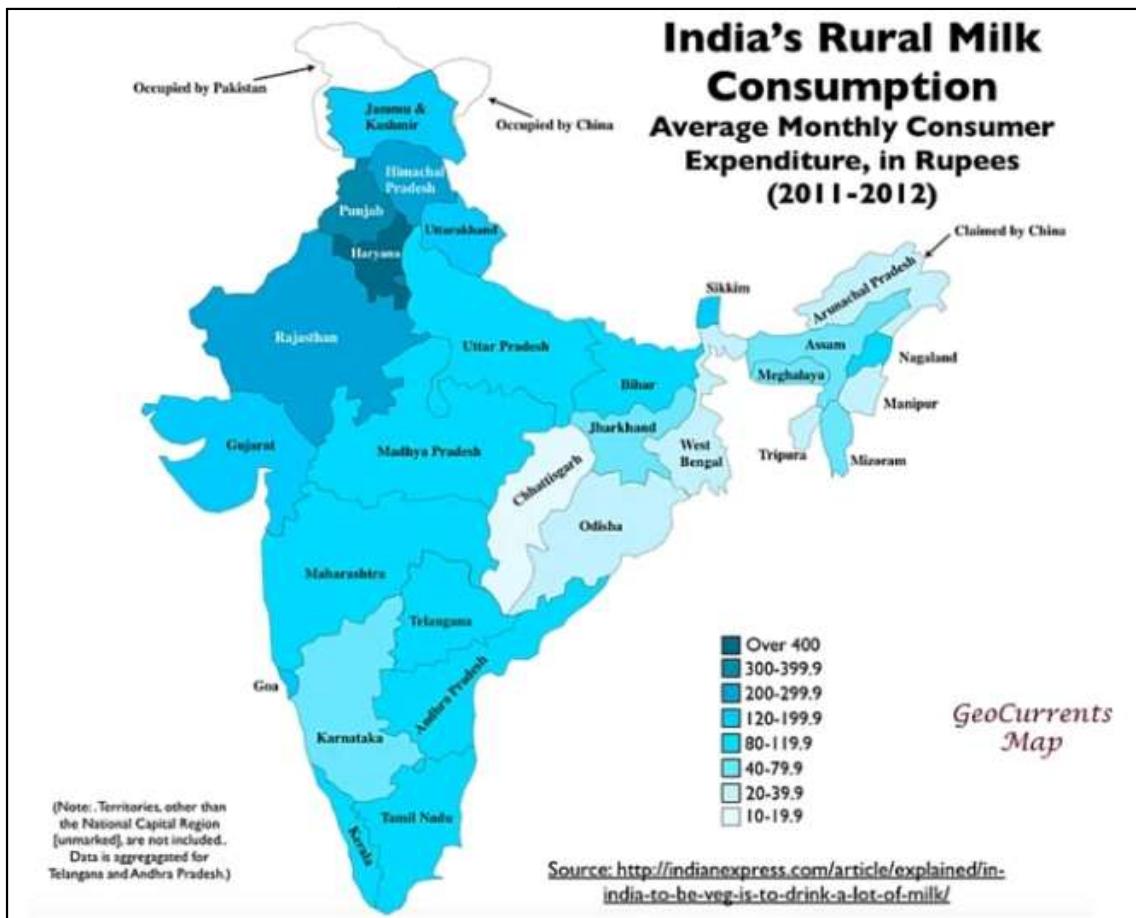


Exhibit 3: Milk production in 2011-12 (State-wise)

State-wise per capita availability of milk during 2011-12

States/UTs	gram/day
Andhra Pradesh	391
Arunachal Pradesh	44
Assam	70
Bihar	175
Chhattisgarh	120
Goa	113
Gujarat	445
Haryana	720
Himachal Pradesh	447
Jammu & Kashmir	352
Jharkhand	145
Karnataka	244
Kerala	223
Madhya Pradesh	308
Maharashtra	206
Manipur	80
Meghalaya	74
Mizoram	35
Nagaland	108
Orissa	112
Punjab	945
Rajasthan	539
Sikkim	202
Tamil Nadu	265
Tripura	83
Uttar Pradesh	310
Uttarakhand	384
West Bengal	140

Source: data.gov.in

References

- Content on coolies' framework drawn from 'Resource Book for Livelihood Promotion, Fourth Edition, The Institute of Livelihood Research and Training'
- Coolies' framework given by: Mahajan, Vijay and Thomas Fisher, with Ashok Singha, 1996. The Forgotten Sector: Non-farm Enterprises and Employment in Rural India. ITDG, Rugby, UK.

About the Authors

Authors are the participants in 39th batch of Post Graduate Diploma in Rural Management (PGDRM) at the Institute of Rural Management, Anand, Gujarat. The case is written based on experiences in Village Fieldwork Segment as a part of PGDRM course. The data was collected by interviewing all the stakeholders involved in the formation of the cooperative.

Role of Ashrayam- the Self Help Group

Nihal K.V IRMA

Challenge

As the head of the 15 members Self-help Group- "Ashrayam", Anitha had to make a plan for their next group meeting. She had to make a detailed report on the lendings made by the group and the future initiatives that the group would take up. The group worked autonomously and its members had full freedom to raise their concerns in their meetings. The purpose of the meeting was also to address any concerns regarding the activities and lending habits of its members. The members were identifiable from a single community and knew each other very well. While making the agenda for the next meeting she had gone through the financials of the SHG. She found that one of its members-Anumol had struggled to make payments on time and has asked for extensions several times. She had also noticed that the purpose of lending was also not clearly stated many a time by this member. Anitha decides to address this in the next meeting as she feels that if one person starts defaulting and is left unquestioned it would affect the morale of the members of the group. Anitha also knew that the conditions in Anumol's house. Her family was not going through a good phase.

"Ashrayam" was set up in 2010 with the purpose of poverty eradication and woman empowerment. It was implemented by the state government. The word "Ashrayam" meant "to support" Malayalam language. Its formation was in the context of the devolution of powers to the Panchayat Raj Institutions (PRIs) in Kerala and Peoples' plan Campaign, which attempted to draw up the Ninth Plan of the local governments from below through the PRIs. It had a three-tier structure for its community network. The levels were Area Development Societies (ADS), Community Development Societies (CDS) and Neighbourhood groups(NHG). The membership is open to all women but limited to one member per family.

Anumol was a member of Ashrayam since its inception. She had a four-membered family consisting of her children, elder a student in the art college in the nearest town- Perambra while the younger one in her higher secondary. Her husband was a daily casual laborer. Anumol was also a worker for the MGNREGS scheme. The family had just recovered from the death of Anumol's mother. The medical expenses of her mother had drained all their savings and left them in debt. To add to the misery her husband was a drunkard and her children grew up under alcohol abuse.

Members of the SHG knew the conditions at Anumol's house. They have seen her quarreling with her husband. He spent his entire income for liquor and also used Anumol's savings for buying liquor. Another negative impact was that her children grew up seeing this liquor abuse. Hence Anumol did not have any savings and often found it difficult to repay her loans.

Anumol had recently borrowed forty thousand Rupees from the SHG as a personal loan. There was a provision to borrow up to fifty thousand as a personal loan in the SHG. The members of the group did not know the reason for this loan. Anitha found out that Anumol's son had entered into a fistfight with one of his batchmates after an argument over a glass of liquor. This was a real shock for the members of the SHG. Anumol was expecting that her children would study, work hard and alleviate the family from poverty. Instead, her son has also been involved in alcohol abuse.

This was not just a single incident. There were many youngsters in the village who were also part of alcohol abuse. Hence Anitha was looking for a solution for the entire village. She then had a discussion regarding the same with the ward members of the Panchayat. They also raised their concern over the issue. Raju, one among the ward member complained that a group of boys was involved in alcohol and drug consumption near his home and they were a nuisance to his entire locality. The meeting ended in the formation of a committee to address the issue and a sanction to set up a de-addiction center within the village.

The state of Kerala made huge profits in selling liquor (exhibit 1). Hence a ban on liquor was not an option, unlike states like Gujarat and Bihar (exhibit 2). Several restrictions were brought in as several activists raising concerns regarding alcohol abuse among the youth. Drug abuse has recently caught up in recent days. Intoxicants like LSD are also available in the market these days.

Response

The panchayat conducted an awareness campaign to address the issue. They brought in several orators and activists who have been working for eradicating drug abuse and alcohol consumption among the youth. One such guest was Dr.Arun, who was a critique of alcohol policy in the state. He is a pulmonologist and has been working for educating the youth on the ill side of drug abuse.

He said "It's not drinking that is a problem but excessive drinking Liquor in a limited quantity has no damage. In fact, there are several health benefits when alcohol is consumed with control. An overwhelming percentage of people in the west drink with no serious health consequences. But in a state like Kerala, it does not happen that way. Binge or excessive drinking is the present issue. A cultured drinking habits like drinking only a couple of pegs a day, or a cocktail before lunch is completely absent in India because of the Taboo attached to drinking not only among traditionally tea-tootled communities but also in general.

Alcoholism can be considered an issue in several regards. A lot of domestic abuse is accelerated by alcohol. At least some reason for that is as a commodity, alcohol is still a male privilege in the villages of Kerala. And it has given men a bigger sense of ownership and entitlement. Students are the worst affected sect when it comes to alcohol abuse. Many of them believe that alcoholism leads to lowering their exam performance, missing classes or leaving college altogether. Social consequences do not end there, 3 students in the higher secondary division died consuming too much of the substance. The effect of alcohol on an individual is generally there for all to see. Although alcohol's social effects are often less visible, the effect on society, in general, aren't. From an increased chance of being involved in crime, to drunken driving or to be sexually irresponsible, alcoholism creates danger. The consequence of drunken driving that on many occasions several families are affected by one person's action. Crime also rises with an increase in alcohol. Assault and sexual assault rise due to substance. Alcohol and violence have a clear correlation with many disagreements rapidly spiraling out of control and affecting many. It is perceived that people do not think about the consequences when they are intoxicated. A regular abuser may have no memory of who they slept with, where they went or what they did. This can easily lead to the spreading of diseases or the loss of life. Some youth have the habit of using intoxicants before involving in sex. They forget to use condoms which lead to the transmission of STDs.

The social effects of alcohol use are also heavily felt by younger people. As earlier stated, college-goers are regular drinkers. However, many people start drinking at a much younger age, despite the illegalities. One of the dangers of underage drinking is that teenagers may have already developed an addiction to the substance before they even reach the freedoms of college. Alcohol and social behavior go hand in hand in college, with many young adults also drinking for the first time. This is arguably just as dangerous, as they may also take the freedom one step too far, and like those who have been drinking longer, can also develop an addiction”.

Action Taken

Anitha was moved by the note made by Dr. Arun and decided to work for the youth. She along with other members of the SHG decided to write away Anitha's loan and also helped in mobilizing funds for the construction of the rehabilitation center in the village. Awareness campaigns were also initiated by the group for addressing the cause.

Lessons Learnt

Alcoholism and drug abuse is a matter of serious concern among the youth. Liquor ban alone is not a single solution to the menace. We need concerted efforts to tackle the problem. The role of SHG's can be vital in mobilizing the people and can act as the critical mass to fight against any such social issues.

Questions for Discussion

1. What is the impact of drug and alcohol abuse on society?
2. How do you think we can fight alcohol and drug abuse?
3. What are the different ways to mobilize people and address the concern regarding alcohol abuse in the village?
4. How can SHG's play a vital role in rural interventions?

Course Positioning

This case can be positioned under Rural planning and development. The case discusses the bad side of alcohol intoxication and how it can affect society. This case also emphasizes the importance of community participation in Rural development.

About the Author

This case is written by Nihal K.V. He got the inspiration to write this case from his village fieldwork summer internship experience in Kerala. The case is an attempt to bring out the harmful effects of liquor consumption among the youth and how it has affected the lives of people associated with them.

Annexures

Exhibit 1

THE LIQUOR ECONOMICS IN KERALA			
YEAR	GROSS SALES Rs. (in Crores)	STATE GAIN Rs. (in Crores)	PUBLIC LOSS Rs. (in Crores)
1987-88	81.42	40.74	203.58
1992-93	208.02	133.00	549.04
1997-98	1,000.83	753.48	2,755.14
2002-03	1,847.40	1,468.16	5,162.96
2007-08	3,669.14	2,914.10	10,252.38
2012-13	8,818.18	7,240.89	24,877.25
2013-14	9,353.74	7,511.00	26,218.48

Sources: KMC & ADG-IHDK

Exhibit 2

BOOZE ONLY IN FIVE-STARS



► No renewal of licences for the 418 bars which remain closed now

► From April 2015, the existing 318 bars will not get their licences renewed

► Only five-star hotels will be allowed to run bars

► Every year 10% of beverages corporation outlets will be phased out, so that in the next 10 years, all of them will be shut down. There will be any new outlets

► Bars and Bevco outlets will remain shut on Sundays and every first day of the month

► A rehab package for habitual drinkers and b employees, Punarjani 2030, to be set up under Kerala Alcohol Education, Research, Rehabilitation and Compensation Fund. CM appeals to people to contribute a day's salary to ap's fund

Traditional Farming Based on Livelihood Intervention at Sholayur

Gokul S IRMA

Challenge

With the outcomes of the past developmental interventions being alarming, it was quite clear for Vedika about the need for an out of the box intervention. However, after reading the mail, she was wondering whether she should propose the participatory livelihood-based development intervention over the conventional approach.

Setting up the Context

It was just one week left before the final presentation of the Sholayur Development Project (SDP) proposal before the Board of Directors (BoD) of Tribal Development Society (TDS). Vedika was worried whether the development approach that she proposed would be accepted by the BoD, as the approach was not in line with the general project proposal structure briefed by her reporting officer, Mr. Neelakantan. The projects proposed by TDS were generally based on the Conventional Top-Down Approach of Development. After spending around two months in the village Sholayur, she had realized that the conventional, irrelevant and non-participatory development interventions have questioned the self-sustenance of the village and it can be revived only through interventions that create livelihood and ensure participation. She developed a traditional farming-based livelihood intervention and the proposal was sent to her reporting officer for approval. However, the next morning, she was amazed by seeing the reply mail from Mr. Neelakantan directing the revision of the proposal with a conventional intervention approach which she understood to be counterproductive.

Vedika

Vedika was a highly talented professional who had secured a post-graduate diploma in rural management from one of the best management institutes in India. After the completion of the course, she joined TDS by the end of August 2019 and completed two months of training. Being the first task after joining, she wanted to put her maximum efforts to bring the best outcome. She even spent around six months in the village Sholayur for understanding the political, social and economic conditions.

Tribal Development Society (TDS)

Tribal Development Society (TDS) was a government aided organization, which had its head office in Attappady, Palakkad district, Kerala. It had been working for the welfare of the tribal people since 1982. It was primarily involved in planning and executing multifarious rural development projects to improve the living conditions and general welfare of the tribals. However, TDS devised interventions in line with government policies which mainly focused on the subsidy driven model of intervention. The government interventions and schemes like PDS, AHADS and Community Kitchen generally were fitted in the framework of the conventional top-down approach of development. These schemes focused on the distribution of subsidized goods rather than sustainable livelihood creation. Moreover, they never ensured the participation of the community in the successful implementation of the schemes. As a result, the tribal community lost its self-sustenance and became totally dependent on the aids of the government.

Brief Background about the Context

Sholayur

Attappady is an extensive mountain valley between the Bhavani River and Nilgiri hills. It is bordered to the east by the Coimbatore district, on the north by Nilgiri, south by Palakkad Taluk and west by Mannarkad revenue village. Located in Palakkad district, it is one of the major tribal belts in the state of Kerala. It has three-gram panchayats which are Agali, Puthur, and Sholayur. Sholayur village of the Attappady block is included in the manipulation zone of the Nilgiri biosphere reserve by the Department of Environment, Government of India (CWRDM, 1994). It is situated in the easternmost part of Palakkad district, close to the Kerala-Tamil Nadu border. It is located in Mannarkad Taluk of Palakkad district, Kerala and is administered by Sholayur Grama Panchayat which was formed in 1968. It is surrounded by Puthur gram panchayat in the North, Tamil Nadu in the East, Thachambara village in the South and Agali gram panchayat in the West (Annexure 1).

Sholayur Gram Panchayat covers an area of 150.67 sq. km. with 50% of its area under forest cover. There were two villages under the Panchayat namely, Sholayur and Kottathara. Since 2010, there are 14 wards under the Panchayat. It had 52 tribal hamlets or 'ooru' inhabited by the Irula tribe.

A Brief History of Settlement Patterns

The Sholayur village was earlier known as 'Cholayur', a Tamil word denoting 'ooru of Chola' which means a settlement in the forest. During the 17th century, the Irula tribe migrated to Sholayur forests from Tamil Nadu due to war and conflict. In the 18th century, Attappady was the Janmis property of Zamorin of Calicut. The Zamorin entrusted the administration of large areas of land in Mannarkad including forest areas of Attappady to a Nair chieftain, Mannarkad Moopil Nair. The tribal folk became tenants of the chieftain. Later the Britishers invaded the area and started cultivation in this region. As a result, plantation of tea and coffee began. The job opportunities in the plantations attracted people from Tamil Nadu and other parts of Kerala who later constituted the settler population of the village. The plantation was later sold to Bhavani Tea and Produce Company (Siruvani Group Estates) in 1945.

Till 1957 Attappady remained as a part of the Malabar district under Malabar Presidency. During the 1960s another episode of in-migration of settlers happened. Later, the Attappady region witnessed significant events such as Save Silent valley people's movement in 1973, the Chittoor dam project in 1975 and the inauguration of Silent Valley National Park in 1985. In 1995, liquor was banned in Attappady due to the extensive use of liquor by men, women and even children resulting in a high infertility rate. JICA funded AHADS project for the rejuvenation of degraded forests was implemented during 1996 - 2012. It also helped in upgrading the social, educational, health and financial status of the tribal people.

In 2013, Community kitchens were introduced in tribal hamlets of Attappady to reduce infant deaths and pervasive malnutrition by assuring at least one complete meal a day. Moreover, in 2013 the National Rehabilitation Centre was started in Sholayur, Pudur and Agali Panchayats of Attappady. This move has helped in reducing the number of children with severe acute malnutrition from 613 in 2013 to 26 in 2018. These were some of the critical events which took place in the Sholayur village (Annexure 2).

Demography

Sholayur village has a geographical area of 96 sq. km. It had a population of 7012 of which 3507(50%) were males while 3505 were females (as per population Census, 2011). The population density of the

village was 73 persons per sq. km. It was 3rd least populous village in the Mannarkkad sub-district. This is because 75 % of the total village area (71.87sq.km) was covered by forest. The population records have not been updated post Census, 2011. Out of the total population, there were 3658 tribal people, 594 belonging to Scheduled Caste and 2760 settlers. The settler population had grown from 10% to 44% and the tribal population had significantly reduced from 90% to 50% during the period 1950 to 2011. Among the settlers, 28.6 % population were Tamil settlers and the rest were Malayalee settlers. There were 1885 households in the village and an average of four persons live in a family. The major religions in the village were Hinduism with 78% followers and Christianity with 22% followers. There were no Muslim inhabitants in the village.

The total number of literates in the village was 4493. Among them 2420 were males and 2073 were females. The literacy rate of the village (excluding children under the age of 6) was 71. 43% which was lower than the state literacy rate of 94%. This was because the tribal population followed the tribal language, Irula, which did not have a written form and were also not interested in learning Malayalam. The total sex ratio and child sex ratio of the village was 999 and 1040 respectively, which were at par with the state ratios.

Employment Opportunities

Agriculture was either a primary occupation or a secondary occupation for about 90% of households in the village. Other secondary sources of income were animal husbandry with goats, cows, and poultry being the main livestock reared, MGNREGA, agricultural and non- agricultural labor and plantation labor. There were 64 establishments in the village. Major employment within the village was provided by Bhavani Tea Factory. It offered employment to 130 people, out of which 95 people belonged to this village. It was also the source of major in- migrations that happened in the village from different parts of Kerala and Tamil Nadu. An Alternative and Innovative School also existed within the estate, which provided education to children until the fourth standard. The workforce consisted of 98 women employees with daily wages of Rs. 312. There was no difference in the wages given to male or female employees. Other establishments that offered employment were tailors, grocery shops, tea shops, etc.

The main occupation of the villagers was agriculture. They mainly cultivated perennial commercial crops like Black Pepper, Cardamom, Coffee, Banana, Tea, Arcanut and practice intercropping. Net and gross cultivated areas were the same, covering a total area of 2500 acres. The famous Siruvani plantation of Bhavani Tea and Produce Company of about 1200 acres was located in the village. They cultivated tea, coffee, and cardamom. The farmers mainly practiced rain-fed cultivation. Only about 400 acres of land was irrigated and natural streams and bore wells were the sources of water. Moreover, these crops did not require intensive irrigation unless there was an incidence of severe drought. The fertilizer application was quite less due to the fertile nature of the land.

Livestock was a secondary occupation for many villagers. They mainly reared traditional breeds of goat, cow, and poultry. The tribals did not milk their cow or goat. They believed that cow's milk and goat milk were only for feeding their offspring. Grazing was the main mode of feeding the livestock. They considered the livestock as an asset which they held for selling when the need for money arose. However, the settlers followed the normal practices of livestock management. They mainly reared cows and poured milk in the dairy cooperative society at Sholayur. The functioning of society was based on the Anand pattern. There was a veterinary hospital in Sholayur with a resident veterinary doctor. Dairy farmers of the settler community followed artificial insemination for breeding while most of the tribal farmers followed traditional mating techniques for breeding their cattle.

An Integrative View of the Village

Sholayur village is remotely located surrounded by thick forest cover. This badly affected the livelihood of the villagers. People were charged high for all commodities by convenience stores due to extra transportation charges. Villagers were forced to pay a margin of Rs. 40 above the market rate of Petrol. This, in turn, increased their household expenditures.

The village was mainly inhabited by tribal and migrated settler communities. Although the two communities interacted and cooperated with each other, tribal communities had deep down resentment towards the settlers. They claim that the settlers have robbed their land and were responsible for their present plight. While the settler community argued that the government schemes were skewed towards tribal welfare only and they were deprived of benefits.

The human-animal conflict was a frequent phenomenon in Sholayur. The wild animals were one of the main causes of huge agricultural losses to farmers. Though large farmers adopted measures like electric fencing, it was not affordable to small and marginal farmers. Moreover, villagers preferred to avoid movement during the night fearing the attack of wild animals. Most of the tribal households in Sholayur owned traditional breeds of cow and goat. But, they did not milk them as they believed that the milk was meant for the offspring. This was an untapped potential that would have provided an additional source of income. The consumption of alcohol was banned in the village in 1995 by the state government. However, alcohol consumption was still rampant and had even increased over the years.

The major decision-making authority of the village was Gram Panchayat. But the ruling political party exercised significant influence in Panchayat decisions. Though Gram Sabha meetings were held at regular intervals, it has turned into a ritual to fulfill the constitutional mandate rather than ensuring fruitful discussions regarding issues in the village. Sholayur village had a well-coordinated network of healthcare facilities. The measures like Community Kitchen and NRC have helped in reducing IMR from 31 in 2013 to 12 in 2017. Hereditary diseases like sickle cell anemia were prevalent in the village.

Sholayur is a stark reminder of the backfiring of incentives and how visionless developmental models can place a chokehold on self-sustenance. JICA funded AHADS program was initiated in 1996 with an aim to rejuvenate the degraded forests and to create employment opportunities to promote livelihood. The program functioned for sixteen years. However, the latter aim was not successful as very low priority had been given in the income generation activities (0.34 % of the total budget) and the program was winded up abruptly in 2012. This led to the loss of jobs for many tribal youths who had left their traditional agriculture as well as higher education, in turn making them incapable to strengthen themselves. It made tribal cultivators mere wage laborers. Community Kitchen was another program introduced in 2013 with an objective to curb malnutrition and IMR. Though it partially succeeded in achieving its objectives, it backfired as it became a negative incentive to work for the working class, as free food was available to all tribals

A Search for a Way out Through Interventions:

During two months spent at Sholayur, Vedika tried to understand the socioeconomic impact of various developmental interventions from the inhabitants. Through observation, PRA, interviews, and surveys of villagers, she understood the drastic upheaval in livelihood patterns with major traditional livelihood trends like millet farming usurped by developmental interventions like AHADS and Community Kitchen ensuing severe identity crisis and a violent metamorphosis of dietary patterns. Such imposed and innate transitions have resulted in changes in dietary patterns resulting in the health anomalies of high infant

immortality rate and malnutrition. She realized the need for projects having a bottom-up, participative orientation for developing self-sustainability through livelihood generation.

Attappady region is blessed with lemongrass which grows naturally and available in plenty. Tribal women of the village, during times of financial distress, collected the grass and extracted oil traditionally which was then supplied to the forest department. The forest department then marketed it under the brand name "Vanashree" for which a reliable market was available. However, due to the lack of a mechanized extraction facility, the volume of output was generally minimal earning them only nominal income. Moreover, with an intention of rejuvenating the traditional tribal millet-based diet and agriculture and thus to curb the malnutrition concerns of the region, the state government initiated a project, "Millet Village" in October 2017. The project promoted the cultivation of ragi (finger millet), thina (foxtail millet), cholam (sorghum) and kuthiravaali (barnyard millet). There was a huge demand for value-added retail products in the Palakkad market which was unmet due to lack of processing facilities. Understandings the available market opportunities, Vedika designed the livelihood intervention using the Rural Livelihood Systems framework- Coolies' Framework which she learned in Environment and Livelihood Systems course during Rural Management studies. Based on the framework, assets were realized in the internal and external context. She developed two interventions for tribals – lemongrass oil extraction and, millet processing and millet-based snack production which focused on the formation of self-help groups of tribals with the financial support by TDS for extraction unit and a processing unit.

Stage 1: understanding internal and external contexts - coolie's framework

External Context
1. Factor Conditions in Sholayur <ul style="list-style-type: none">• Climatic condition – Erratic rainfall (prevailing drought conditions), warm in summers to mildly cold in winters• Infrastructure – Complete electrification, well-connected road system, and telephone network connectivity in almost all areas• Skills of Villagers – millets farming, NTFP collection, honey extraction, livestock rearing
2. Demand Conditions <ul style="list-style-type: none">• Steady demand for vegetables in Sholayur as well as nearby townships of Anaikatty, Agali, and Palakkad• Emerging demand for healthy organic milled based snacks in urban areas of Kerala and TN
3. Industry Conditions <ul style="list-style-type: none">• An overall increase in the market for vegetables• Favorable market trend towards consumption of organic snacks
4. Institutional Conditions <ul style="list-style-type: none">• Tribals engaged in daily wage activities while settlers had varied livelihood portfolio• Both sets show immense interest in agriculture and allied activities• Government employment schemes include MNREGA and Millet village program

Internal Context

1. People's Livelihood

Tribal People

- Portfolio – 1. The processing unit 2. Value addition SHG units
- Capacity – Traditional skills for growing millets and capacities for making value-added products to be given
- Shocks – Epidemics and drought
- Strategy – Home-based industry

2. Organization – Government institution or an NGO

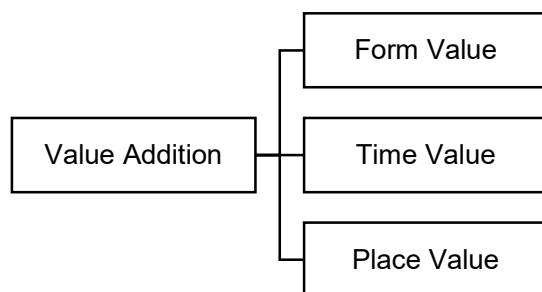
- Mission – To become a catalyst for the integrated development of society and to facilitate the harmonious growth and welfare of the people irrespective of race, community, caste or creed
- Capacity – Building on local knowledge and practices, using naturally available resources in innovative ways, better market reach, and bargaining power
- Funding – Government schemes, community funds, donor agencies, and international grants

Stage 2: Deciding livelihood intervention

1. Exercise 3-E (Explore the External Environment):

The scope for cultivation was tremendous due to the large availability of arable land and the intent of the population. Adequate skilled manpower and raw material were available and the requirement of capital and collective cultivation spirit was minimal. Organic products such as lemongrass oil, millet snacks, and vegetables have huge urban demand as well as growing rural demand.

2. ValueAddition



Value addition opportunities available in the intervention can be of three types:

- a) Form Value: The utility of lemongrass oil or processed millet is much higher than the lemongrass or raw millet as the former form creates more consumer convenience in using it.
- b) Time Value: The utility of lemongrass oil or processed millet is much higher than the lemongrass or raw millet as the shelf life of former is longer which in turn ensures the availability of products during the most desirable times of consumers.
- c) Place Value: The utility of lemongrass oil or processed millet is much higher than the lemongrass or raw millet as the accessibility of the customers to the former form is much

easier as the product can be distributed smoothly and can be made available at convenient locations in the targeted market.

3. Understanding Economies

The intervention enables three economies namely:

- Economies of scale:** The per-unit production cost of lemongrass oil and processed millets gets reduced as the mechanized production units yield higher output.
- Economies of scope:** The total production cost of the unit (SHG) gets reduced as the same facility is used for the production of two or more millet products
- Economies of Integration:** As the members of the SHG are involved in the cultivation of lemongrass and millet and TDS provides market linkage through procurement agents, economies of both backward and forward integration are enabled in the intervention.

4. Analyzing Value Chain

Target Group	Intervention	Output
Tribal People (through SHG formation)	Lemon grass Cultivation and oil extraction	Lemongrass oil
	Cultivation of Millet grains and its processing for value-added product production	Millet grains/ flour and ready-to-eat millet based snacks

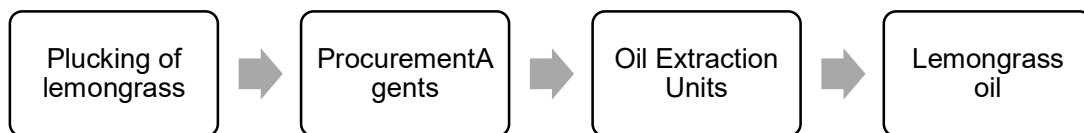


Figure 1: Value chain of Lemongrass oil production

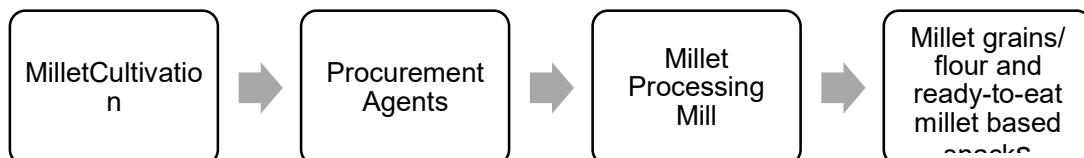


Figure 2: Value chain of Millet product production

Stage 3 Designing the Intervention

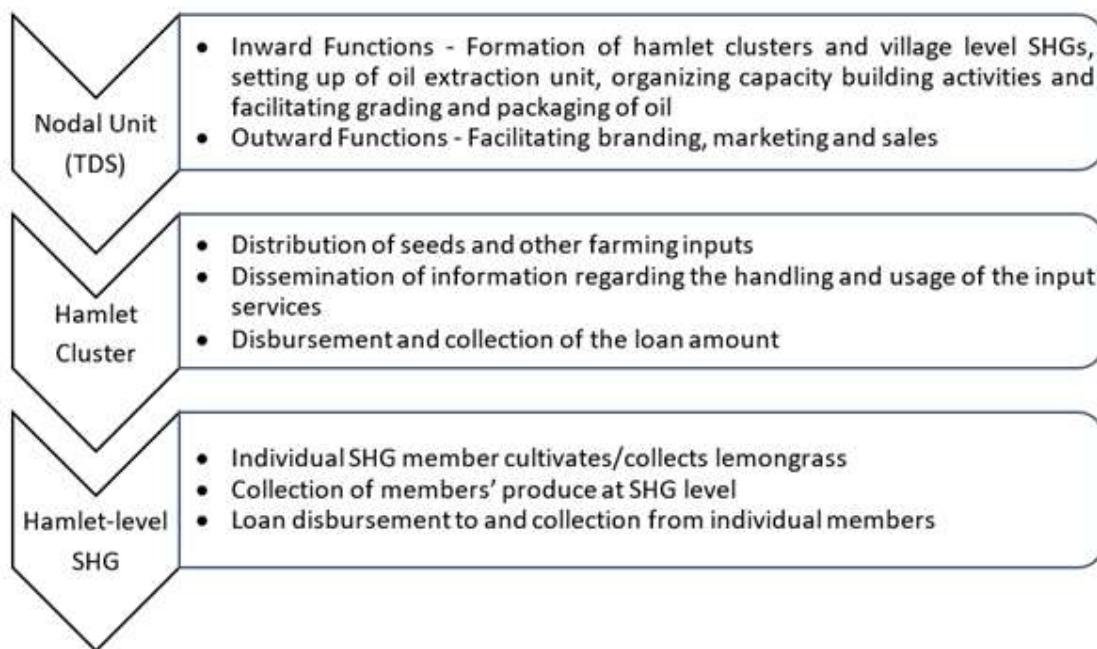
1. Lemongrass Cultivation and Oil Extraction

Vedika, when she conversed with the chieftain or 'Oorumoopan' of Sholayur hamlet, realized that in earlier days, a large portion of the Irula and Valayar community used to extract oil from lemongrass. It was extracted using an indigenous distilling mechanism and sold in the Mannarkkad market. Such operations have come to a halt due to conflicts arising between the forest department and tribals regarding forest rights. Large plots of land with ST ownership remained uncultivated due to human-elephant conflict. However, lemongrass could be freely grown in the uncultivated areas without installing additional electrical fencing or watchtowers as Elephants won't trample with lemongrass. The equipment required for distilling and extraction was minimal and could be easily operated. Training of

the tribal SHG members could be imparted in less than four sessions, which could be facilitated by TDS. The oil could be marketed using the tagline “from the hills of Attappady”. With the wide range of uses of lemongrass oil as a food ingredient and for medicinal purposes, the intervention could enable the tribal to realize a fair price for their efforts.

Organisational Design of Intervention

The organizational design of the intervention involved three tiers, Nodal unit, Hamlet cluster, and Village level SHG. The nodal unit was responsible for performing both the inward and the outward functions. The inward functions included the formation of hamlet clusters and village level SHGs, setting up an oil extraction unit, providing capacity building activities, grading, and packaging of oil produced and for the provision of a loan to clusters. While the outward functions including branding, marketing, and sales. In the first phase, only 4-6 village hamlet clusters were formed. The distribution of seeds and other farming inputs, dissemination of information regarding the handling and usage of the input services and disbursement and collection of the loan amount were done at the hamlet cluster level. Each of the hamlet clusters would have around 5-10 farmers who cultivate and collects lemongrass. Once the collection was done at each of the clusters, they were aggregated and transported to the processing center for oil extraction and producing other value-added products.



The scale-up plan in the future could include the production of other beauty products of lemongrass oil such as soaps, shampoos, creams, scrubs, etc, and herbal beverages. The promotion of lemongrass leaves in the diet could be another scale-up option.

2. Millet Processing and Millet-Based Snacks Production

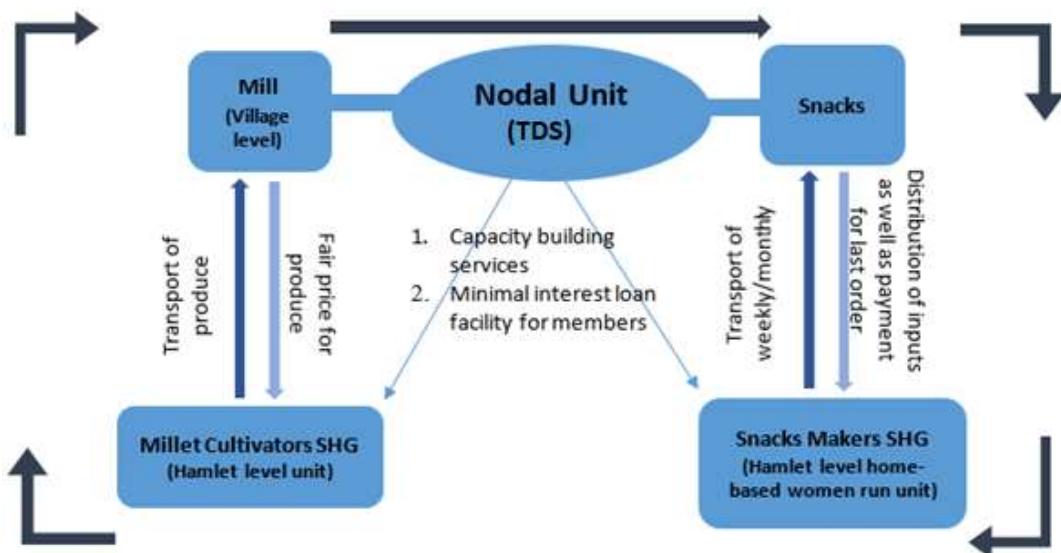
As the state government has shown a special interest in the successful implementation of a recently initiated project, Millet Village, Vedika believed that an intervention that converges with the project could complement the success of both the interventions. Moreover, unlike conventional government interventions, the Millet Village project encouraged the participation of tribals and focused on the creation of sustainable livelihood. So, she designed an intervention of “Millet processing and Millet based snack production, which focused on the value addition of the primary producers, millet grains.

Factors Favoring the Intervention

- The intervention converged with the objectives of 'Millet Village' program of State Government
- Millets, being drought-resistant crops could easily be cultivated by farmers, particularly in rain-shadow regions of Eastern Attappady
- Awareness among STs that infant mortality issues, rampant anemia, etc were due to a change in their dietary pattern would act as a motivating factor to readopt the millet cultivation and diet.
- Increasing health consciousness and consumer awareness about the importance of coarse grains in diet would attract huge demand for the products based on millet.

Organisational Design of Intervention

The organizational design of the intervention involved the formation of two SHGs, one for the cultivation of millet and the other for snacks production. The nodal unit (TDS) provided the required capacity building practices and minimal interest loan facility to the SHG members. The hamlet level millet cultivators produced millets and the extra production after subsistence was transported to the mills for processing and the payment for the supply was made immediately to the farmers. The nodal unit would provide the linkage between the processing mills and the snacking units. The SHGs of tribal women were formed at the hamlet level and were given required training to produce the snacks. The snacks were distributed to the retail outlets and the market linkage was facilitated by TDS.



The scale-up plan of the intervention could include diversification of product lines into bakery items such as bread, cookies, muffins, and cakes using millets. The distribution could be also extended to retail outlets in several locations in Attapady, Mannarkad, and Coimbatore under a single brand name.

The thoughts of the mail disturbed Vedika throughout the day. She reviewed the mail, again and again, not knowing the reason for it. The turbulence further built up as the words of Valli echoed in her mind, "We had led a happy life and never cried for any help. It's your greed that made us malnourished. And now, we are your slaves".

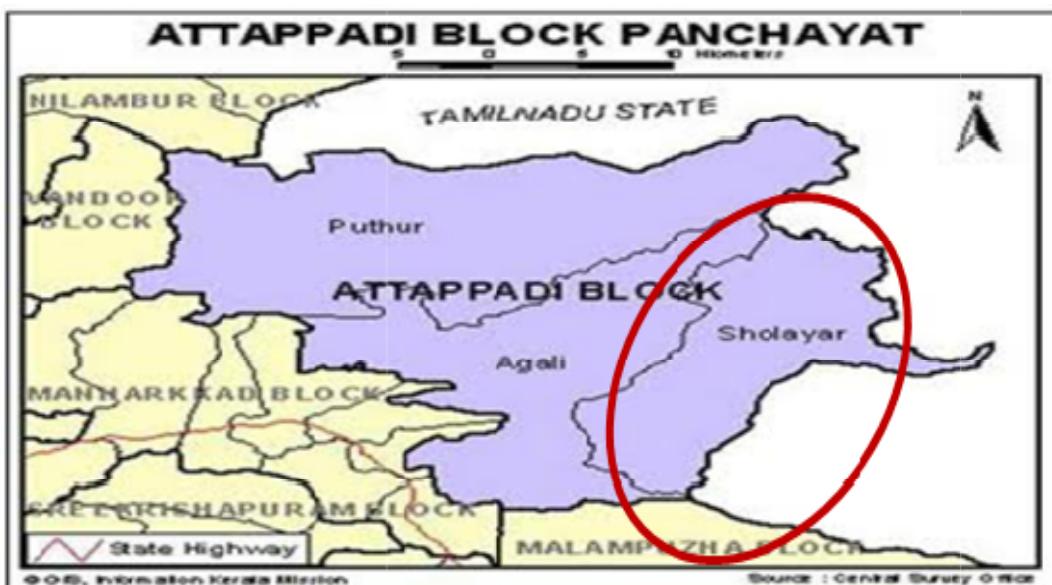
CLAUSE: The mini case is developed for Mission Grameen Gyan Initiative by MGNCRE, Ministry of Human Resource Development. The case is prepared as a basis for class discussion. The case is not intended to serve as endorsements, source of primary data, or illustrations of effective or ineffective management.

About the Author

Gokul S- Post Graduate Diploma in Rural Management (PGDRM) candidate at the Institute of Rural Management Anand (IRMA). The author is qualified for Assistant Professor (UGC NET December 2018-Management). The case is developed based on the experience and information gathered by the author during the Village Field Segment (VFS) at Sholayur under the Attappady Social Services Organization (ASSO) as a part of IRMA-PGDRM program.

Annexures

Annexure 1: Map of Attappady Block Panchayat



Annexure 2: Timeline of Critical Events at Sholayur

17 th Century	•Migration of Irula tribe to Sholayur forests from Tamil Nadu due to war and conflict.
18 th Century	•Zamorine of Calicut entrusted large areas of land to Nair chieftain, Mannarkad Moopil Nair.
19 th Century	•Britisher's invasion. Tea and coffee plantations began
1945	•Plantations sold to Bhavani Tea and Produce Company
1996 - 2012	•JICA funded AHADS project for Eco-restoration & Tribal Empowerment
2013	•Community kitchen introduced •National Rehabilitation Centre started in Sholayur, Pudur and Agali Panchayats

Bhanwata: A Case of Good Water Management?

Vineet Kawadkar, Suraj Singh IRMA

Challenge

It was a hot May afternoon when Hiraram reached Agar, a village in Alwar district of Rajasthan. Hiraram is a marginal farmer from Bhanwata, belonging to the Balai caste, who had just returned from Delhi, where he worked as a daily wage laborer. He would have to walk another 2.5 km before he can reach his village. Happily walking towards his village, Hiraram got stunned when he saw few of the johads (small lakes) completely dried up. Condition of other johads around the village was no better. In the evening he was to meet with other villagers who, like him, had returned to the village before monsoon for Kharif.

"The johads are all dried up and there is no water in borewells! We don't have any other option than to sow bajra (pearl millets) again this year," claimed Bhikaram, a farmer with medium land holding. Hiraram could not help but agree with Bhikaram since the village has seen scanty rainfall for the last five to seven years. Hiraram had seen the transformation from a drought-prone village in the mid-80s to a water-sufficient village with an awarding winning water management plan (Exhibit 1) and then back to a water-scarce situation. He wondered where they went wrong and if the blue days can ever be brought back to the village.

About Bhanwata

Bhanwata is a small village located on the foothills of the drier side of Aravali ranges. Situated close to the border of Jaipur and Alwar districts of Rajasthan, the village is a part of Bhuriyawas panchayat which falls under Thanagazi tehsil of Alwar district. The village has a population of 560 and the literacy rate is 47.52% (Exhibit 2). Geographically, the village consists majorly of lithosol and regosol soils of hills (red grey valley soil) and hard rock beds starting at depths of around 75 meters (GOI, 2013). The village is surrounded by deciduous forest¹ and encounters with wild animals (such as hyenas, leopards) were frequent.

Agriculture is the major source of livelihood and everyone is involved in it. Due to the absence of any irrigation facility provided by the government, the villagers depend on groundwater for harvesting. As such, the availability of water is of utmost importance to them. Bhanwata faces an absence of any major source of naturally occurring surface water such as a river. The only remaining surface water source are two small johads in the village. Therefore, the major source of water for the villagers is groundwater. Some of the rich farmers have engaged extensively in exploiting groundwater through their borewells. This groundwater needs to be replenished with rainwater, but the gradual decline of monsoon rainfall over the past few years (Exhibit 3) has started to adversely impact the groundwater levels. Currently, the villagers are completely dependent on the either groundwater, if they can find any or they need to avail water tanker facility from a nearby town Pratapgarh.

Owing to the peculiar geography of the village, Bhanwata was historically a drought-prone village. A major reason for unavailability of water was loss of rainwater due to surface run-off. In the absence of any proper water management system, the little water they received through rainfall was lost. Due to this, the villagers faced water scarcity for greater part of the year. The only structure in the village for

¹ Forest consisting majorly of trees that shed their leaves once a year

harvesting rainwater was an old johad. But due to lack of maintenance, the johad was not able to store any water from the scanty rainfall they receive. Exhibit 4 shows the rainfall pattern and average temperature throughout the year for Alwar district.

Bhanwata faced a major drought in 1985-86. The severity of the situation can be assessed from the fact that the village lacked in the bare minimum availability of water for drinking. Women had to travel great distances to other villages in order to fetch water for drinking. Lack of water led to severe malnutrition and chronic health problems. The forest also suffered due to scarcity of water as it limited the growth of trees which in turn meant less fodder for livestock. Coupled with the unavailability of drinking water, this led to large number of deaths of livestock.

Response to the Drought

In the year 1987, an NGO working in Alwar district entered Bhanwata. The NGO had worked on various projects of water management successfully in neighbouring villages. When the NGO came to know of the drought of 1985-86, they suggested that to avoid such crisis, water management practices should be followed in the village. Various benefits of good water management practices were explained to the villagers, such as availability of water throughout the year. As the experience of the drought was fresh in their minds, the possibility of availability of water throughout the year was music to the ears of villagers. Hence, they readily agreed to work with the NGO.

After discussions with the NGO and multiple meetings, the villagers came to a consensus that the problem can only be solved through active participation of every villager. As the NGO made the villagers realise that the major reason of water scarcity was the rainwater run-off from surface, the villagers resolved that they will tackle this issue collectively.

Actions Taken by the Villagers and NGO

A campaign “Jal Sanrakshan Andolan” (Water conservation movement) was started by the NGO. In order to start mobilising and motivating people, various slogans such as ‘Jal hai to jeevan hai aur uske sahare jungle surakshit hai’ (Water is life and it helps sustain forests) were created. These slogans were painted on the walls of common places, taught to children in school and made a part of daily lives. This ensured that every member of the village community was part of this campaign, regardless of the caste, sex or age.

Under the campaign, the villagers donated land, labour, capital or machinery to the best of their ability. Using these resources, the construction of the first artificial johad in the village, aimed at harvesting rainwater, was started. The motivation and cooperation of the villagers was so high that the construction completed in two months. The construction of this johad was of utmost importance since not only this was the first step taken by the villagers towards water management, but also this highlighted that the villagers can work together keeping their biases and prejudices aside. The construction of the first artificial johad motivated the villagers to construct another ten johads around the village. The decisions regarding the creation of these johads were taken collectively during gramsabhas. The benefits of creating johads were seen within the first couple of years in the form of better water availability.

Looking at the involvement of the villagers, the NGO suggested furthering the water management practices by creating a kaccha dam. The villagers began the construction of ‘Babaji wala kaccha bandh’ in December of 1990. This dam designed to increase water table in an area of 10.25 sq. km. The construction of this dam was completed in 1995.

While the construction of ‘Babaji wala kaccha bandh’ was going on, the villagers decided to simultaneously construct another dam. The construction of ‘Sankda ka pakka bandh’ started in the December of 1991. This dam was situated above the kaccha bandh in the hills to collect the rainwater running down from the hills. The catchment area of this dam covered 9 sq. km. The construction of this dam was completed in 1995 and required 54,000 labour days. Resources such as cement and masons were made available by the NGO which cost around Rs. 95,000.

The villagers started to see the benefits of constructing these two dams in the year 1992 itself. The water in the catchment areas of both the dams started rising. The first signs of this were visible through the now green trees of the forests which were once barren. The revival of the forest meant that the livestock now had better availability of fodder and water. The green forest also helped in flourishing the wildlife. The benefits of water availability also started reflecting in their agricultural practices as they moved from sowing bajara to wheat.

Lessons Learnt

From the experience of the villagers of the drought of 1985-86 and the subsequent actions taken by the villagers, Hiraram had learnt quite a few lessons. He knew that since the village lies in the dry zone of Aravali, water management practices need to be followed. He also knew that when the entire village faced any common problem, the village would come together, keeping aside their biases and prejudices. His assumption was not unfounded after all and this was shown by the villagers during “Jal Sanrakshan Andolan” (Water conservation movement). But the past experience taught him that an intervention of an external agency which has the required expertise to identify and explain the water management practices was also necessary to ensure that steps are taken in the right direction. The intervention of an external agency would also mean that they can bring financial help with them which can significantly expedite and at the same time ease the implementation of water management practices.

Questions for Discussion

Though the villagers had learnt a lesson the hard way in the past, Hiraram wondered what led to the current situation of the village. Several questions started coming up in his mind, “Were the villagers not trained properly about good practices before the NGO exited? Was it the excessive use of borewell that led to groundwater depletion? How could it be controlled?” Hiraram had also heard about climate change during his work in Delhi, he wondered if villagers could do anything about it to tackle irregular rainfall. He also pondered if any intervention of an NGO was needed, like last time or should they seek help from the government. In either case, what role should the intervening agency perform to ensure water availability? But what bugged him the most was “Would the NGO or the government agency be able to bring the best modern water management practices to the village?”

Course Positioning

This caselet can be used for courses on Natural Resource Management, as the caselet deals with water management issues faced by a village chronically affected by water scarcity. The caselet can also be used in discussing topics such as collective action and cooperation, strategic intervention, sustainability of interventions, role of NGOs, government and villagers in implementing interventions, effect of climate change on water management and agricultural practices.

References

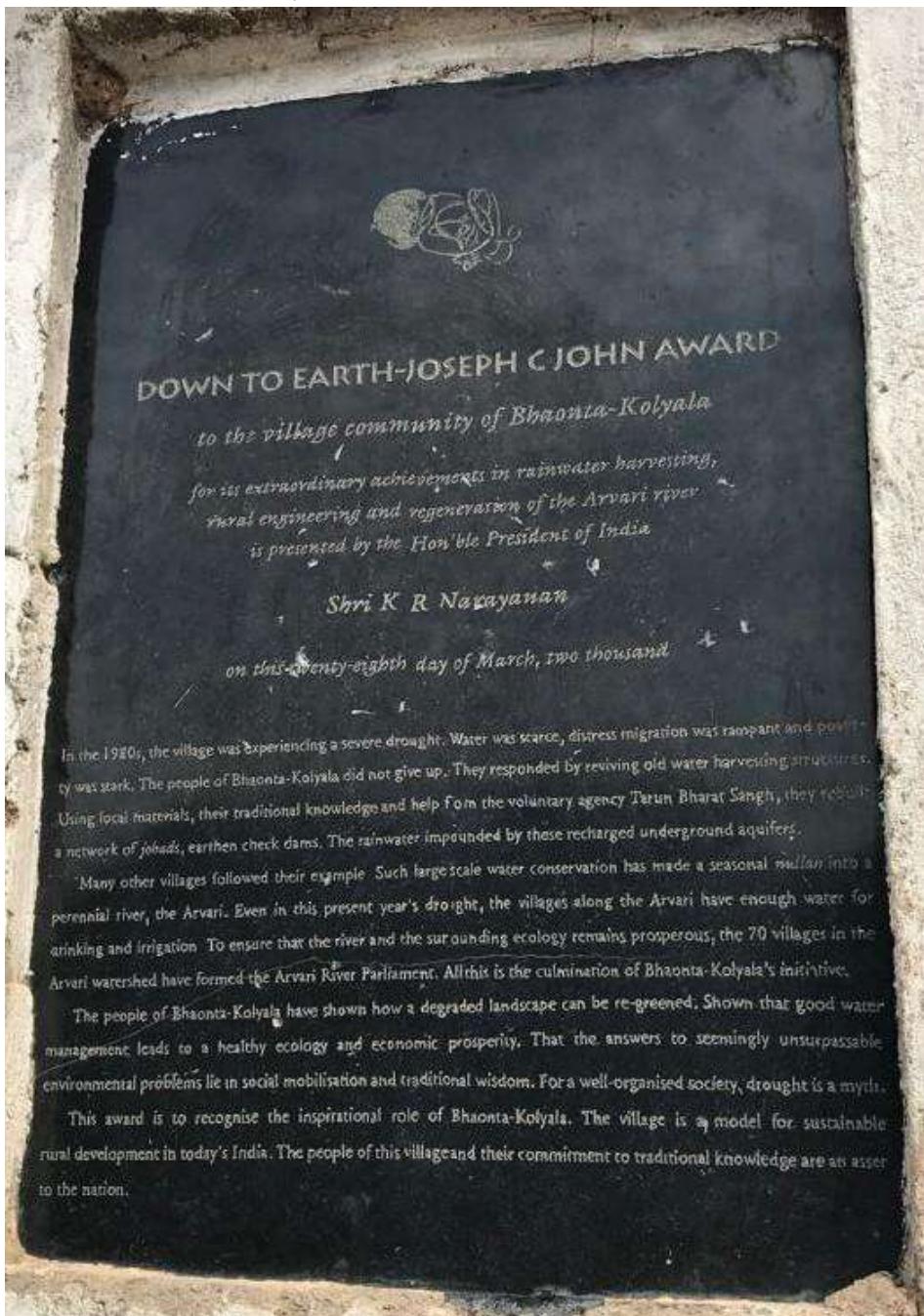
1. GOI. (2013). Ground Water Information Alwar District Rajasthan. Jaipur: Ministry of Water Resources, Central Ground Water Board.

About the Authors

This caselet is written by Vineet Kawadkar and Suraj Singhal. They got the inspiration to write this caselet from their village fieldwork experience in Rajasthan.

Annexures

Exhibit 1: Down to Earth - John Joseph C Award

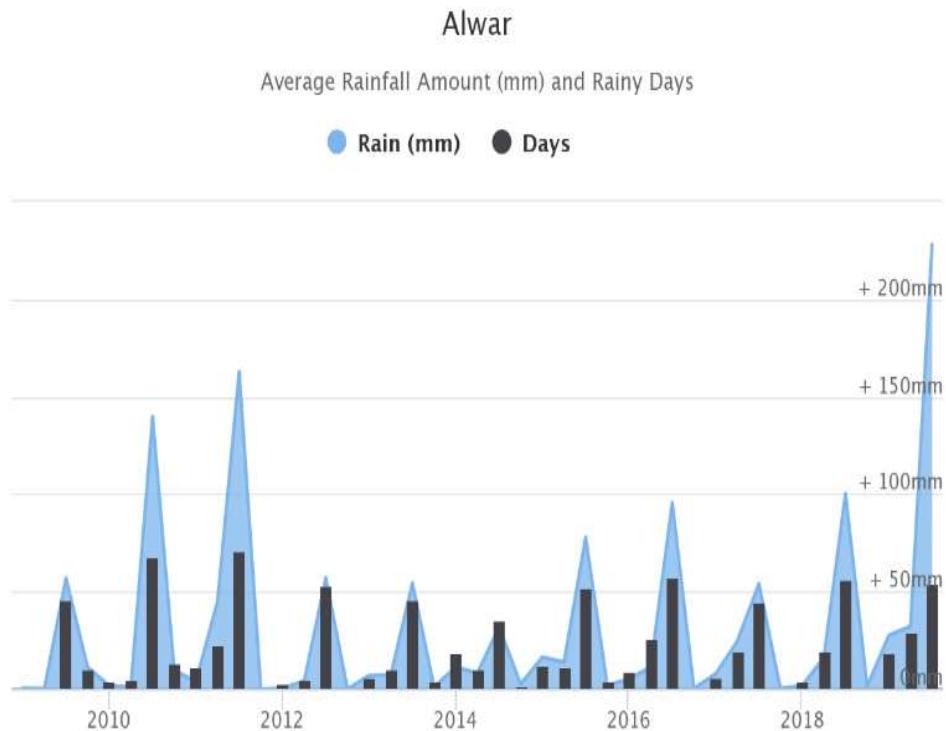


Source: Primary survey, 2018

Exhibit 2: Bhanwata demographics

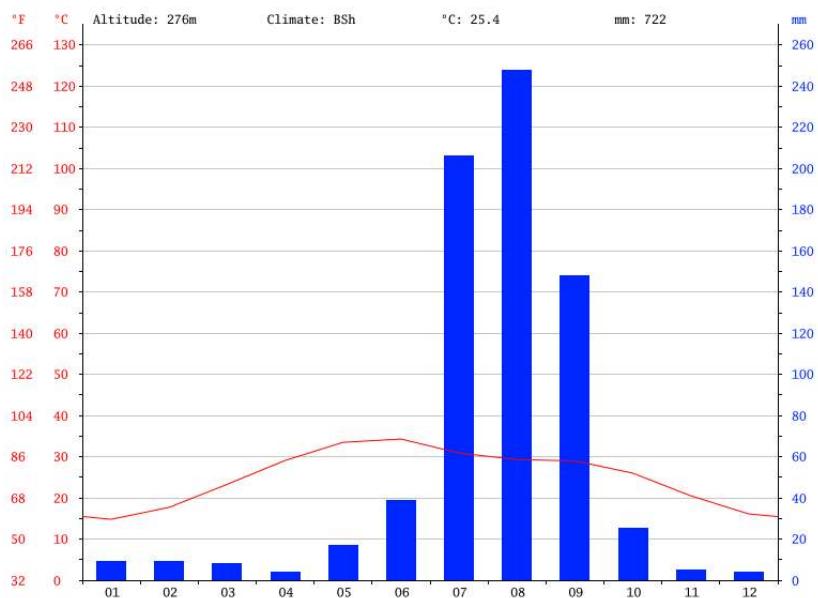
Population	560
Number of households	76
Sex ratio	859
Literacy rate	47.52%
Castes	Gurjar (OBC), Balai (SC), Rajput (General)

Source: Primary survey, 2018

Exhibit 3: Average rainfall amount and rainy days

Source: Retrieved from <https://www.worldweatheronline.com/lang/en-in/alwar-weather-history/rajasthan/in.aspx>

Exhibit 4: Alwar district rainfall pattern



Source: Retrieved from <https://en.climate-data.org/asia/india/rajasthan/alwar-57401/#climate-graph>

Beyond the Norms- The Story of a Tribal Woman

Shivangi Bolia IRMA

Challenge

Silence prevailed around Manju as she looked at her husband lying on a hospital bed, with eyes closed and an oxygen mask over his mouth. Manju was a forty-three-year-old Adivasi woman residing in Patiya village of Udaipur district. She had received a call a day before from her husband's office stating that he fell in the bathroom after getting unconscious. The next day she was able to reach the hospital where he was admitted and she was told that he had got paralysis attack and had gone into a state of coma.

As the condition of Narayan ceased to get any better, and the way her children looked at her with hope was making things much more difficult. Days turned into weeks, and soon she was dealing with a bigger set of problems that she never thought would come her way. She realized that she was unable to help her husband in any tangible form as the doctors conversed in a language, she was unable to comprehend. Manju was not literate and conversed only in her local tribal language of Wagdi and a little knowledge of Hindi; the prevailing language of the nearest urban center. She was at the whims of others to fill the forms for the daily requirement to ensure the treatment of her husband.

She felt helpless, neither she was able to read or understand the basic information nor she was able to handle other information related to expenditure. Let alone deal with the procedures she would need to fulfill, both in the hospital as well as at the workplace of her husband. Being a close community of tribal there were relatives who were helping with the situation, but their numbers were dwindling as time passed by. Also, the amount of money they had was draining, and belonging to an Adivasi family there was very little habit of saving that was inculcated in the household.

As time passed by with no signs of improvement in the health of Narayan, and people began regaining the pace of their normal life, there were people whose life was far from normal. Manju and Narayan have three children, all of them were still in the student phase of their life. The eldest one was doing graduation while the other two were yet to complete +2. The beginning of the new month brought the responsibility of paying their fees, the amount was significant as they lived and studied in the city. The savings were being poured into the treatment of her husband. There was no other source of income for the family. Some amount of food products was obtained by their fields in the village, where Manju lived, but that won't ensure the payment of the educational institutions' fee nor can it ensure better treatment for Narayan. With every door seemingly closing, Manju realized that helplessness would take her nowhere and the only way to get out of the situation is to help herself. But the question of how still remains?

Response

With each week, the fund used in the treatment remained consistent. As Narayan gained consciousness but required a few more surgeries to recover better, the need for funds increased. It was unsure that when his salary would be disbursed. As the doctors fixed the date for surgery and Manju realized that relatives won't be able to lend a hefty amount. Manju started looking for avenues in order to meet all the needs that were arising out of her household.

She knew that there is livestock in the household which can be sold for cash. It would ensure short term & immediate cashflows, but she also understood that selling them at the correct timing will fetch proper prices. It ensured short term instant cashflows, but selling them at the correct timing will fetch proper prices. After thinking for several hours, she remembered that her husband had pursued her to be part of SHG in their village which was built under the guidance of Gram Sewa, the organization where her husband Mr. Narayan Meena used to work. Gram Sewa was an NGO that worked in the village for the past 12 years. They have helped villagers in many forms including the health of their plants to bringing watershed management program to the village and solving day to day issues.

Manju approached her SHG fellow members and asked for help. She garnered a positive response from them and soon was provided with the money. With the treatment of Mr. Narayan Meena, Manju started to involve herself in petty activities of dairying and poultry to generate income. The surgeries went successful and Narayan Meena, although was unable to walk, was discharged from the hospital. He was taken back home, as he was not in the condition to work. His salaries were released with a cut of 75% and thus although they were able to afford the regular treatment fees.

Manju slowly started increasing poultry activities in the backyard space of her home as it was easy to carry out and included quick cash returns. Still, she was facing many problems which included making calculations of various expenses. As summer vacations approached and her children came back home, she made it a point to learn to write and do basic calculations so that she would be able to handle everything better. In the coming months, she started learning how to do bank transactions. At the same time, she sold a certain part of the cattle to increase her poultry work. There was a lot of reluctance coming from the community, as Manju was traveling to the city. Also due to the nature of her work, she visited maximum houses in the village which in turn increased her interaction with the people irrespective of their gender. This interaction at odd hours of the day or at market places which was perceived negatively. Likewise, it was the first time in the village which comprised wholly of Adivasis that a woman was trying to become the breadwinner of the house which was difficult for the community as there were no women-headed households in the village.

Patiya, was a closed community with around 1500 people residing and 97% of them were Adivasi and belonged to the Meena community. With each person knowing the other, it started becoming an issue and being discussed among households. A lot of people started coming to her house to talk to Narayan Meena, who was physically impaired but in good health otherwise. People started telling him about how Manju need not visit every house to sell her birds or eggs. And other people can help to run their house until their elder son Sanjay starts working and that he should talk to his wife. Narayan realized that the noise from the community was increasing and his health would not allow him to work. Manju knew that the villagers were unhappy, but she also realized that if she asked for help from people she has to compromise on various aspects of her children's life. Also, there were chances of people stopping her further if she agrees to stop the poultry work today. Further poultry was acting as her lifeline to sustain, as it was ensuring regular cash flow without much investment.

Manju continued doing things silently, as people came and went by – and Narayan didn't say anything to her. She was aware that the demand for poultry birds in her own village was going to reduce since the rainy season would start soon and also as there is a period of Mansawar, the month of lord shiv, was coming and people eat only vegetarian food. She could force the decrease in demand within the village

due to the arrival of the holy fast season. This triggered her and made her talk to the vendors having shops near the highway. Many of those restaurant & shop owners who were catering the truck drivers agreed to purchase from her. This further increased her cashflows.

Her increasing interaction with the highway vendors raised eyebrows further and caused the village Sarpanch to come to her house. He was the cousin of Narayan and asked Mr. Narayan not to insult the community as a whole. Further instigated him to call his elder son to take the role of head of the house. This time around Manju had to bear the brunt, as Narayan asked her to stop doing all this. At the same time, Ranikhet (Newcastle disease which is very prevalent in birds) started spreading in the village. A large number of birds owned by Manju suffered and died in that season. Thus, her backyard poultry declined to a reasonable amount but that didn't stop her from trying to revive things.

Action Taken

Manju started to actively participate in the SHG activities and started mobilizing more women to join the SHG program. On one Tuesday evening when she went to the SHG meeting she was tensed regarding three of her hens dying and thus was not paying attention. That day the Gram Sewa team had come for invigilating the meeting. Seeing them talk something regarding 'murgi palan' i.e. poultry, Manju stayed back and approached one of them who took her to the project head present them.

Jyoti Rajput was working with Gram Sewa for the last 4 years and have handled various intervention programs for the NGO. The NGO was looking to propose a livelihood program based on backyard poultry to propose in three villages of a cluster. Patiya was not included in the list because each village needed a resource person who would oversee the work and there was no such person from the village that was ready to put that kind of effort. The sarpanch and wards representative have not identified any such person when the officials from Sewa approached them. The question that Manju put forward to Jyoti was regarding the vaccination of her birds and whether they could guide her upon how to go forward with it. Jyoti was surprised by her questions as she thought there was no one in the village who wants to learn about or has any prior experience in poultry farming. But as she held the conversation with Manju, she realized that not only did Manju had fair know-how of the business but she also wants to learn new methods of ameliorating the business.

She later contacted various others in the village and enquired about Manju, from which she realized that Manju was part of one of the most affluent family in the village but was put in a downward vicious spiral of events. How people opposed her working and yet for the good of her family she continued with different livelihood activities and also the social norms and culture slowly accepted that she can work. Jyoti learned that Manju also learned to speak Hindi properly, writing and doing basic calculations. To say the least, Jyoti was impressed.

Next week she contacted Manju and told her that Gram Sewa is looking for someone in the village and if they found someone competent enough whom the villagers trust to induce the idea of poultry as a livelihood option. Manju listening to this subtly enquired that what exactly they are looking for as she also wants to learn more about poultry. Jyoti then briefed her about the plan stating that they would be providing people with birds and they want someone who can teach others the basis of keeping and taking care of the birds and maintain their health. They also want people to follow certain norms regarding the selling and vaccination of birds, and to do the same they would train the resource person from all 40 villages to a teaching tour across the country, show them the basic practices and train

them in vaccinating the birds. In short, they would employ the concerned person and would involve them in all programs that are bought in the village based on a fixed and a variable pay component. Jyoti proposed Manju the position asking whether she would like to join the organization.

Manju realized the opportunity she was presented with brings not only a fixed source of income but also an opportunity for growth. Also, it would help her to learn things and imply not only to her birds but could help the whole village by increasing their income as it gives many women like her the opportunity to uplift their condition. She also knew that although people were opposing her from the beginning but she has always found support in her SHG group. Manju soon accepted the offer, there was little resistance from Narayan as Sewa was his previous employer and thus there was a trust factor associated with the organization.

In a span of one and a half years, Manju had become one of the best performing resource person and Para worker who have vaccinated maximum no. of birds. In her village, the survival rate of birds was higher than all the neighboring villages. There were problems but this time there was a support of both villagers and the organization and thus she was able to deal with things better. On the other hand, her elder son graduated and she was able to support and encourage him to pursue higher education rather than forcing him to work.

She also learned about the cultivation of Soybean instead of Makka(maize), and how it could increase their income substantially. She was thinking of proposing it on the village level so that the crop could reap good monetary benefits for all although her husband has received the Voluntary retirement amount. But now Manju wanted to do things for her own, and her family and not due to any circumstantial problem and thus there was no stopping her.

Lessons Learnt

- In the situation of external shocks, the rural household either towards sinking strategy or diversification strategy. Choosing diversification will lead to increased income, which can stop the vicious cycle of poverty.
- The role of grassroots organization as a supporting body facilitates capacity building and a sense of self-empowerment among the grassroots population.
- The social barriers such as norms, traditions and the other political, financial constraints have always acted as a barrier to development in rural systems. Though overcoming them is very difficult, but in case of success its effect lasts forever and it inspires others.
- Gender plays an important role in dealing with the problems and its severity, it often leads to more disparity and gender inclusion as a concept is a highly underestimated one in rural scenario, but with proper awareness and utilizing normative interventions, the gender inclusion perspective can be built stronger.

Questions for Discussion

1. What role did the factors like culture, caste, community, and social norms play to deal with an external shock for an individual in the rural context?
2. Does the case emphasize on specific events that center on the severity of outcomes based on gender roles? If yes, why discuss gender roles and their impact.
3. Do organizations like NGOs play a role in bridging the gaps in terms of gender, social status and income? Discuss.

Course Positioning

The caselet is written in the thematic area of Rural Society which will be suitable for the courses such as rural society and politics and rural livelihood systems. The participatory approach shown in the case may create an opportunity for it to be positioned in a course like rural development. The courses would be suitable for students of undergraduate, postgraduate and executive rural management courses.

About the Author

This caselet is written by Shivangi Bolia. She got the inspiration to write this caselet from her village fieldwork experience in Rajasthan.

The Case of Perenna LP School

Ben B Varghese, IRMA

Challenge

Perenna Government-aided LP school was one of the oldest schools in the village, being established in 1948. It remained one of the most important schools in the village for over fifty years, providing not just quality education, but also the best infrastructure available. The school was situated in the fourth ward of the village, which was a hilly area. The connectivity to the other wards was limited due to lack of proper road or transportation facilities. As a result, the school was a lifeline for the people nearby in terms of educational requirements. Currently, the school was in very bad condition. The old classrooms were not good enough to accommodate many children and there was a shortage of benches and desks as well. The school had no proper infrastructure available. The total number of students enrolled in six different classes in the school fell from 60 in 2017 to 29 in 2018. Many parents decided to send their children to some other school in the village. The nearest school was almost 3km away downhill. Because of connectivity issues and lack of public transport, only the parents who could afford private modes of transportation could send their children to other schools in the village.

Response

The manager of the school was settled in US. He came to Perenna two years ago with a plan to renovate the school. He had a really big plan which included the complete revamping of the school infrastructure. However, days before the renovation began, he came to know that some locals used to play in the school ground. He was told that they used the ground for anti-social activities like consumption of alcohol. He decided to make a big cement wall around the school property, which included the ground as well. There was a negative response to this from the locals. Several meetings took place between the local leaders and the manager to reach a compromise. But the issue kept elevating. Finally, some people filed a case against the manager alleging that he was trying to encroach public property. It turned out that a portion of the school ground was indeed public property and thus the court ruled in favour of the petitioners. The manager was taken aback and decided to drop his plan of renovation and return to US. As a result, no renovation took place and the school continued to have poor infrastructure facilities. The teachers knew that the school did not have a bright future and many decided to leave the school. Only a few, who had some kind of emotional attachment to the school decided to stay. But as the number of students went lower and lower, their livelihood was at stake as they now risked losing their job.

Action to be Taken

The best solution possible in this issue was to convert Perenna LP School into a government school. The whole property should be taken up by the government and the government can then undertake the activities of infrastructural development. There would be no legal issue hindering the development in that scenario and this will result in a win-win situation for all. The additional challenge was for the government to raise enough funds for the same.

Lessons Learnt

1. Government intervention is the key to solving a majority of problems in the rural area where various political and social perspectives prevent constructive dialogue between the concerned parties in case of a conflict.

Questions for Discussion

1. Discuss exclusion of people in general development activities because of locational disadvantage.
2. Discuss the lack of development in educational infrastructure in the rural areas and how to ensure the improvement of the same.
3. Discuss how important it is to see that locational disadvantage, when combined with lack of infrastructure facilities, first and foremost affects girls because of difficulty in transportation.
(from exhibit data)

Course Positioning

The case is intended to be included in the course which introduces the students to the basic features of rural societies. The case might seem to be very specific and a one-off incident. But the underlying factors that determine the situation are the what can be generally observed. The issues include marginalization of people in villages with locational disadvantage, absence of proper infrastructure facilities etc.

About the Author

Ben B Varghese is a PGDRM student in IRMA. He got the inspiration to write the case from his experience during the village fieldwork that he did in Kerala as part of the course. The case is based on the facts collected through primary survey done by the author.

Annexures

Exhibit 1 Student data of different schools in the village

School Name	2018		2016		2014	
	No of students	Percentage of girls	No of students	Percentage of girls	No of students	Percentage of girls
G.H.S.S Perenna	571	33	537	47	661	55.3
Perenna G U.P School	328	47.5	284	52.4	273	50.9
A V P School Mattanod	321	46.7	316	49.1	304	48
Perenna LP School	29	27.5	63	39.3	90	57.7
Nachod H.S.S	2549	53.5	2204	51.6	2180	52.5

Exhibit 2 Village Map of Perenna



Malaikottai Paddy FPO: Challenges & Collective Development

Mahesh Kannan S IRMA

Challenge

Situated along the Cauvery delta basin in Tiruchirapalli district, central Tamil Nadu region, Lalgudi is a small town, where agriculture is the primary occupation. This delta region is known popularly as “Rice Bowl of TamilNadu”, where major crops grown are paddy & pulses. Kallanai (Grand Anaicut), an ancient dam built by the Chola king situated near the region, serves as a major source of irrigation to the fields. The delay in monsoon and subsequent drought in recent years have resulted in low yield of agriculture produce. Since majority of them belong to small and marginal farmers with land, holding lesser than two hectares, the credit facility is not accessible to them. Furthermore, liberalization and rapid change in the market led them to agrarian distress. Most of the small farmers are still practicing traditional methods of cultivating paddy, where it requires a lot of water and they lack in agriculture extension services.

Response

In order to overcome these challenges, they formed “Uzhavar Mandram (Farmer Interest Group)” under the guidance of the Government of Tamil Nadu in each of the village having total members of 20 farmers. So it caters to the needs of farmers by providing credit facility by giving non-collateral loans to farmers and giving subsidies to farm equipment. Still, it didn’t address the problem of market linkage and providing Agri extension services to farmers.

Under the guidance of the National Bank for Agriculture & Rural Development(NABARD), Malaikottai Paddy Farmer Producer Company limited was established by merging 32 Farmer Interest Group in the region. Dalmia Bharat Foundation acts as the Producer Organization Promoting Institution (POPI) for FPO, assisting in the motivation of farmers, organizing them as FPOs, facilitating registration and approvals for FPOs and imparting training to farmers, and developing a business plan for FPO. Annexure 1 shows the registration office in Lalgudi region.

This FPO is located in the Cauvery delta zone i.e. eastern part of Tamilnadu. In this zone, rice is the principal crop. In the rice-based cropping system, it is either single or double-cropped. Pulses black gram and green gram are grown in rice fallows throughout the delta region from January onwards. Gingelly is also sown in September in prepared fields subsequent to summer showers. Refer Annexure 2 for crop calendar in the Lalgudi region.

Vision of FPO

To facilitate sustainable agriculture by helping Paddy & Pulse farmers to collectively promote a producer-owned organization that would enable farmers to increase productivity and reduce costs and thereby, leading to higher returns through collective action and collaboration with various agencies and stakeholders.

Mission of FPO

- To create awareness about Innovative technologies related to Paddy & Pulses production

- To enable self-sustenance through the supply of quality & branded Agro Inputs
- To impart commodity marketing techniques to shareholders
- To organize farmers in a collective manner and also promote collective Selling & Marketing
- To communicate to the farmers about market status, price behaviour, value addition, and packaging of the produce
- To minimize the entry of commission agents and thereby enabling farmer producer to directly reach the consumers along the supply chain

Action Taken

Malaikottai Paddy Farmer Producer Company Limited was registered in July 2016 under the Indian Companies Act. Currently, they have 1000 members as shareholders, out of which 730 are men and 270 are women. The majority of them belong to small and marginal farmers, only 7% constitute large farmers. Currently, they covered 32 villages across Lalgudi Taluk in Tiruchirapalli District.

In terms of representation, the majority of the farmers belong to Backward Caste group. The proportion of the Scheduled Caste group is very less compared to other caste groups. The share price is at 1000 Rs per share. FPO has an authorized share capital of 10 lakh rupees. Under the scheme of Equity grant scheme in Small Farmers Business Consortium (SFAC), they applied for equity grants as same as the amount paid by members.

The board of directors consists of 15 members with 13 men and 2 women. Among the 15 members, small & marginal farmers constitute eight members and the other seven are large farmers. The board of directors is selected by the members of the FPO. Previous contributions to FPO, influence in the region are some of the chief criteria for selection. As seen in the institutional mechanism attached in Annexure-3, NABARD provides the technical and financial support whereas Dalmia Bharat acts as a Promoting Institution.

For handling day to day activities, the FPO has hired a CEO who doesn't have any stake in the organization. The Board of directors has multiple committees reporting to it and the heads of these committees are selected by the board. These committees are responsible for the marketing, finance, administration and purchase functions of the organization. The committees consist of members from all villages who share the responsibility of decision making. The general body meeting happens once a year whereas the Board of Directors meet once every two months where decisions are taken based on the consensus of the majority. Annexure 4 represents the organizational Structure of FPO.

Agri Input Store and other Benefits

Malaikottai FPO started as an Agri-inputs store in 2016. The store is named 'Uzhavan', which means Farmer, located in Lalgudi. They are dealers of major players like Godrej agrovet, SKM Feeds, IFFCO & Nagarjuna Fertilizers and sell most types of fertilizers, seeds, pesticides & other Agri inputs. The majority of the FPO shareholders buy their Agri inputs from this store. The main motive of the store is to provide Agri inputs at competitive prices to the farmers in order to reduce the input cost to the farmers. The store procures directly from the companies thereby getting rid of the excessive dealer margins to benefit farmers. During the last financial year, it had a turnover of more than INR 1 crore.

Conclusion

The farmers have overcome the challenges they faced earlier by availing easy credit facility from banks with the help of FPO and also by aggregation of agriculture produce which lets them fetch good market prices. Agri inputs store has reduced the overall input cost of crops and through FPO, the farmers also get technical assistance and training from NABARD and other Agri institutions. As a result, the livelihoods of the shareholder farmers have improved substantially.

Lessons Learnt

1. This case provides an opportunity for the students to address the need for FPO by understanding their structure & opportunities.
2. Creating a Farmer Producer Organisation is necessary to address the problem of agrarian distress.
3. FPO helps in introducing Economies of Scale, bringing down input costs and increases the bargaining power of farmers by providing market linkages & extension Services.

Questions for Discussion

1. Whether the Farmer Producer Organisation addresses the problem faced by farmers currently?
2. What are the measures to be taken to increase the shareholder of FPO & inclusion of all communities?
3. What are the characteristics needed for FPO to become a successful entity?
4. What are the advantages of FPO's to the farmers in overcoming distress?

Course Positioning

The case is suitable for a topic in rural development and collective action. It covers certain general topics like Farmer Producers Organizations and the underlying concept of collective actions and co-operation. This would need the students to understand the concepts of collective co-operation in terms of rural context to create a sustainable livelihood.

Annexures

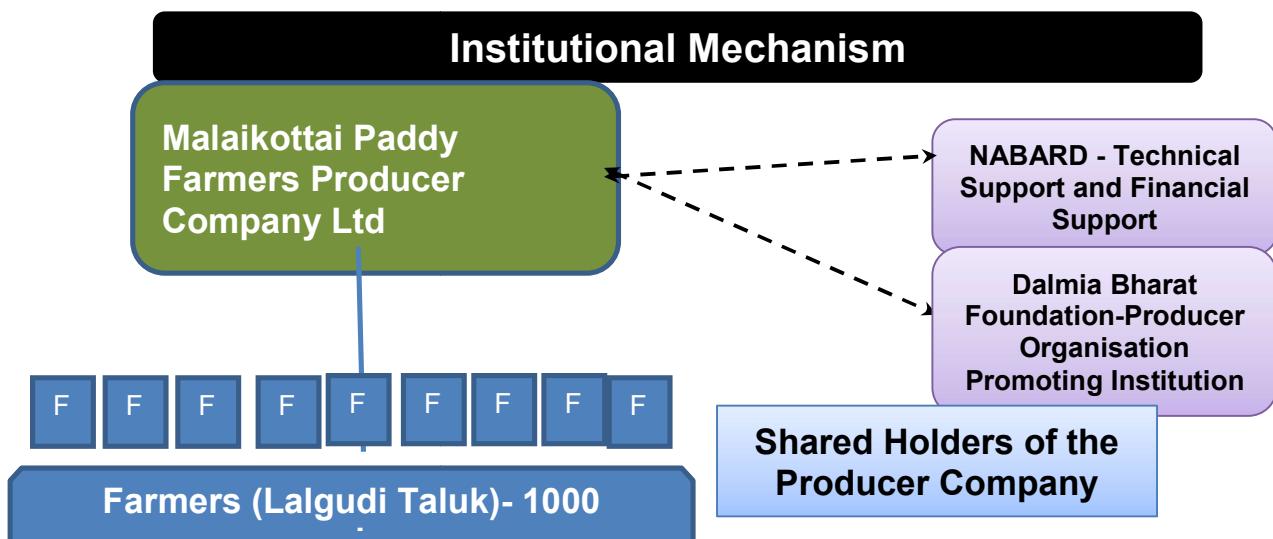
Annexure-I

Crop Calendar for Lalgudi region

S.NO	NAME OF THE COMMODITY	CROP CALANDER											
		Harvesting Time				Sowing Time							
JANUARY	FEBRUARY	MAR	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER		
1 PADDY													
2 PULSES													
3 GINGELLY													

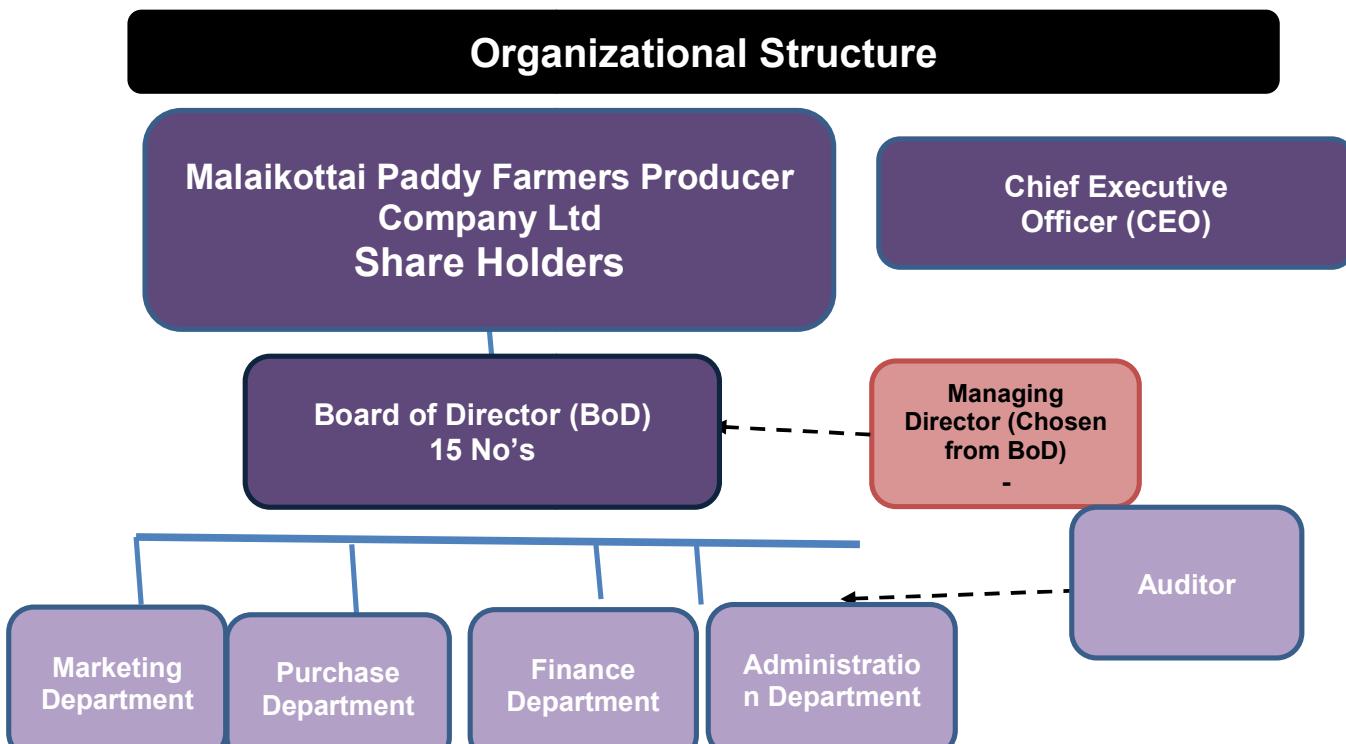
Annexure-II

Institutional Mechanism of FPO



Annexure-III

Organisational Structure of FPO



Importance of Assured Market in Community Based Organization

Neeraj Lodhi Institute of Rural Management Anand

Challenge

Ramkrishna Godara is the secretary at Bahumulya SetuSansthan, a non-governmental organization in Bikaner. In 2018, he visited village Rajaman in Rajasthan for a meeting with the local staff of Bahumulya to discuss about the current situation of Roshni Mahila Sansthan, which was founded by Bahumulya with the help of local SHG's, to help provide employment opportunities for women in that region.

During the same period, Neeraj Lodhi, Prakash Pachar and Sahil Ratra - PGDRM students from a reputed institute of rural management were working with Bahumulya as interns. They happened to be on a visit to village Rajaman for their fieldwork, when they met Mr. Ramkrishna Godara. As the three interns were training to become Rural Managers, Mr. Ramkrishna discussed about the working of Roshni Mahila Sansthan with them and presented some issues that he was facing in managing the federation. He further expressed his desire to appoint a professional manager at Bahumulya to handle the sole responsibility of managing Roshni Sansthan; but with a condition - The manager should be able to earn profits to the tune of double the amount of salary s/he desired from Bahumulya. The interns therefore decided to analyze the situation and understand the issues associated with it.

About the Village

Rajaman is a large village located in Chattargarh Taluk of Bikaner district, Rajasthan. It is situated in community development block of Munkaransar. It has a population of around 5800 individuals residing in 870 households which is 20% more than the population noted in the census data of 2011. The village is home to people from diverse ethnicities and castes which include Padiyar, Dudi, Naiks, Rajputs, Sansi, Acharya, Meghwal, Jats, Suthars and Pandits (Purohits and Sadhs). Majority of the population follows Hinduism while around 15% of households follow Islam. Padiyar and Dudi are the two Muslim communities in this village.

The village lies in Thar Desert, thus consisting of mostly yellowish brown, sandy loam to sandy clay loam in texture and mostly are permeable in nature. The area lies in hot semi-arid zone according to Koppen Climate Index. The average annual precipitation in the village is around 252 mm which is extremely low. There is no irrigation facility available in the village and because of low annual precipitation, only one cropping season is possible. The Kharif season which begins in July and ends by November is the only cropping time for village. This season is also rain-fed and hence, there are recurrent crop failures. The region faces the same every 3rd year and the same happened consecutively in 2016 & 2017.

Livestock farming is the primary occupation of almost all the villagers in the village Rajaman. 85% of villagers own livestock. From our survey, we saw that the sale of livestock products accounted for 48% of total income of all respondents. Hence, it can be concluded that the majority is heavily dependent on livestock farming especially in the drought years. Majority of the livestock farmers own cattle in form of Rathi breed cows. Around 20% families also own goats or sheep. The goats are of local Marwadi breed. Goats and sheep are not owned by farmers who adhere to certain religious belief and are involved in the sale of milk and other dairy products. Also, Marwadi goats don't produce enough milk to provide income only from milk products.

About the Organisation

The geographical conditions of the village are not good as it is having less rain and a victim of drought every third year due to which the problem of fodder also exists. Poor families of the village are mostly dependent on livestock farming with goats, cows, and rich families. Higher caste people mostly have cows only. Looking at these situations, the project 'Roshni Mahila Vikas Sansthan' was started by 'Bahumulya Setu Sansthan' in 2013 in the village Rajaman with the help of Geifer International which is a charity organisation. Under the project 400 families were given goats for rearing. Post -breeding, this initial batch of 400 families handed over the off springs of these goats to an ewbatch of 400 families. The purpose of the project is to make women self- dependent by doing business and is able to bear their expenses by themselves.

On March 2016, 'Roshni Mahila Vikas Sansthan' was registered under the Society act. Today 170 women groups and 2300 families are associated with it. The goats were sold to local traders, mandis and outside traders. In addition to goat marketing, 'masala udyog' was started since it can be sold easily and is a good move to support the Sansthan. Roshni Mahila Vikas Sansthan has provided the much needed platform for its members to attain empowerment and work towards their own development.

The ground staff of Roshni Mahila Sansthan includes Mr. Madanlaal, Ms. Vinita, Mr. Rajvir Singh and Ms. Methi. Madanlaal is also a veterinary doctor who takes care of the goats. Madanlaal and Vinita together handle buying and selling for both the Masala Unit and Goat Marketing Unit. Vinita also plays the role of an accountant. Rajvir has a good connect with the community and helps Roshni Sansthan in community mobilization. Ms. Methi also helps in managing the Goat Farm and the Masala Unit.

Masala Udyog

Under Masala Udyog, three products are being processed and sold – turmeric, chili and coriander. Profits as shown in the table below for the year 2017-18 (Exhibit-1) excluding salary (Rs.45000 per month) and one-time investment cost (Rs.200000).

Goat Farm and Goat Marketing

Goat Farm and Goat marketing are the two businesses related to goats. The funding agency, Geifer has provided a shed for the goats and their offspring's where they can be nurtured well. The staff members take care of the goats. The doctor Mr. Madanlaal in the team is there to do vaccinations of goats and other health issues of the goats. The new born babies are also an advantage to the goat farm population. These goats are sold on the occasion of Eid due to high demand and better prices.

Goat marketing is about the buying and selling of goats. Roshni Mahila Sansthan buys the goats from the local people and sells to the market at higher price. This trade can be done with local traders and Mandis (market to sell goats to private traders). Mostly, these goats are sold in the Amritsar goat mandi. Mr. Madanlaal handles the buying and selling for the goat marketing business.

Marketing Challenges

A trader from Alwar (a city in Rajasthan) visited Roshni Mahila Sansthan and promised Mr. Madanlaal to buy goats in large number. The trader told Mr. Madanlaal to keep the goats ready for him. He said he will come with the vehicle and take the goats. Mr. Madanlaal was excited with the offer and bought

goats from the market. The trader promised to send the money in advance. But later on, the trader decreased the number of goats required by him and asked Mr. Madanlaal to send the goats by arranging a transport himself. The trader changed the deal previously made with Mr. Madanlaal because of some other local sellers who contacted the trader and were ready to sell goats at cheaper prices. Such other local sellers posed a strong competition for Roshni Sansthan and this made business difficult for the federation.

For the above stated deal, Mr. Madanlaal finally complied with the demands stated by the trader and sold the required number of goats to him. The cost of transit was borne by Mr. Madanlaal himself, which turned out to be high because of the multiple tolls on the way.

The remaining goats were taken to and sold in the Amritsar Mandi, about 600 km from Rajasar village. On the way to Amritsar, three goats died in transit after falling sick due to heavy rains. Prices obtained at the Mandi were low but Mr. Madanlaal had no other choice but to accept this deal. Overall, the transaction resulted in huge losses for the federation.

Response

The interns analyzed the situation using various methods like cost-benefit analysis, SWOT analysis etc. Following are the major suggestions given by the interns in their final report to the organization:

1. The staff requires training related to marketing management.
2. Policy document should be designed for marketing activities.
3. Roshni Masala Udyog is less risky and can be profitable in the future.
4. Potential buyers were suggested for goat and spices business.

Action taken

The organisation agreed with the suggestions provided by the interns. Bahumulya Setu as promoting organisation is keen to strengthen Roshni Mahila Sansthan and will help the Roshni to incorporate suggestions provided by interns. These challenges are also told to the staff of Roshni Mahila Sansthan so that they can also understand various challenges Roshni Sansthan is facing.

Lessons Learnt

- Forward linkage in terms of assured market plays a crucial role in any business. Roshni Mahila Sansthan got formed without having an assured market.
- Proper policies should be designed for all the processes in the organization. Policies were absent regarding buying and selling of the product.
- Traditional skills can be utilized for the livelihood intervention.
- Farmer producer organization and farmer Producer Company are two different entities. It can be understood by finding the act under which it is registered.
- Marketing skills of staff plays an important role in doing the business.

Questions for Discussion

1. Would the situation of Roshni Mahila Sansthan be different if the market was assured initially?
2. What are the skills required for a marketing person?
3. What are the advantages of registering an organisation under societyact?
4. How funding agency should make sure that fund utilization is doneefficiently?
5. What are the factors which determine the bargaining power of buyer andseller?
6. How diversification is done by the Roshni Mahila Sansthan?

Course Positioning

The case is suitable for the course of Cooperation and Collective action. The caselet highlights the importance of market for a community based organization. The case also describes about the support of other organizations like promoting organization and funding agency. The case explains the issues related to selling of a product by providing the real life example. The case can also be understood as an intervention in women empowerment.

About the Author

Neeraj Lodhi is currently pursuing his Post Graduate Diploma in Rural Management (PGDRM) from Institute of Rural Management Anand. He is interested in marketing management which can help in creating efficient marketing linkage for the community based organizations in rural India.

Annexures

Exhibit-1: Financials of Masala Udyog Unit (2017-18)

Particulars	Chili (Rs.)	Turmeric (Rs.)	Coriander (Rs.)
Stock Bought (kg)	865	327	393
Buying cost	86264	30649	29204
Average Buying Price	99.7	93.7	74.3
Stock sold (kg)	738	240	320
Sales Revenue	110700	38400	44800
Buying cost of sold stock	73599	22495	23776
Profit	37101	15905	21024
Total Profit	74030	.7	

Source: Primary Research

Exhibit-2: Details of Goat Farm (Year 2018)

Goat Farm	
Total Bought	58
Sold	1
Dead	2
New Born	18

Source: Primary Research

Exhibit-3: Financials of Goat Marketing (Year 2018-19)

Date	Buying cost (Rs)	Fodder, Transport etc. (Rs)	Selling price(Rs)	Profit(Rs)	Comments
Jan-18	2,41,420	4525	233555	-12,390	
Feb-18	77500	0	122275	44,775	
Jul-18	64850	0	66400	1,550	
Sep-18	108764	0	109800	1,036	34 sold
Oct-18	444800	10000	389300	-65,500	62 sold, 4dead
Total	9,37,334	14,525	9,21,330	-30,529	
Total cost Total sold					9,51,859 921330
Profit excluding staff cost					-30,529
Remaining Goats(21 (10 babies))					60000
Expected Profit (Rs)					29,471

Source: Primary Research

Laporiya- Transformational “Chaukas”

Nikita Sarni IRMA

Challenge

18 percent of the world's population which resides in India has access only to 4 percent of usable water sources. The water crisis in Rural India is severe more than urban areas due to unavailability of water amenities and institutions to regulate them. Many water scarce regions suffer from erratic monsoon rains and depleting groundwater levels making the situation more exacerbated. With growing population and limited government budget for water availability and conservation, whether we need to rethink the water policy or promote indigenous innovation implemented by communities in small pockets of the country.

Response

Rajasthan is the state in the country with the least surface water and has only 3% of the country's water resources. High temperature, dry weather and scant rainfall is proving to be a bane for farmers in Rajasthan. A slightly below average rainfall can push the state to the spiral of water scarcity. When most of the drought-prone districts anxiously wait for monsoon, there is one village named Laporiya showing the way. Laporiya, 90 km from Jaipur, the capital city of Rajasthan has set a commendable example of watershed management. This village stands out because even at the end of a long summer its lakes hold enough water for the community's needs. Laporiya's wells never run dry and fields retain moisture, even in summer, to boost grass to sustain animals. Until recently this village has caught the eyeballs of major media channels, especially in today's time when water crisis in the country is dangerously moving towards the tipping point. This story is an example of how community management, collective action, and critical leadership can change the face of a village. Laporiya model can be a role model in approaching similar problems in several water-deprived regions in the country organically by community engagement.

Action Taken

As a 17-year-old guy who hailed from the infamous 'Laporiya' village in Rajasthan, Laxman Singh had set out on a long journey, decades ago. He wanted to bring sanity and order to his village that means 'crazy.' With more than a hundred standing cases, prevalent riots and unemployment, his village was on the downfall. There was no water, people would go down into wells to fetch water, no vegetation, but no one cared except a 17-year-old guy who was utterly bothered. In 1977, Laxman Singh was mocked by his fellow villagers who advised him to help his farmer father instead of wasting his time on the 'frivolous idea' of reviving ponds. 17-year-old Laxman Singh took on strenuous task of mobilizing local villagers to rebuild local rainwater collection structures that had fallen into disrepair. He set up several village meetings and asked the villagers to contribute their labour in rebuilding the rainwater collection structures. But these attempts failed as few villagers agreed to help, but only if they would get paid. One fine day he took the initiative of reconstruction. In the beginning, his close friends, who came to visit Laxman Singh from another village, joined him. But, persistent efforts and the fact that "seeing is believing" really motivated the entire community to make the change. After seeing the perseverance of Laxman Singh and his friends, gradually other villagers who were shaken by his efforts, decided to join him in his mission. This community group quickly evolved into GVNML (Gram Vikas Navyuvak Mandal Laporiya) founded by Laxman Singh

which means Village Development New Youth Group Laporiya, and it was registered as an NGO in 1986. The organization has since then, amongst other works, promoted the use of a unique water harvesting technique known as the "chauka" system. GVNML facilitates local action by building alliances and carrying out capacity building in community-based organizations, believing that empowering villagers is the only way to develop sustainably. Laxman Singh concentrates on training youth, now in over 80 villages of Rajasthan, to imbibe local wisdom and implement indigenous blueprints of democratic water management. Livestock is an important aspect of the rural economy, and Laxman has incorporated into his water management scheme the need to regenerate denuded pasturelands to sustain the cattle. He has supplemented water conservation systems with strict measures to protect the meagre land cover and induce the communities to re-green the land. The result has been a scientific model of natural resource management that has revived dwindling crop yields and arrested migration of people and cattle.

Over the past three decades, Laporiya has demonstrated that conservation is possible despite increasing desertification. To combat dependency on fickle monsoons, the village's "water warriors" built two-foot-high "chaukas (small embankments)" all around the village, in both fields and pasture lands. These small mud walls work as water-harvesting structures by slowing down the flow of rainwater and giving it enough time to seep into the ground and recharge underground water tables. The mud has been dug up and it creates a small catchment area. Water is collected in small quantities and then it overflows from one "chauka" to the next, increasing ground-level moisture with repeated recharges with every spell of rain. After recharging excess water feeds in three lakes, each of which is de-silted in the summer. Two of these lakes are for drinking and the third is for irrigation. Anasagar (the third lake) irrigates nearly 1,400 bighas (approximately 875 acres) of agricultural land. Now villagers don't need to rush to the city for jobs, they make a living from rearing cows, buffalos and even goats. Their job is farming and they keep animals for dairy. They easily earn more than Rs. 12,000 per month and this is because they have water and rich pastures.

With lakes, trees, and birds, Laporiya today brings hope to drought-hit villages across the country. Laxman Singh recreated the village with the help of youngsters but without support from the government. The people organized themselves, built the 'chaukas', carried out maintenance and de-silting of channels. The conservation movement that started in Laporiya has now spread to 58 villages and is run by the villagers themselves.

Lessons Learnt

Well, the method could be different depending on the region's water table. The solution can be found based on the geographical condition of the place where the building of ponds and bunds can emulate. The chaukas, for instance, manage excess water by diverting it across agricultural fields through canals. As the amount of water stored by the rectangular enclosure rises, it flows into the neighboring chauka. After reaching the last chauka, excess water flows into a monsoon drain along the gradient. The most important characteristic of the system is that it spreads water evenly over a large area. In Laporiya, the chauka system worked well. In other regions, similar traditional methods of water conservation need to be identified. The success of water conservation measure in Laporiya is beyond the technical complication. Maybe the conditions in other regions can be different so are the solutions. Here what is elementary to understand is how the community mobilization of taking the ownership of building, operation and maintaining the bunds and chaukas can be designed in a

different place. Similar kind of implementation as of Laporiya needs to engage and motivate the community in taking responsibility and pride in the intervention. The importance of leadership is the most crucial aspect of such interventions. People like Laxman Singh make it possible as he was able to convince other villagers to help him. He was critical to this initiative and its success. The organizations working at grassroots need to identify such local leaders who can take the initiative and mobilize masses to sustain the intervention. Many solutions to these problems lie in local understanding of context and people. It makes the government facilitate this process by playing the role of facilitator rather than an implementing agency as it is difficult to find a self-motivated leader like Laxman Singh in other region dealing with the acute water crisis.

Questions for Discussion

- How critical was the role of a leader like Laxman Singh in bringing community together for local solution?
- Analyse the case from perspective of community mobilization and community engagement for the sustenance of such interventions.
- Determine the extent of role of critical leadership for successful take-off of similar intervention.
- How collective action of stakeholders is important in similar situation?
- Discuss the significance of understanding of local context for such intervention by NGO and government.
- If similar intervention needs to be implemented in another region, what is the role government should play?
- How the organizations at the grassroots level should be incorporated to reciprocate as per the socio-cultural aspects of that region?

Course Positioning

This caselet can be discussed in the class in the subjects of Rural Development Intervention which promote community mobilisation for local problems. This caselet can also be discussed in class of Collective Action and Cooperation under the topic critical leadership and emergence local institutions. This caselet can also help in designing policy for water scarce rural areas by determining the scope of government to function as a catalyst to replicate the intervention at scale.

About the Author

Nikita Sarni, a postgraduate student at the Institute of Rural Management, Anand. The inspiration for writing this caselet has come from my Village Field Segment experience in the village Birajpur in Dumka District in the state of Jharkhand. Birajpur is struggling with water scarcity problem. In my attempt to find the solution to water scarcity in Birajpur, she stumbled upon the success story of Laporiya village. This story needs to be told to students who are going through a course on rural management. This can help them in gaining insights to design intervention at the grassroots level.

Youth Resource Center, Majawad

Arth Patel IRMA

Challenge

India occupies around 2.4% of the world's landmass. It is also home to 17.5% of the world's population¹. The density of population is more in the urban landscapes. However, being largely an agrarian economy, a significant part of India's GDP comes from the villages and rural areas. Rural development and prosperity is deeply integrated to any nation's growth. Skilled workers and entrepreneurs are the need of the hour with the government committed to improving the skill landscape in the country over the next few years. The mobilization of the available youth and manpower and making them as skilled individuals is the need of the hour with the burgeoning youth brigade of India. This case focuses on the existing ecosystem for skill development in the village of Majawad and the role skill development has to play in the future for increasing employment and entrepreneurship opportunities among the youth of the village.

Mahatma Gandhi, the father of the nation said that India's strength lies in its villages. Rural areas contribute significantly to the overall growth and economic development of a country. A statistics states that of the roughly 5.98 billion people who live in the world, close to 3.4 billion people live in villages/rural areas². However, many issues still plague the villages of India such as poverty, water scarcity, malnourishment, lack of basic facilities, illiteracy, unemployment, anti-social elements etc. While many of these exist from time immemorial, unemployment seems to be the major threat in today's scenario with the ever growing population, and India is expected to outgrow China as the world's largest populated country. India sits on a goldmine of raw talent waiting to be nurtured, developed and added to the HR pool. Effective utilization of resources and availability of skilled individuals help in ensuring that developmental activities do not get compromised. This is where skill development plays a major role.

Skill is required to improve employment, reduce poverty, provide livelihood opportunities, enhance productivity, and promote environmentally sustainable development. The wide gap between those who have access to education and skill development opportunities and those who do not have is a challenge that needs to be overcome. In India, 72.2 percent of the total population lives in the rural areas. 12 percent of the world population lives in the Indian villages which makes it bigger than the size of Europe. 80 percent of the rural households are having small and marginal farms. Although the share of agriculture in the Indian GDP is declining but still it engages around half of the country's population. Persons engaged 15-29 years who are considered as the youth accounted for 26 percent of rural population³.

In Majawad, only about 21 percent of males and 12 percent of females are educated at secondary level and above. The youths are looking for employment and the industries are suffering from unavailability of skilled workers. The skill mismatch makes the youths unemployable. It is an astonishment that literacy rate and educational levels have increased in the last few years however; about 90 per cent of youths do not take any vocational training. Youth's labour market also faces the problem of organized labour market, lower income, lack of job opportunities in nearby cities, unhygienic conditions of work, and lack of social security. Rural youths in Majawad start working

from their childhood. Some rural youths are decently educated but they do not get the desired jobs as per their qualifications. Rural youths work in the fields but they lack the innovative ideas that are making agriculture bitter and unattractive for them.

Response

There is a dire need to improve the quality of the Indian education system. Job oriented courses should be emphasized. During our meeting with the school authorities, we asked the teachers and principal to lay more focus on imparting skill education. They also knew the importance of education which should be on the basis of the current industrial requirements. With education, practical knowledge should be provided. We urged the youths to select those institutes where proper education and trainings are imparted. In order to avoid the rural migration, the local government took various steps to encourage the rural based industries in the village itself. The main target was to provide more employment to the unemployed youths and also, to create job opportunities in the rural areas during the off season of the year.

Development in rural areas will stop the rural migration and thus, reduce the pressure on the urban areas. The National Skill Development Mission (NSDM) has been developed to impart skill development trainings in different states. This mission, which is active in the state of Rajasthan, is making efforts to consolidate and coordinate skilling efforts. This mission is also supported by the National Skill Development Agency, National Skill Development Corporation and Directorate General of Trainings.

Upgrading Skills and Training in Traditional Arts/Crafts for Development (USTTAD) scheme aims at upgrading skills and training of minority communities by preservation of traditional ancestral arts and crafts. Significant emphasis is given to the youths who are viewed as an investment opportunity and are treated as partners in growth and development. Many rural youths remain unemployed due to lack of knowledge of job oriented courses, technical expertise, knowledge of modern agriculture etc. In order to mitigate the problem of unemployment for the rural youths, policy interventions by Jatan Sansthan and the local government initiated. Their key area of focus was on providing quality education and jobs oriented trainings. Also, credit assistance and marketing assistance was provided to the self-employed youths.

Action Taken

The organization, Jatan Sansthan is a grassroots Indian non-governmental organization (NGO) headquartered in the state of Rajasthan. The name is derived from local languages and translates to "Offering Organization/NGO." Founded in 2001 by Dr. Kailash Brijwasi, the NGO was formed to provide needed services to young people in the rural areas. Jatan is working with rural and resource poor communities in the districts of Rajsamand, Udaipur and Bhilwada. Jatan has its presence in more than 1200 villages across these areas, which have traditionally had poor social indicators.

Since its establishment in 2001, Jatan has designed and implemented various initiatives geared towards improving social and demographic indicators by working with youth groups. In the last decade, Jatan has worked on programs related to children, young people and women in the areas of health and education.

The organization is constantly in search for new, creative, and interactive formats that will engage and motivate the youth of Majawad to be productive individuals for the society. They appointed local field agents who work at the grassroots level, provide assistance to the villagers, and help villagers to raise their issues and grievances in front of the local administration. To grasp the attention of the youth regarding the same, they came up with the idea of conducting interactive sessions involving talks on career counseling, showing inspirational videos about successful rural entrepreneurial work, and organizing a cricket league to increase the interaction between school and college going students, as well as with the casual laborers who work in nearby factories.

In the first session organized by the employees of Jatan Sansthan, they pitched in the idea about establishing a Youth Resource Center (YRC) in the village which would be fully operated by the village youth only. They explained the need and importance of YRC, the different roles and activities to be undertaken by the youth, and asked for their suggestions regarding the same. Their response was not very positive. The main reason for the lack of enthusiasm observed among the youths was the unwillingness to become a leader and take command of YRC's functioning and operations.

Later, they conducted a buzz session wherein participants were clubbed together in groups that focused on a single topic of difficulty observed/faced by them in the village. Within each group, every student contributed his thoughts and ideas without any hesitation. Then finally a Q&A session was arranged. The youths were asked to jot down questions pertaining to the subject matter on a small piece of paper. After collecting and mixing the cards, the students were called randomly to read and discuss the student-generated questions.

These sessions were helpful in raising the critical issues that the youth encountered in the village. They pointed to the lack of willingness among students to pursue higher studies and also to inculcate key skills that would help them in getting better jobs. They were hesitant to approach their teachers or parents during times of difficulty in studies. To overcome this, they were asked to approach their seniors or college-going students whenever they get stuck at anything. The organization then, approached the Vice Sarpanch and requested him to arrange a sufficient space in one of the Anganwadis for the students to create their own library wherein anyone can donate and issue books. By doing so, students would inculcate the habit of reading and develop a liking towards studies.

To increase the interaction between the youths, a cricket tournament was organized. The students chose four captains and formed the teams by selecting children from all age groups. After the teams were prepared, they were asked to schedule the matches according to their convenience. The students showed great excitement and enthusiasm for the tournament. After the first match was over, the students were given the responsibility of hosting the remaining matches but no one came forward. Then, the local field agents took this opportunity to work in unison with the youths and give hands-on mentoring and guidance for the future games.

To instill positivity and find the desired direction, they planned to arrange a computer for the students with the help of local administration so that the youths could read and learn about inspiring stories of how people contributed to the society with what they had, coming from a similar background, and then working their way upwards. However, to make the pitching events meaningful

for both sides, it was necessary to set up an effective backchannel that will connect the active participants with the prospective ones. For this, Jatan Sansthan created a database that enlisted the names of the enrolled participants along with their personal details. The agents then had to update the database as and when the need arises.

Lessons Learnt

It is evident that education and skills are central to improve employability and livelihood opportunities, reduce poverty, and enhance the productivity of the rural citizens. It is urgently needed to integrate skills development into rural development policies and strategies such as agricultural policies and private sector development and entrepreneurship policies. It is required that in education system skill based training should be linked with placement facility to link trainee with Industries/Employees. The need of the hour is to build a skilling system which would enable the workforce to adapt and match the new requirements, a system that responds well to business needs and also provides new opportunities for rural youth which results in rural development.

The hunger for motivation and inspiration is always an added advantage to the existing hard work and dedication put in towards achieving the target. However, in case of Majawad, the youths showed low levels of excitement and enthusiasm regarding the establishment of Youth Resource Center. Our focus was to create a feeling among the youths that there exists a need to move beyond the classroom boundaries which will ensure that being a resourceful citizen doesn't involve excelling in education only. There are spheres which aren't yet tapped by the villagers such as skill development activities and engagement in sports. The combined efforts of the village youth, their families, and the local administration will prove to be a catalyst in bringing about any significant change in their standard of living as well as economic wellbeing.

Questions for Discussion

1. If unemployment amongst the youth is the most common phenomenon observed in the village, what all interventions (apart from the YRC) would turn out to be positive for the community as a whole?
2. Suggest measures to motivate and inspire the parents to send their children to schools and colleges to pursue higher education.

Course Positioning

This case is an example of how collective action and cooperation among villagers will help them in achieving the goal of enhancing their status and fulfill a common objective of creating resourceful youth. Collective action applies pooled resources to shared interests. The key actors in this entire journey constitutes of the school and college going youths of the village as well as those individuals who work in the nearby towns and cities. Their continuous efforts and dedication towards helping each other out will bear fruits in the long run. However, every individual must ensure that they do not free ride on others as it will lead to an outcome that is socially undesirable as well as sub-optimal.

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About the Author

Arth Patel is a postgraduate student at the Institute of Rural Management, Anand. The inspiration for writing this caselet has come from my Village Field Segment experience in the village

Annexures

There are various factors which make rural youths unemployable.

1. Rapid increase in population

It is expected that within 20 years the population of India will be doubled. No economy can guarantee employment to its growing population in such a rapid rate. Family programme in India have not yielded the desired results. Thus, new ways to handle this issue needs to be meticulously planned to accommodate the increasing population in the respective works. There is need to create innovative jobs for the youths so that they can be empowered.

2. Pressure on land

Majawad is having a limited area under cultivation because of its rugged terrain and unavailability of water and thus, efforts are being made to convert the barren land into agricultural land with the help of local NGOs. There is great pressure on the land due to increasing population as well. In the village, most of the people depend on agriculture for their livelihood and this situation makes them unemployable as they are lacking the modern techniques of agriculture. Providing land to the landless rural youths can open the new gate of employment for them.

3. Lack of awareness on modern agriculture

The localities lack the awareness on modern methods of agriculture. This makes their task cumbersome and time consuming. Vocational trainings on cash-crop cultivation, beekeeping, dairy farming, value addition in fruits and vegetables etc. can create employment in the rural areas.

4. Seasonal agriculture

Agriculture in India is seasonal in nature and therefore, people in rural areas get employment only for a few months (seasonal unemployment). This has an adverse impact on the earnings of the farmers and their standard of living. During the vacant period, the employment should be provided to the farmers. This will help the farmers to earn more money in free time. During the free time the rural youths can be utilized for the vocational training programs to start entrepreneurship in agriculture in the rural areas.

5. Lack of job oriented courses

Many rural youths join any course without proper guidelines. Such courses don't bear compatibility to the innate talent of youths that remain as degree for them without any kind of job. They again go to their villages and do agriculture. This is a result of lack of mentorship and effective guidance from an experienced individual.

6. Job creation in a calendar year

Every year, many school going students from Majawad come out with flying colors. Out of them some get jobs but majority remains without jobs. It has been observed that many students are not opting for the professional courses. Many seats in the professional courses remain vacant. Decent jobs require quality education and skill development trainings. Skill development courses can work as a vehicle for a change in the village and can enhance the income and employment for the youths. Besides hard skills, the weight age on communication skills, upkeep of the employees, language proficiency, hygiene, punctuality etc. should also be taught to the trainees.

Marigold Cultivation for Women Empowerment

Tanya Sinha and Prachi Saroj IRMA

Challenge

The intervention

Sumitra Singh had just finished a meeting with the women farmers who had taken up marigold cultivation. As she sat alone in her office, she wondered if marigold cultivation actually helped to empower the women of Tasol (a village in Rajasthan) and whether she should scale up the project. Five farmers had opted for floriculture in the village Tasol, growing marigold flowers in particular, under the guidance of Sumitra Singh, who initiated and led the project. The project started in the Khareef season of 2018 and every farmer planted marigold flower in 15 bigha in their respective lands.

Sumitra worked as a project manager in Prerak Sanstha, a leading non-profit organization. She had done her masters in social work and was driven towards her work. She had been working with the organization for the past five years. Prerak Sanstha was founded in 1968 with an idea that the individual should be doing something for the society. Prerak Sanstha's initial involvement was with economically disadvantaged people. Currently, it works in different domains and has done interventions in women empowerment, youth development, childcare, local self-governance, education, health, social enterprises and sustainable natural resources. Prerak Sanstha helps the rural population in Southern Rajasthan, India by giving them employment opportunities such as new options for agriculture; capacity building by giving them knowledge & training and new advanced farming techniques; women empowerment by forming Self Help Groups, training, providing employment opportunities, providing short stay home etc.

Rationale behind Marigold Cultivation

Sumitra had been in the village for over a year. Even though the relationship was new, Sumitra, along with Rani, had succeeded in building a good rapport with the villagers. She often visited villagers from different social strata and conducted unstructured interviews so as to gauge the problems they face. As she bonded with the villagers, they started opening up to Sumitra, especially the women. Many women expressed their concerns regarding their status in their families, and the society. One such story is Geeta's. Geeta lived in a joint family with eight other family members, including her child, husband, sister-in-law, brother-in-law, their two kids, mother-in-law and father-in-law. All family related decisions in her house were taken by the male counterparts of the family and the women did not have much say in it. Geeta found this upsetting and wanted to do something which would make her family value her. Even in terms of finances, her hands were tied as she could only spend the amount given by her husband. Geeta worked from home as a tailor but she had to give all her earnings to her husband.

While interacting with women in the village, Sumitra found out that Geeta's case was not an isolated one. Many other women faced such suppression and sought upliftment. Another common trend in the village was alcoholism among men. Often, men resorted to wasteful spending money on buying alcohol. Also, cases of domestic violence were frequent but women were not comfortable talking about the same. Sumitra documented all the findings and decided to plan an intervention for

women empowerment. She realised that women lacked a constant source of income. Even the income that their respective families received from agriculture produce, was received only once during a harvest season. Sumitra wanted to plan an intervention related to agriculture which would ensure income at regular intervals to the women of the family. In Tasol, the men usually used to work in nearby marble factories as labourers and the women worked in the farms. Thus Sumitra wanted to plan an intervention for women in their comfort zone of agriculture. However, during the time of harvest, the whole family worked together and sold the produce.

After a brainstorming session with the employees at the headquarters of Prerak Sanstha, Sumitra decided to plan an intervention with marigold cultivation for women empowerment. Sumitra chose marigold cultivation for the following reasons-

1. Marigold flowers could be plucked after just 40 days of planting the saplings. Also, the flowers were supposed to be plucked after every ten days and could be plucked for around ten times in one season. This would help the woman farmer get liquid money at regular intervals, instead of getting money once a season, like in the case of crops like maize and rice.
2. The demand for marigold flowers were high (Rs.30/kg to 40/kg) the previous year and was expected to be the same the coming year as well.
3. The soil and weather requirements for cultivating marigold matched with those of Tasol.
4. Marigold is an important flower, as it is extensively used for religious and social occasions.

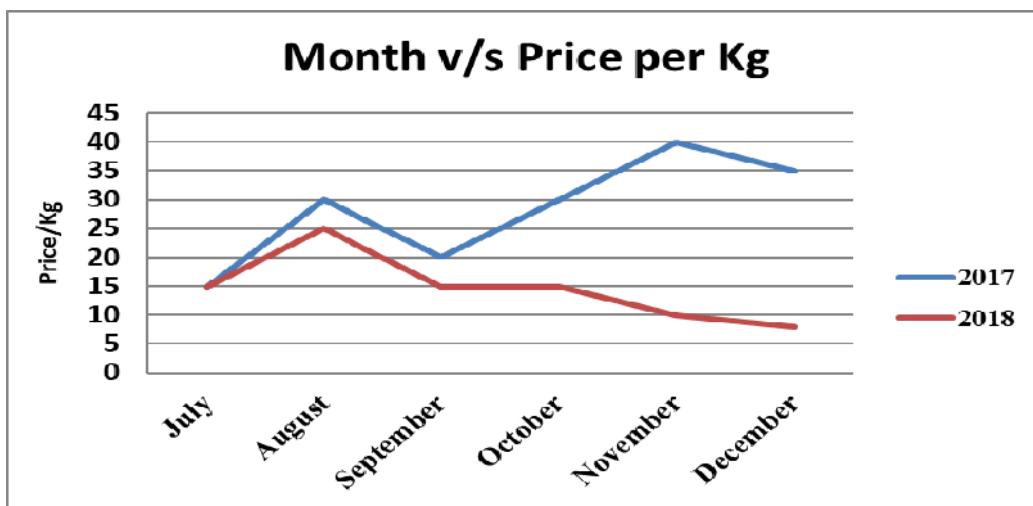
The Preparation for Marigold Cultivation

This project was a pilot project and the five farmers who opted to plant marigold had no prior experience in cultivating this flower. Sumitra was aware of this and so she made sure that the farmers receive proper training before getting into floriculture. To assist Sumitra in all her projects, a local resident, Rani, was employed. Rani helped Sumitra connect with the farmers and build a good rapport. The selected farmers were trained for three days on various aspects of marigold cultivation such as getting the soil ready, frequency of watering, manure to be used and frequency of plucking. Sumitra had also arranged for experts to teach farmers how to make the organic manures, Panchamrut and Jeevamrut. Apart from training, Prerak Sanstha also arranged for free marigold saplings from Krishi Vigyan Kendra.

Response

The plucking period of marigold flowers began in November of 2019. The plants flowered at intervals of approximately ten days. Around the same time, Naina, a student from Indian Institute of Rural Management had come on a volunteering project, associated with Prerak Sanstha. She was supposed to work with Sumitra on the marigold project. Naina interacted with the farmers involved in the project and conducted few unstructured interviews to understand the project better. One of the farmers Naina interacted with, was Geeta who told her that the prices of marigold were plummeting in the market and that she couldn't get a fair price for her produce. Geeta was one of the women farmers who took part in the marigold cultivation pilot project. She was a homemaker. Her husband used to work in the marble factory as a labourer but often indulged in alcoholism. This made it difficult for the family to sustain as they had three children, all below the age of fifteen. So, Geeta pitched the idea of marigold cultivation to her husband and after some resistance, he agreed. Naina decided to accompany Geeta to the flower market to assess the market condition. Geeta had

seven kg of flowers to sell that day. When they reached the market, it was very populated and chaotic, a variety of flowers were up for sale. Geeta stood there by her flowers to sell them. Meanwhile, Naina went to the traders and middlemen present there, to know more about the market and the price trend of marigold. She even interviewed traders and farmers who came for selling their produce. She found that there were different dimensions of marigold flowers and price varied as per the size and quality. Also, she found that farmers from nearby villages and even the ones who were from villages 100 kms away had come to sell marigold in the same market. Prices, at that moment were at their lowest (Rs. 5 to 10/kg). The prices were better in August, but plummeted drastically by November. The market for marigold crashed and was not as good as expected because of the high supply of marigold in the market from villages nearby. The quality of Geeta's marigold flowers was just average and they were small to medium in size. No buyer gave a good offer and so in the end after waiting for six hours, Geeta gave her flowers to a middleman in order to sell them on her behalf and give the money next time she comes. After waiting for six hours in the market, with not even being able to recover her cost of production, Geeta was very tensed and disheartened. The middleman system was not transparent and there was no guarantee that she would get the money for her flowers. Her husband was also not in support of her, but she did not have any option. For confirming the information, Naina went to the market two more times and observed similar prices and a similar dismal trend. The graph below depicts the variation of price through the year as well as compares the prices between 2017 and 2018.



Naina discussed this with Sumitra that there was a marigold glut in the local market. Basically, flowers from many villages viz. Mohi, Sardargarh, Khatamla and Jatana, were sold in Kankroli market. This resulted in a much higher supply as compared to demand. Farmers whose plants had flowered in November had faced losses and were frustrated. Sumitra, along with Naina, and others from the organisation pondered over alternatives and chalked out a quick-fix plan. According to the plan, the farmers were encouraged to make garlands of flowers and sell instead of selling loose flowers. The reason behind this being the festive season. In the month of November, people celebrate Dussera and Diwali. So, the festivity could be leveraged to sell flowers. However, only one farmer of the five farmers opted for making garlands. However, the difference in the earning was not substantially different as the market for garlands was not assessed prior. Also, the other farmers still wanted to try their luck in the flower market selling loose flowers.

Action

After being part of the pilot project on marigold cultivation in Tasol, Naina realised that if this project has to be scaled up, there are certain things that should be done differently for a better success rate. According to her, there was no contingency plan in the project and hence when the market for loose flowers failed, the farmers had no clue what to do. So, she suggested the following steps that could be taken for a better success rate:

1. Sell flowers as garlands. This value addition would fetch better prices.
2. Make herbal holi colours from the flowers after they die and sell it in the market to traders.
3. Make agarbatti from the dead and waste flowers and sell them. (This idea was taken from an organisation situated in Kanpur under the name HelpUsGreen).

Naina had gathered these ideas through secondary research and thought it was worth exploring.

Lessons Learnt

The following lessons could be learnt from this caselet-

1. There should always be a contingency plan

In this case, there was no contingency plan for the project. As a result, when the prices of loose marigold flowers plummeted, the farmers went in losses as they did not have a plan B.

2. Framework for livelihood intervention should be used

For example, framework constituting of objectives of intervention, design of the livelihood activity and nature of the intervention, should be used to make the choice of intervention.

3. Importance of building relationship building with stakeholders

In this case, the NGO had good relationship with the farmers and panchayat members. This helped in project implementation.

4. Scalability of project

The project of marigold cultivation is scalable and the model could be replicated to other geographies. Hence, it is important to consider scalability of a project.

Questions for Discussion

1. Was Sumitra's rationale behind choosing marigold cultivation for women empowerment, justified? If not, what could she have done differently?
2. If you were Sumitra, what intervention would you have planned for women empowerment? Justify.
4. Do you think there should have been a contingency plan for the project? If yes, what should it have been?
5. If Sumitra has to upscale this project, what measures should she take?
6. If you were Naina, what would you have done differently?
7. What value addition could the farmers have done for better returns?

Course Positioning

The caselet is suitable for a topic in Rural Development and Collective Action. It covers certain general topics like Farmer Producers Organizations and the underlying concept of collective actions and co-operation. It will be helpful in understanding the importance of need identification in rural

context through tools such as participatory rural appraisal. Understanding Value addition for rural produce with a value chain analysis approach towards rural intervention. This would need the students to understand the concepts of collective action and co-operation in terms of rural context to create a sustainable livelihood.

About the Authors

This caselet is written by Tanya Sinha and Prachi Saroj, who are currently pursuing their Post Graduate Diploma in Rural Management (PGDRM 18-20) from Institute of Rural Management Anand (IRMA). They got the inspiration to write this caselet from their Village Fieldwork Segment (VFS) experience in Rajasthan which they had undergone in 2018 as a part of the institute's curriculum.

Disclaimer

This caselet has been written solely based on the limited experience of IRMA students who volunteered with the NGO, Prerak Sanstha (name changed) for one and a half months. The experience of farmers described in the case is not representative of the experience of the entire beneficiaries (38 farmers) involved in marigold cultivation. The IRMA students had access to only two villages whereas the scope of the project was across the entire Kankroli district. Name of the mentioned organization and people involved have been changed to maintain privacy.

Means to Tackle Rural Migration -Insights from Goraj

Patel Rutvi Hiteshkumar IRMA

Challenge

Significant numbers of rural population migrate to urban areas. The probable reason behind rural to urban migration is the lack of economic opportunity in terms of searching more and better income source for rural people in urban areas because of the uncertainty prevailing in agricultural prices. Also, other amenities and facilities can be better found in urban areas compared to rural areas. People who live in rural areas, the majority of them have major sources of income dependent on agriculture. The Indian agricultural scenario is uncertain given its huge dependency on rainfall and weather conditions. Therefore, due to this agricultural income uncertainty, many rural farmers suffer through poverty. Hence, these farmers and their families migrate from rural areas to urban areas in search of employment. Here, this case highlights the story of Goraj, who is an exception of this migration trend. People who are residing in Goraj, most of them are employed nearby Goraj area so that, these people are not required to migrate to the city for their income and livelihood needs.

About the Goraj Village

'Goraj' Village is situated in 'Vaghodia' taluka of 'Vadodara' district in Gujarat, India. It is located 38 km from district headquarters, Vadodara and 153 km from state capital, Gandhinagar. Goraj has been in existence since 1772. It is situated on the bank of the river, 'Devnadi' which flows from east to west. It has two entry points - one is in the north and the other is in south direction. The northern entry point has Gram Panchayat, PHC, High school, Temple, Milk cooperative society, Bus stand, Tea stall and small shops where major activities like decision making, health check-up, education, transportation, and other economic activities are carried out which makes it centroid of the village. The southern entry point has two bifurcating roads, one leads to Devnadi river and the other leads to Mahadevpura. The entire village of Goraj is divided into nine streets which are locally known as 'Fadiya'. Demographic pattern and occupation structure of Goraj is given in Annexure 1 and Annexure 2 respectively.

As per census 2011 data (Refer Annexure 1), Goraj has a higher gender ratio and the child sex ratio (0-6 years) than the Gujarat State and India. Here, people give equal acceptance to the girl child and boy child.

As per given occupation structure in Annexure 2, it is evident that, the majority of the population in the village work as Agricultural labourers who earn for more than six months next to cultivators and others. Very few people are occupied in their home business, wherein approximately 5.5% of people earn their income by working less than six months. From the graph (Refer Annexure 2), it can be inferred that in the village, the majority of the population has adequate sources of income, which is one of the reasons behind less migration of the people from the village.

Action Taken

Remoteness of the village

Various facilities like bus Stand, Post office, pukka road, fair price store, PHC (Primary Healthcare Centre), subsidiary health centre, anganwadi, schools, panchayat office etc. are easily accessible at the village level. A well-known NGO (Non-Governmental Organization) which is working in that area since the last four decades is just four km away from the village. It has played an instrumental role in developing the village. This NGO runs one hospital which is considered as one of the top cancer treatment hospitals. This hospital attracts a large number of patients from all over the country due

to its reasonable cost of treatment. It has helped in generating employment profiles like nurses, caretakers, security guards, housekeepers, sweepers, drivers, etc. The patient rush has improved the availability and frequency of public transport facilities in the village. When compared to other villages, Goraj has accessible transportation and pukka road facility using which people can easily commute to Vaghodia GIDC for their livelihood.

For other facilities like wholesale agriculture market, store for agriculture inputs, taluka headquarter, block headquarter, ATMs, banks, police station, college etc. are available in Vaghodia, which is 11 km from Goraj. The nearest railway station is in Dabhoi at 35 km from the village in eastern direction. The district headquarters and airport are in Vadodara, 38 km from the village in the west direction. Goraj has access to most of the facilities from Vadodara City which is approximately 38 km away. Goraj also has access to four different market facilities from all four directions which can be better understood through Annexure 3.

Thus, Goraj village has an advantage of easy market linkage with four different cities. These linkages are possible because of good transportation and pukka road facilities provided by the state government. Therefore, it creates a positive effect on the villagers in terms of getting employment opportunities at these locations, where they can work and can stay at their home in the village. Thus, migration from Goraj to these cities generally do not happen.

Employment Data

Employment data of Goraj is given in Annexure 4 which indicates that, in the village, various employment opportunities are available which are skill and service-oriented. However, there is no manufacturing unit present in the village. There are a significant number of people who work as casual labourers at Vaghodia GIDC which has around 300 factories.

Simpson's Diversity Index²

Here, Simpson's Diversity Index is used to show the heterogeneity in available employment opportunities. The value of this index lies between 0 and 1 where 0 indicates no diversity and 1 indicates infinite diversity in employment.

The formula for Simpson Index is

$$D = 1 - \frac{\sum n(n-1)}{N(N-1)}$$

n = No. of individuals employed in each establishment.

N = Total no. of individuals of all the establishment.

The calculated value of Simpson Index for Goraj is 0.9063 which indicates high diversity in employment.

²<https://www.statisticshowto.datasciencecentral.com/simpsons-diversity-index/>

Simpson Index for services

Table 1 No. of services available in Goraj³

Services	N
Rice Huller	3
Flour Mill	2
Bicycle Repair Shop	2
Tea Shops	2
Vegetable shops	2
Grocery shops	6

The calculated value of Simpson Index for services comes out to be 0.8382 which again indicates high diversity.

Simpson Index for skilled sources of employment

Table 2 Skilled sources of employment⁴

Skilled sources of employment	N
Tractor/vehicle Electronic Repair Shop	1
Tailors	7
Blacksmith	1
Masons	2
Carpenters	1
Potters	6
Barber	1

The calculated value of Simpson Index for skilled-based employment comes out to be 0.7836 which again indicates high diversity, but it is lesser than the previous two values.

Key Insights from Goraj Story

Villagers commonly migrate in search of better livelihood opportunities for diverse income source or for good education and health facilities for the family members. Villagers in Goraj have already

³ From Survey taken during seven weeks of Village fieldwork Segment (VFS) stay at Goraj

⁴ From Survey taken during seven weeks of Village field work Segment (VFS) stay at Goraj

diversified their income source and the majority of them work in nearby GIDC factories. Not only Men but also Women work here apart from doing household chores. Generally, women are engaged with dairying. Some women also work as a beautician and tailor. An NGO which is located nearby to the Goraj, also provides a great livelihood opportunity to the nearby villagers. This is because of service facilities like health and education which are provided by this NGO that has a great potential to generate alternate livelihood opportunities for the nearby villagers.

The State Government has provided good connectivity facilities in the Goraj due to which villagers can daily commute to and fro from their respective home to job location. Education facilities for children till the 12th standard is also available in the Goraj. Thus, most of the villagers send their children for schooling in the village itself. But students who want to opt for science or commerce stream, then villagers send their children to the nearby cities where they can daily commute to and fro from school to the village or if they wish then, they can stay at the hostel too. State Government also encourages girls for higher education by providing cycles to them for commuting to school from home. For health services, PHC along with Health Sub-Centre and anganwadi are in the village itself. Villagers have easy access to other nearby hospitals and private clinics located in Halol, Sangadol, Waghodiya and Vadodara. Also, one Cancer Hospital is just a few km away from Goraj. Thus, basic needs of the villagers are fulfilled by staying in Goraj, due to which villagers usually do not migrate. The state government has ensured accessing of all these facilities like connectivity, regular electricity, education and health care facilities to the villagers.

Lessons Learnt

Hence, the diversity in terms of employment opportunities can be seen in Goraj. The villagers from Goraj have major source of income opportunities that includes GIDC factories, agriculture produce, and self-employment opportunities. Additionally, good road connectivity from Vadodara and other cities to Goraj village, provide a great opportunity to the villagers for the market linkage of their agricultural products that help them to fetch good prices and also for their daily commute for the employment towards these cities from the village.

Here, migration from Goraj to urban areas for employment is not much. The major reasons here highlight the contribution of the state government to maintain good connectivity from village to different cities that also become one of the reasons for the availability of frequent transportation facilities to the Goraj. These transportation options include "Chhagada" (Common three-wheeler public transport vehicle), bus services and other private vehicle facilities on rent. Along with the transportation facilities, the location of GIDC factories is such that, which is able to provide employment opportunities to its nearby villagers.

Therefore, role of state government work in terms of development of any villages and connectivity of these villages to market linkage played a crucial role for development of these village not only in terms of employment opportunities from village to cities but also easy access for educational facilities, medical facilities, agricultural extension services, agricultural input services, veterinary service, financial services and such others that can help in the holistic development of any village. Here, it is required to assess the importance of timely and effective implementation of central as well as state government schemes related to village connectivity to urban areas through providing transportation and pucca road services facilities. This assessment may be helpful as one of the ways to tackle migration issues of rural people.

Questions for Discussion

1. At what extent the transportation facilities for rural area can solve its migration issues by giving market linkage facilities to the villagers?

2. What is the role of the state and central government in providing these facilities which can help in the development of rural areas so that the scope for solution of migration issues in rural India can be devised?
3. Why are these types of facilities not available in other villages?
4. What steps do you think the villagers have to take to become a model village like Goraj?

Course Positioning

This case is suitable for two courses which includes rural economy and rural livelihoods and production system. Although, rural economy can be preferable because it includes understanding of rural development and its economic growth opportunities through diversified livelihood options in both farm and non-farm area and also other critical factors like infrastructure availability which influence as one of the key drivers for boost in the rural economy.

About the Author

Patel Rutvi Hitesh kumar has completed the Bachelor of Engineering in Electronics and Communication field and currently is the undergoing Post Graduate Diploma in Rural Management (PGRM) - (2018-2020) course of IRMA. This case study is prepared with the help of primary survey data, which were taken during seven weeks of stay in Goraj as part of my village fieldwork segment of IRMA curriculum.

Annexures

Annexure 1:

Demographic Pattern of Goraj

Table 3 Demographic pattern of Goraj⁵

Particulars	Total	Male	Female
Total No. of Houses	1073	-	-
Population	5093	2526	2567
Children (0-6)	617	320	297
Scheduled Caste	136	66	70
Scheduled Tribe	2037	1036	1001
Literacy	79.62%	89.89%	69.65%
Total Workers	2067	1550	517
Main Workers	1954	1954	0
Marginal Workers	113	52	61

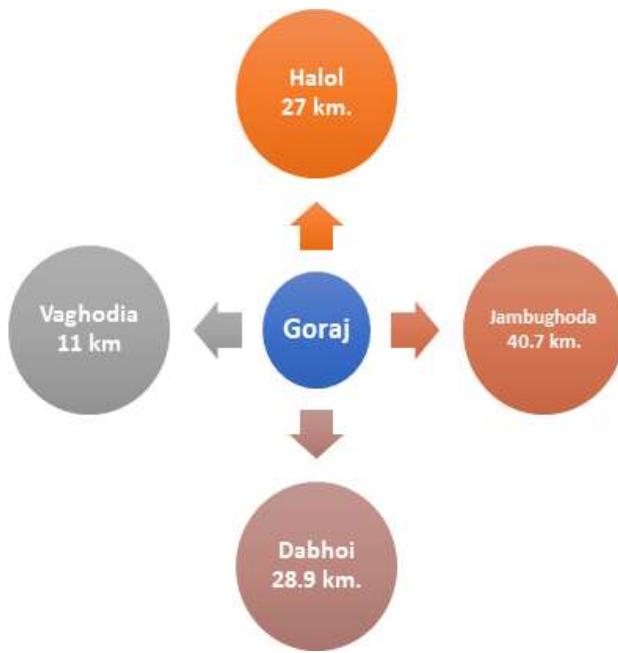
Note: This data comprises all the houses in Goraj revenue village including its 10 hamlets.

⁵<http://www.census2011.co.in/data/village/519973-goraj-gujarat.html>

Annexure 2
Occupation Structure⁶



Annexure 3
Nearest Market to the Goraj



⁶<http://www.census2011.co.in/data/village/519973-goraj-gujarat.html>

Annexure 4
Employment Data

Table 4 No. of Establishment in Goraj⁷

Establishment	No of establishment in the village
Rice Huller	3
Flour Mill	2
Bicycle Repair Shop	2
Tractor/vehicle Electronic Repair Shop	1
Tea Shops	2
Tailors	7
Blacksmith	1
Masons	2
Carpenters	1
Potters	6
Barber	1
Vegetable shops	2
Grocery shops	6

⁷From Survey taken during seven weeks of Village fieldwork Segment (VFS) stay at Goraj

NRC: Challenging Infant Mortality

Jimmy Joseph, IRMA

Challenge

Kerala- “God’s own country” is blessed with rich natural resources and has a long history of art and cultural heritage. The state is noted for its achievements in education, health, gender equality, and law and order. It has the lowest infant mortality rate amongst all other Indian states but the tribal block of Attappady in Mannarkad Taluk of Palakkad district in Kerala, portrayed a completely different picture.

The entire Attappady block has been subject to widespread media attention in 2013. In the newspaper, “The Hindu”, a report mentioned the shocking estimates of 52 infant deaths from the Attappady block in 2013 due to malnutrition. The main causes of child death were congenital anomalies, pulmonary aspiration, malnutrition, and poor maternal health, with the former two being more significant. Sholayoor is a small village in the Attappady block which was facing the brunt of extreme malnutrition condition.

Response

Sholayoor village of Attappady block is included in the manipulation zone of Nilgiri biosphere reserve by the Department of Environment, Government of India (CWRDM, 1994). It is situated in the easternmost part of Palakkad district, close to the Kerala-Tamil Nadu border. It is located in Mannarkkad Taluk of Palakkad district, Kerala and is administered by Sholayoor Gram Panchayat which was formed in 1968. It is surrounded by Puthur gram panchayat in the North, Tamil Nadu in the East, Thachambara village in the South and Agali gram panchayat in the West. It has a population of 7012 of which 3507(50%) are males while 3505 are females (as per population Census, 2011). Out of the total population, there are 3658 tribal people, 594 belonging to Scheduled Caste and 2760 settlers (Exhibit 1&3).

Sholayoor was a tribal village dominated by the tribal community called “Irula”. It is a small tribal community which belongs to the Dravidian family. They belong to the Negrito (or Negroid) race which is one of the main ethnic groups that constitute a racial mosaic of India. Some surmise that the word Irula is derived from the Tamil word “irul” implying the dark complexion of the Irular. According to Zvelebil Kamil (1979), Irulas can be divided into 5 subgroups based on their socio-cultural and dialectical variations. However, Irulas of Anamalai and Attappady hills belong to the subgroup Vettakadu Irulas. Moreover, there are 12 clans or Kulas which decides an individual’s status in the social stratification. Each clan has its own specific role to play in every social ceremony. Each hamlet has a chieftain or ‘Oorumoopan’ who determines cultural, social and religious matters with final authority. Out of all the clans, ‘Kurunage’ kula is considered for this position. Traditionally, the main occupation of the Irulas has been snake and rat-catching. They also work as laborers. The main deities for the Irula are ancestors, clan spirits and Malleswaram Kadavul Swamy. Irulas follow Irula language which does not have a written form.

Attappady block being a tribal block, many government schemes were introduced for the welfare of tribal community. Same benefits were transferred to the village of Sholayoor. ITDP (Integrated Tribal

Development Project) is a government body formed for the upliftment of the tribal community. It appoints government officials called ST Promoters in each hamlet to take care of the needs and to address the complaints of the ST community. The main occupation of the village was agriculture. They mainly cultivated perennial commercial crops like Black Pepper, Cardamom, Coffee, Banana, Tea, Arcanut and practiced intercropping. Education was one of the priority sectors of Government. Sholayoor village had four Government schools and equal importance was given to the education of girls. As a result of combined efforts of Government and local NGOs, the village of Sholayoor prospered in terms of availability of basic amenities.

The problem of malnutrition was evident in the village which could be verified by the number of deaths of children below the age of five. The tribal community was reluctant to avail the hospital facilities and depended on traditional methods of healing. The situation was aggravated by the presence of extreme poverty and backfiring of incentives by the Government. One of such initiatives by the government was the AHADS (Attappady Hill Area Development Scheme) project. JICA (Japan International Cooperation Agency) funded AHADS (Attappady Hill Area Development Scheme) program was initiated with an aim to rejuvenate the degraded forests and to create employment opportunities to promote livelihood. But the latter aim was not successful as it did not sustain for the long term since very low priority had been given to the income generation activities (0.34 % of total budget) and the program was wound up in 2012. This led to the loss of jobs for much of the tribal youth who had left their traditional agriculture as well as higher education, in turn making them incapable to strengthen themselves. It made tribal cultivators mere wage laborers.

Action Taken

To mitigate the issue of infant mortality, an extensive network of healthcare facilities (Exhibit 2) and several significant measures like Community Kitchen and Nutrition Rehabilitation Centre (NRC) was introduced by the government in Sholayoor and other parts of Attappady. The tides were turned when the Nutrition Rehabilitation Centre (NRC) was set up at Sholayoor in 2013 to eliminate child deaths due to malnutrition. The main role in this intervention was played by ST promoters of each hamlet. These Promoters kept a record of all the activities taking place in the village and were also involved in mobilizing the tribal community towards a common good. They catered to the health care requirements by distribution of food supplements for pregnant women and children. Also, monitoring of pregnant women was carried out once in a week by health workers and ST Promoters.

Nutrition Rehabilitation Centre was chiefly responsible for screening, identification, and recovery of SAM (Severe Acute Malnutrition) and MAM (Medium Acute Malnutrition) cases in the age group of 0- 51 months in the region. It also took care of anomalies during pregnancy and after delivery. Community kitchens were also introduced to aid the process of improving healthcare facilities. Its main aim was to provide one complete meal a day to the tribal community.

Nutrition Rehabilitation Centre, Sholayoor constituted a medical social worker, a nutritionist, two staff nurse, a cook, and a cleaner. It was situated in the premises of Primary Health Centre which ensured the availability of a Doctor during the day. It had eight beds facility to admit SAM (Severe Acute Malnutrition) and MAM (Medium Acute Malnutrition) children. SAM is a condition defined by very low weight for height. National Health Program in India classifies SAM into two categories- first categories being the cases with medical complications such as diarrhea, fever, pneumonia, needing

facility based care. Second category are the cases without complications and can be looked after in the community. Medical social worker administered the process of identifying these children through regular screening carried out at Anganwadi. Constant monitoring of height and weight of the children were done in order to identify whether the children were underweight. If any child was found to be slightly underweight, food supplements and mild medications were provided. A child falling into a SAM or MAM category was asked to get admitted.

The parents of these children did not give in to the idea of admitting their wards for their recovery. The people belonging to the tribal community offered more resistance in this regard. The role of ST Promoters and medical social worker became crucial in this context as they shouldered the responsibility of mobilizing and educating the tribal community regarding the importance of nutritious food in the overall growth of a child. After convincing the parents, the children were admitted at the Nutrition Rehabilitation Centre for two-week rehabilitation program. Mainly two diets were followed, namely, 8 feed per day diet and 12 feed per day diet, as recommended by the nutritionist. Two staff nurse was employed to provide adequate care to the children and the food was prepared by adhering to the dietary pattern prescribed by the nutritionist. Cleanliness was given utmost importance to avoid any chances of spread of infection. Though the children were discharged after 2 weeks, follow up check-ups were carried out until the child turned five years old.

The success of NRC (Nutrition Rehabilitation Centre) could be attributed to the fact that there had been a considerable improvement of maternal and child health with only 12 child deaths reported in 2017. However, the rate is higher than the state average IMR of 10. This move had also helped in reducing the number of children with severe acute malnutrition from 613 in 2013 to 26 in 2018 (NGO Reports).

According to the Press Information Bureau report on 21st December, 2018, Ministry of Health and Family Welfare, the Government of India has established around 1151 Nutrition Rehabilitation Centers all across the country, under National Health Mission. The success of NRC would depend upon the local conditions prevalent in a particular area. NRC in Sholayoor was successful due to the participatory approach of the local community and the commitment of the medical staffs in dealing with the problem. Other incentives such as community kitchen, provision of grants to the tribal community were significant to alter the external environment towards success of NRCs.

Lessons Learnt

1. The engagement of community and proper education is necessary to achieve the developmental goals and also to sustain such initiatives.
2. Participatory approach and convergence of objectives are key to the success of any developmental intervention.
3. Proper follow up after the intervention is necessary to ensure the sustainability of initiatives. Moreover, improvement of healthcare services contributes much to the development of a particular region.

Questions for Discussion

1. Despite making steady progress in different facets, why the village of Sholayoor suffered from extreme malnutrition?
2. What is the role of various stakeholders in the success of this intervention?
3. What would be the challenges faced by the government if similar intervention is planned in different states?
4. How did the convergence of different schemes leverage the benefits of intervention?

Course Positioning

This caselet will be suitable for the course on Rural Development and Planning as it describes an alternative to solve a pertinent problem in a state which otherwise leads in development initiatives. The caselet helps in understanding the need for a participatory approach in rural intervention necessary for creating a long term impact.

About the Author

This caselet is written by Jimmy Joseph. He got the inspiration to write this caselet from his village fieldwork experience in Kerala.

Annexures

Exhibit 1: General Classification of the population in Sholayoor village

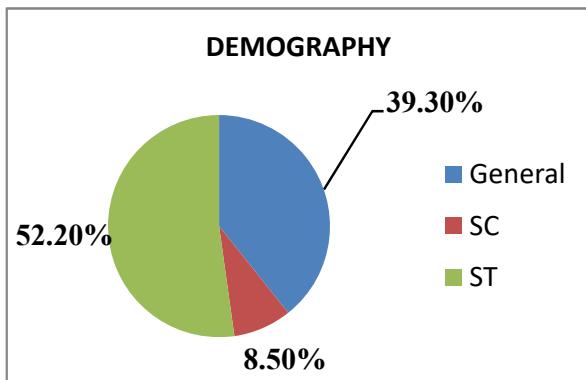


Exhibit 2: Healthcare facilities in Sholayoor

Source: Village Survey

Health Care Centers	Number of Health Care Facilities	
	Within the village	Within Gram Panchayat
Sub center	2	6
Primary Health Centre (PHC)	1	2
Nutrition Rehabilitation Centre (NRC)	1	1
Govt. Tribal Specialty Hospital	0	1
Govt. Ayurveda Hospital	0	2
Govt. Homeo Dispensary	0	1

Exhibit 3: Demographic details of Sholayoor

Particulars	Total	Male	Female
Total No. of Houses	1,885	-	-
Population	7,012	3,507	3,505
Child (0-6)	722	354	368
Scheduled Caste	594	279	315
Scheduled Tribe	3,658	1,811	1,847
Literacy	71.43 %	76.75 %	66.08 %

Source: Census 2011

Rational vs Emotional Management

Gautam Suneetkumar IRMA

Challenge

Rahul Kashyap, CEO of Honest (NGO) was eagerly waiting for the presentation of the work done by Arjun, student of Benevolent Institute of rural management during the last two months in his internship segment in 2017. The place where Arjun did his internship was very much talked-about and it was a rumorthat it was a very tough to accomplish any project. The village in which the NGO was working was notoriously known for the unruly behavior of its people. The NGO had been working for many years for the upliftment of the needy and underprivileged sections of the society. But after the presentation, the CEO was doubtful whether the organization was going about its work in the right way.

As per the Companies Act, 2013, it is the responsibility of Magnificent Oil Limited to contribute 2% of its profits for the welfare of society. Magnificent oil Limited was funding the NGO to spearhead CSR projects on its behalf in the villages affected by its effluents. At the start, Magnificent oil Limited had purchased lands for its refinery from the villagers at prices which were five times above the market price. The villagers who received this money used this money to construct Pukka houses and to purchase vehicles and luxury items. As the company's profits increased on the back of location advantage and low transportation costs, the villagers were getting employment as laborers in the company. During their jobs, they came to know that the effluents from the refinery were damaging the ecosystem of the village. Soon, this news spread in the whole of the five villages and the company started doling more money to quell the village protests. This increased the expectation of the villagers and made them dependent on the company. The dropout rates among the students of the villages increased. This illusion had grown over all the communities in the village and its repercussions had started to affect the NGO. The upper caste community, with their political heft, had, on occasions, threatened the employees of the NGO not to enter the village, if they did not have any evident assistance to provide at that point of time. The villagers had lost all patience and wanted on the spot benefits.

The purpose of NGO at the starting of the project was also to empower women. So they constructed a tailoring center and started providing training to women. The women of other castes apart from the Thakur community participated in this capacity building program and started treating this learning as a source of income. The females of Thakur community were not allowed to go outside of their houses and earn money. But these women learned stitching from their friends which helped them in sorting out their clothes' stitching problems at their homes. As time passed by, the majority of the people had learnt to stitch but still there weren't many customers from where they could earn revenue. So this absence of market linkage was also a gap reported by Arjun

The area was near the coastal area because of which water was saline in nature. The area also received very less rainfall and the quality of groundwater was also unfit for drinking and agriculture activities. The villagers strongly believed that the refinery was releasing its effluents into the ground and they were convinced that its toxic chemicals were exploiting their land and water. The produce of agriculture was decreasing per acre as per the information obtained from the group of farmers. So the people in the village started denouncing the company for ruining their income source.

Threatening Experience

A year back, a team of five civil engineers had visited the village to test the groundwater. But the villagers barred them from starting the work and instead shouted abuses at them, holding them responsible for the depletion of natural resources in their village. The altercation took an ugly turn and the villagers locked up the five employees in a room. The employees were badly beaten and were deprived of all their belongings, including their mobile phones. Somehow, one employee was able to save one cellphone, with which he called the NGO and apprised them of the situation. The NGO had to come with a group of 20 people to sort out the matter with the villagers. The matter was resolved politely but still they were not satisfied with the work of NGO and Magnificent Oil limited. There have been many incidents of a similar nature in the past and the situation was getting worse day by day.

In 2018 a baseline survey was done in the 5 villages by the researchers of Maharashtra University under the Honest NGO. The CSR arm of Magnificent oil Limited found discrepancies between the baseline data and the information that they had. They wanted to know what percentage of the data is correct so that a plan of action can be sketched out. For this purpose, the NGO hired Arjun, an intern from Indian Institute of Rural Management. Arjun who had good communication skills and also was good in building relationships surveyed in a systematic way in coordination with the village head, the Sarpanch and the local people residing there. He had two months to find out the variations in the data. He revisited 20 % of the households covered in the previous survey and the results he got were unexpected. He found out that during the last survey, the assets and income had been understated by the respondents in the expectation of getting benefits from future programs. There were great variations in the landholdings and the assets of households. Along with this he also created a new baseline survey and was ready to present his report in front of higher authority.

At the starting of the presentation, Arjun explained how much variation did the data from the last survey had with the actual situation. Then he shared his observations and inferences about the daily lives of people living in the villages. Since the top officials of the organization did not have the opportunity to visit all the areas, his presentation was eye-popping for them.

Response

Magnificent oil Limited is an Oil refinery basically submerged in refining of crude oil, and selling of petroleum products surrounded by two more competitive oil refineries and other manufacturing industries. Honest (NGO) founded in 1989 is a Non- Government Organization working across many states of India and is committed to providing sustainable livelihoods to rural households. NGO is working on programs such as Women Empowerment, Livestock development, Agricultural related activities and Natural resource management.

The partnership of XYZ organization and ABC limited.

CSR of Magnificent oil Limited and Honest (NGO), Maharashtra became a partner in 2014-2015. The plan was to work for the development of 5 villages in the coastal area of Maharashtra.

Action Taken

In 2014 a baseline survey was done in the 5 villages by the group of undergraduate students of Maharashtra University under the Honest NGO. The CSR arm of Magnificent oil Limited found discrepancies between the baseline data and the information that they had. They wanted to know what percentage of the data is correct so that a plan of action can be sketched out. For this purpose, the NGO hired Arjun, an intern from Benevolent Institute of Rural Management. Arjun who had good communication skills and also was good in building relationships surveyed in a systematic way in coordination with the village head, the Sarpanch and the local people residing there. He had two months to find out the variations in the data. He revisited 20 % of the households covered in the previous survey and the results he got were unexpected. He found out that during the last survey, the assets and income had been understated by the respondents in the expectation of getting benefits from future programs. Because of availing continuous benefits village people had become more acquisitive. There were great variations in the landholdings and the assets of households. Along with this he also created a new baseline survey and was ready to present his report in front of higher authority.

At the starting of presentation, Arjun explained how much variation did the data from the last survey had with the actual situation. Then he shared his observations and inferences about the daily lives of people living in the villages. Since, the top officials of the organization did not have the opportunity to visit all the areas, his presentation was eye-popping for them.

Lessons Learnt

- 1) Monitoring and Evaluation of the project are necessary at every stage.
- 2) Public participation is necessary for any project success as it creates a sense of belonging amongst the communities.
- 3) It is not necessary to fulfill the expectation of the villagers' every time as it creates a dependency rather they should be provided with job-related training so that they became self-employed.
- 4) A project like women empowerment does not stop with just providing training but it also needs to provide market linkage so that they can earn income and get familiarize with the market outside village.
- 5) As the villages were surrounded by refineries and manufacturing industries the women could also start a dabba/ Tiffin system.
- 6) If the rumors spreading in the village are false and without any facts, the NGO should politely talk with the village head who is respected by all the village members and alleviate all concerns.

Questions for Discussion

1. What went wrong? How can the situation be controlled? How can we make sure that our employees are safe working over there?
2. What are the chances that the backward community in the village gets financially and socially benefited from the project?
3. Should the project be discontinued though Magnificent oil Limited was providing a fund of 2.25 crores for implementing their project and it was one of the highest funds for the NGO and along with that 30 employees are working there
 - (a) If the project is discontinued, 30 employees would become unemployed and since as per the NGO policy they can't remove anyone from a job so they will have to adjust them somewhere else.
 - (b) The company which set out to work for the disadvantaged section is now working for a well-established people. As of today every organization which is earning funds in the form of CSR is expected to work for the disadvantaged section of society. What should the CEO do?
4. As the NGO's know that Oil refineries pollution affect both land and water should they continue to support this activity to get the fund? Emotional versus Rational Ethics- which one should the EO consider?

Course Positioning

The Case let is suitable for rural planning and development as the story of the case revolves around the village life transformation. The case deals with the challenges to monitor and evaluate the process of providing benefits to the people if they don't understand its value then the main objective of the project is difficult to accomplish.

Scaling of FPO through Platform Business Models: New Avenues to Explore

Mehul Raghavan TV IRMA

Challenge

On the last day of internship Manoj gave his presentation to reporting officer Anita and came out of the cabin. Still doubts were clouding his mind. "Can platform business model really work in the context of FPO? Can the model overcome rural challenges? How can this model evolve?"

Manoj is a student in a reputed institute in Rural Management, and as part of the summer internship segment he got the opportunity to work in the CSR department of a popular IT service company, Srishti.Ltd. The core competency of Srishti.Ltd is to virtually link stakeholders effectively and seamlessly. The company believes there is wide potential for platform business models in providing market linkage for emerging FPOs. Platform business models are emerging as a prominent business strategy in urban market in retail (Amazon), Transportation (Uber, Ola, Red bus etc.), food and entertainment (Zomato, Swiggy, Book my Show etc.) and many other sectors.

As a student of Rural Management Institution, Manoj was exposed to only conventional FPO models, and the saying "Amul came to exist only because, Bombay existed" was stuck in his mind. But in the current context of technology era, SRISHTI CSR believes physical aggregation of market is not necessary. Every needful urban smartphone user with a platform app installed is technically a buyer. There are various emerging examples where platform business model is being used to bridge the urban rural divide. 'e-Nam' is a platform model successfully implemented in commodity aggregation and trading. Platform based model for product market linkage have been tried in initiatives like 'De haat'. However, no widely popular models have emerged so far.

As part of the internship, Manoj is asked to design the value chains for 'Sankalp' FPO in Guntur, Andhra Pradesh. The CSR department have field level partner NGO (Dwani), who help in community mobilization and handholding. Manoj is working on the value chain and overall feasibility of the model in the context of Guntur cluster. Guntur is popular for chilli and Manoj is thinking of developing a 'Red chilli Pickle' based value chain for the Guntur cluster.

Pickle making is a well-established value chain and market study shows good potential for sales in urban market (3.5% CAGR growth expected in coming years). However, as he was designing the value chain, various challenges emerged in term of implementation of the project, each of which are discussed below.

Challenges in Capacity Building

'Sankalp' was having a majority of small and marginal farmers and most of them were not skilled enough to use smartphones for accepting orders and updating products in the app. So there was a need for technology demystification and capacity building at FPO level.

Challenges in Evangelizing the Market Platform

Platform based app was available in google play store and popularized through various other channels. However, the platform is still struggling to create a sustainable customer base. Apart from the platform challenges, FPO value chain also suffered from conventional challenges like:

Challenges in Financial Linkages

Sanakalp is a newly formed NGO with very few credit histories. Hence the FPO is struggling to get credit from local banks. Currently they are adopting low level value chain like drying and sales of chilli. However, large scale pickle making and branding needs capital investment.

Challenges in extension services: The farmers of Sanakalp are in need of extension services like better quality seeds, fertilizers and pesticides at lower cost, better agro practices, however due to licensing issues and no proper linkages with extension services, FPO is not able to avail effective services.

Standardization and Branding

The value addition is done at village level, including packaging and labeling. There were challenges in terms of standardizing and branding the product, since production was not centralized.

Policy level challenges: Apart from the field challenges, the FPO is also suffering in terms of APMC act restricting commodity aggregation and contract farming opportunities. There are also challenges in acquiring license for input distribution.

Based on 2 months of study Manoj proposed the value chain and possible model for implantation. But being a new approach Manoj is still doubtful about the feasibility of the approach. How can this model achieve the economies of scale enjoyed by platforms like Amazon? Many platform development models are being tried out in the recent past, will this model emerge as a popular approach for rural development in future? What could be the fate of this project?

Stakeholders

Srishti CSR

Srishti LTD is a prominent IT service provider. Apart from conventional CSR initiatives, Srishti believes delivering social value through their core competence, i.e. software development. Srishti CSR identified a potential for developing rural platform by linking FPO with its major stakeholders. Srishti CSR collaborate with field level partner NGO like 'Dwani' for community mobilization and handholding. Activities of Srishti CSR is no more a cost center for the organizations, they have also stated providing consulting services for various NGOs and government projects. The activities of the CSR department are creating a unique brand image for Srishti LTD.

Sankalp FPO

Snakalp is an FPO in Guntur district formed through the aggregation of various local clusters. Various Chilli clusters were identified and integrated to form this producer organization. The products developed were marketed under the single brand name of 'NIRMAL'.

Dwani NGO

Dwani NGO is working in Andhra Pradesh with focus on rural livelihoods. Their approach is community mobilization forming people's organization and working towards capacity building.

Manoj

Manoj is a student in IRMA, exposed to FPO through IRMA curriculum and Village Field stay segment. He is aware that cooperative model is widely successful in case of commodities like sugar and milk, however this model could not have been effectively replicated in other commodities. He is still confused between the 'greenhouse theory' and 'Blueprint theory' of FPO. Greenhouse theory claims

that success of FPO is attributed to unique factors and leadership and cannot be replicated blindly. Blueprint theory claims that fundamental architecture of FPO is well defined and can be replicated effectively. Having an engineering background, he favors the blueprint theory, however he is also aware that there are unique regional factors that can contribute to FPO success, which cannot be replicated.

Response

Before developing the value chain, Manoj wanted to identify the needs of the farmers under the 'Sankalp' FPO and which of these requirements can be directed from what sources. He started with stakeholder mapping with farmer at the center of focus. The stakeholder map he developed is shown in figure 2.1. Analyzing the stakeholders, Manoj identified the need for farm input suppliers, for which FPO have failed to create sustainable linkages. Creating these linkages were also proposed as part of the project and potential partners were identified and listed. Knowledge gap was another major challenge for which linkages with nearby agricultural university was proposed. In terms of Skill building various government and non-government agencies were identified and listed (including Dwani). In terms of marketing linkages and technology demystification Shrishti CSR had their own inbuilt team. Market and input supply was designed to be integrated with the platform, where FPO can order inputs through a different interface of app and other linkages were designed off platform. Identifying the critical relationship among these, incentives were designed to establish sustainable relationship between these stakeholders. Network effect was also strengthening these linkages, with more farmers attracting more input suppliers and vice versa.

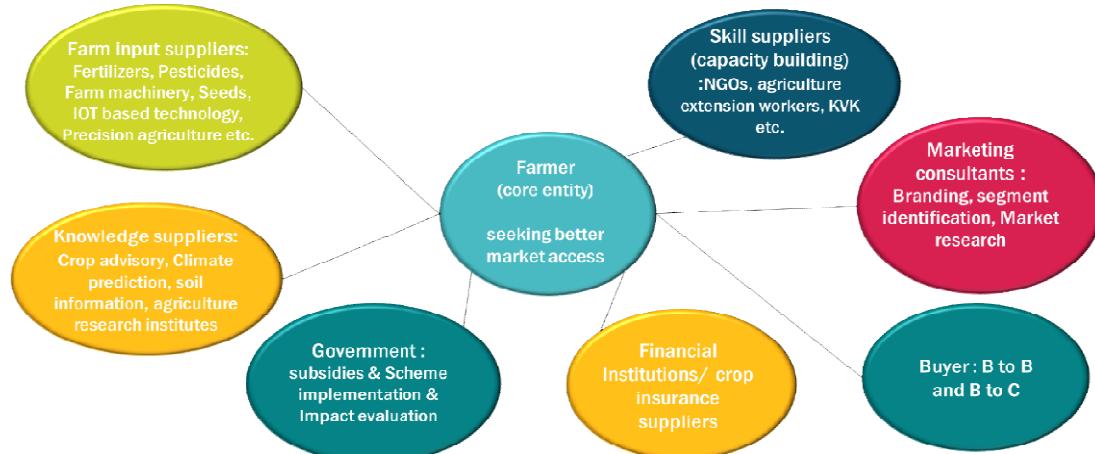


Figure 2.1: Stakeholder mapping for Farmer

Action Taken

Based on the needs and potential identified for Guntur area, a 'Red chilli Pickle' value chain was proposed. The proposed value chain is shown in figure 3.1. Approximately half of the procured chilli is solar dried, packaged and sold, while the other half is directed to pickle making. The capital cost and the proposed cash flow is shown in annexure 1. It was identified that effective channels of communication need to be established with government agencies in leveraging the various subsidies and tax exemption proposed for FPO.

As part of the study, various existing platform models were explored, identifying the opportunities and challenges. List for platforms used in bridging the urban rural divide is listed in table 3.1. e-Nam is a commodity platform owned by government which achieved substantial scale. I got crop is a market platform, operating in downstream of value chain, linking FPO to market. Kalgudi is a market

platform linking FPO to market. De haat is also a privately owned market platform linking rural produce to urban market. Crop in is a platform working in upstream of value chain ensuring timely input and extension services to farmers, the focus of this platform is to increase productivity through effective backward linkages of farmers.

Manoj knew that lessons learnt from these development platforms will be valuable in developing his own platform. In case of E-NAM platform, based on the implementation in Chhattisgarh, following challenges and following recommendations have been made in the past.

Major Challenges

1. Time consumed in e-NAM auction
2. Multiple visits to bank for payment
3. Lack of awareness about e-NAM system and
4. Lack of understanding of the displayed content.
5. Based on the findings, following changes were suggested in the model:
6. Organizing awareness campaigns and training programs,
7. Significant enhancement of assaying and grading facilities
8. Improved software and connectivity
9. Visual display in local languages
10. 25 % to 50 % cash payment for immediate cash requirement of the e-NAM sellers and
11. Establishment of regulatory body for regulating the e-NAM system for its smooth functioning.
12. Besides, the initial bidding price should be made higher than previous successful bid for real price discovery
13. Bidding time should also be increased for the improvement of e-NAM system.

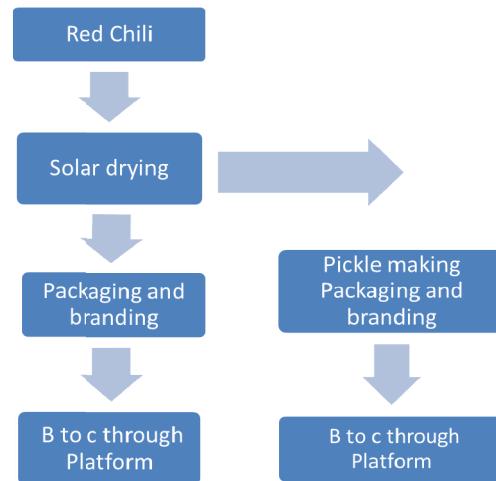


Figure 3.1: value chain proposed for Guntur cluster

Table 3.1: Platforms currently used for development

s.no	Platform name	Platform type	Platform ownership
1	e-Nam	Commodity platform	Government
2	I Got crops	Market platform for products	CSR + state
3	Kalgudi	Market platform for products	FPO
4	De Haat	Market platform for products	Private
5	Crop In	Input platform for productivity	Private

Lessons Learnt

Based on all background study done, Manoj identified few critical principles to be followed in designing a development value chains for platforms.

1) Bottom up approach

Capacity building shouldn't be an isolated event after platform design and it should go hand in hand with interaction with community and design should be changed and adapted based on community feedback at each of the above mentioned stages of design.

2) Effectively targeting the poor

The value chains developed to link with development platform need to be focusing on the poor. There is a need for linking the small and marginal farmers effectively in this value chain creating maximum benefit and sustainable livelihoods.

3) Principles of commodity selection

The product identified need to be market driven. A market study should identify the product demand, customer segment and also the local resources and skill availability that can drive the production.

4) Need for capacity building infrastructure and team

Onboarding an FPO to a platform is quite different than onboarding a retailer to a market platform in terms of providing required skill set, linking with relevant partners etc. In this context platform should be capable of delivering required skills, infrastructure, finance linkages etc.

Questions for Discussion

1. What is platform business model? (Discuss in the context of Amazon, Uber, and Airbnb etc.)
2. How development platform is different from urban platforms discussed above?
3. What do you think should Manoj do additionally in ensuing success of the proposed project?
4. What is the significance of considering regional aspects in developing a value chain? (cases of sugarcane cultivation and sugar co-operative leading to groundwater depletion in Maharashtra can be discussed)

Course Positioning

The case study will expose students to challenges in designing and implementing an FPO at village level. The study also familiarizes students with the platform business models and stimulates thoughts on how these models can be leveraged in bridging the urban rural divide. The case also brings into discussion the factors influencing the sustainability of FPO and the role of capacity building in enabling FPOs to adapt to various technology. The case should also give students learnings on how to develop value chain for an area based on the identified strengths and weaknesses of the region.

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About the Author

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Annexures

Annexure 1: Capital cost and cash flow for Red chilli pickle value chain

Specifications	Y0	Y1	Y2	Y3
Production dry chilli		4000	4000	4000
Production chilli pickle		8000	8000	8000
Plant and machinery cost(a)	385000			
Initial pre-operative expenses	150000			
Other fixed assets (furniture etc.) (c)	100000			
Contingency (5%)	31750			
a) Capital cost Total	666750			
Prime cost (Variable Cost)				
Depreciation (10%)		63500	63500	63500
Procurement		100000	104000	108160
Storage		300000	312000	337459.2
Packaging cost		225333.3333	234346.667	253469.3547
Labor		360000	374400	404951.04
Utility		48132	50057.28	54141.95405
Raw materials		3293280.84	3425012.07	3704493.059
Cost of manufacturing		4390246.173	4563316	4926174.607
Fixed costs				
Factory overheads				
Rent		300000	312000	324480
Inventory management		50000	52000	54080
Administrative Overheads				
Salary		204000	212160	229472.256
logistics		286666.6667	298133.33	322461.0133
COGS		5230912.84	5437609.35	5856667.877
c) Revenue		5440000	5657600	6119260.16
Interest for working capital		90106.16322	90106.163	90106.16322
e) Profit before tax		118980.9969	129884.48	172486.12
Tax		5949.049844	6494.2242	8624.306002
f) Profit after tax	-666750	113031.947	123390.259	163861.814
WC	693124.33	693124.3325	693124.332	693124.3325
Salvage value				
Change in WC	-693124.33	0	0	0
Net cash flow	-1359874.3	176531.947	186890.259	227361.814

Self Help is the Best Help

Archana Kamath, IRMA

Challenge

Even after 72 years of independence, the condition of the tribal people living in the small hamlets near the Attappadi block remains unchanged. Poverty, deep level of deprivation, child mortality and alcoholism is still rampant here even after multiple interventions through projects run by the government and many NGOs. The economic condition is still backward and even after having fertile land and having geographical conditions suitable for agriculture the people do not engage in agriculture as their primary activity and depend on the government to satisfy their basic needs of food, clothing, and shelter. As low as only 1 in 25 young male has a source of income and even the ones who earn would spend their earnings on alcohol.

Attappadi, a protected area situated in the Mannarkad Taluk of Palakkad district of Kerala, southern India. It is one of the most backward blocks in the state of Kerala and home to the indigenous tribal population. The tribal people are the first inhabitants in this area and are considered indigenous to this place. The tribal population consists of mostly Mudugas, Irulas and Kauraumba tribes, and a few Badagas and the section of settlers from Tamil Nadu and Other Districts of Kerala. There are 192 hamlets in Attappadi. The land there is fertile and the climatic conditions are conducive to agriculture. Availability of fertile land at cheap rates, which is good for agriculture has resulted in an increase in the inward migration of settlers from the mainland of Kerala since the middle of the 20th century. Further, the cost of living is very less in Attappadi because of the low standard of living and availability of fresh fruits, vegetables at very cheap rates. Labor is also available at low wages. Hence the people who were struggling to live in their native places in other parts of Kerala had to face societal pressure as they were expected to maintain a certain standard of living. They have preferred to live here and avoid the feeling of being judged every day by their friends and relatives. Due to this, the tribal population of Attappadi had decreased drastically from around 90% in the year 1951 to around only 40% by the year 2001.

The uneducated and innocent native tribal were exploited by the settlers and the situation changed drastically for these indigenous tribal people. The settlers bought the land from the tribes for petty price or sometimes in exchange for liquor. The repercussions of this bygone era are still to be seen in this area. The tribes are very addicted to alcohol and have become chronic alcoholics. There came a stage when the tribes had to work in settlers' land as tenants as most of the agriculture land was owned by the settlers by now. Then in 1976, the Government passed the land sealing act which said only a tribal can purchase land from another tribal. But by that time there was already a significant difference in the land ownership, and hence there was no major effect of the Land sealing act. Later, to address the woes of the tribal, the government started acquiring land from the settlers and distributed it back to its rightful owner –the tribes. The government also strictly banned alcohol in this area.

In spite of all the efforts, multi-faced projects and various government interventions efforts to improve the standard of living of the tribal people here, poverty and deep level of deprivation is still quite rampant here. Hence, to promote sustainable livelihoods for tribal communities and thereby enhance their income security, the WADI project was introduced which was funded by NABARD (National Bank for Agriculture and Rural Development) and facilitated by ASSO (Attappadi Social Service Organization).

Response

The WADI project was started in the Parapandara hamlet situated in the hilly terrain of the Attappadi block in the year 2013. The tribal people here were very reluctant to work for a living as they are dependent on the government and other NGOs for providing them even basic needs like food, clothing, and shelter. The government has built houses for them and they are entitled to get benefits of free ration as per the BPL cardholder benefits. The men here are alcoholics and prefer to spend their day in groups chatting as they avail free benefits from the government and other NGOs here for their day-to-day basic needs. To initiate the response for the program, ASSO along with NABARD started conducting awareness programs about the WADI and explained to them about how it would be beneficial in the long run. Now ASSO along with NABARD had a challenging task ahead of them to change the mindset of these tribal people and influence them to start with the WADI program. Hence they came up with an innovative way of influencing these people.

The facilitators had realized that merely giving lectures to these tribal people and convincing them to take the benefits of the programs would not lead to acceptance. Hence they started conducting awareness camps in which there were no training sessions, lectures, etc. but instead the impact generated was shown to them through short video-stories, pictures, etc. This helped in clearly depicting the before and after standard of living conditions of the people after the adoption of Wadi. This made the tribal people gauge the importance and understand the benefits of the Wadi program as they could relate to the impact generated in the real-life examples shown. They realized how Wadi had helped these farmers achieve a better standard of living. This helped them to make the future of their children brighter and motivated them not to be contented with whatever the government is providing them but to work hard and bring about a change in their lives for a better future for their children.

The WADI program is a NABARD funded Tribal Development Program (TDP) which aims at promoting sustainable development for the tribal communities. "Wadi" means a 'small orchard' in Gujarati covering very small land of about one or two acres. This is envisaged as a family-centric agriculture project with the emphasis on small landholdings (1-2 acres), agrobiodiversity and community participation required for the successful development of the project. People's participation and involvement were crucial in the sustainable development of the project. The initiation or the critical mass of this project were 2 farmers named Manian Konan and Veldon Giri who accepted the WADI project and implemented it in their fields and became successful role-models for other villagers to follow. The major turnaround for the project was the inclusion of women in the project activities indirectly. As the men here were alcoholics it was important that their family supported them and here the women of the household played an important role in providing support and encouragement.

Critical mass is usually a relatively small subset of a larger pool of interested group members. If any action is forthcoming, it is the most interested group members who will contribute first to the programs. They have to face high transaction costs not only in monetary terms but also have to face the societal pressure of going against the societal views and norms, standing on their own and starting something new. The less interested group will later join the bandwagon only after they see the benefits of the program. The critical mass is usually the leaders who are responsible for creating a huge revolution by making sacrifices themselves and carving their way to success for others to follow. The less interested group later follow the path of their leader and take positive steps to change for a better tomorrow.

Action Taken

"Self-help is the best help". This holds under any circumstance and emphasizes the fact that self-help or in other words self-initiative is necessary for sustainable development. This time it has been proved by two poor hardworking farmer households in the Parapandara hamlet of Attappadi. They understood that if they wish to live a quality life and have a better standard of living, instead of being contented with whatever the government is providing them, they have to work hard and bring about a change in their lives. They started working under the guidance of the team of WADI project started in 2013, funded by NABARD and facilitated by ASSO that made these poor farmers self-dependent and made them stand on their own feet.

For Veldon Giri and Manian Konan, it was clear that life was never easy for them. Veldon Giri had a family of 4 and his elderly mother to support. Whereas Manian Konan was the head of the family of 6. His son was a young man of 30 years having two children but did not wish to work as they wanted to live on the free- benefits provided by Government and other NGOs. The Parapandara hamlet is located in a very hilly area and though the conditions have improved now, it was very difficult to access the hamlet a few years back. The men here are addicted to alcohol and did not wish to participate in any employment generating activities, which demotivated other people who wished to work for a better standard of living as they were mocked and laughed at. Also, both the farmers were uneducated and had to face a lot of hardships in their life including land disputes, etc. which had impacted them both financially and emotionally. But they wanted to change this and wished to give their family and their children and grand-children a better standard of living by working hard. It is their will to fight back and do something for their welfare that helped them pave their way and succeed in spite of many difficulties in their way. Hence the two farmers took the leadership here and adapted the Wadi program.

The farmers acted as critical mass for the program as the rest of the tribal people who were aware of the program but were not adapting it due to lack of motivation due to availability of free benefits from Government etc. and also due to societal pressure of being judged if they failed to succeed. But through these live examples in the fields of these farmers, they could see the results and impact generated which made them understand how beneficial the program was. This inspired the others to undertake the benefits of the Wadi program and follow the footsteps of their leaders Veldon Giri and Manian Konan who had paved their path of success. Veldon Giri and Manian Konan now grow organically plant banana, coconut, areca nut and pepper in their small field or 2-acre land. Organic manure and organic pesticides were promoted In addition to this, the farmers were also provided with necessary and good quality agriculture toolkits like a harrow, tiller, etc. and were also imparted lessons on rainwater conservation pits, earthen bunds, recharging pits and other techniques for water and soil conservation.

After undergoing training and awareness programs for the WADI project the farmers have now become self-sustainable and yield a yearly income of about 3 to 4 lakhs. The farmers have now built electric-fencing themselves to protect the crops from stray animals at night. The women played an important role in their development and acted as their support system throughout time. They ensured that the men follow all the training and precautions imparted to them and also restrict their alcohol consumption. These two families are now role-models for the villagers to follow. Manian Kunan, who is the Sarpanch or the head of the Parapandara hamlet and is now also the head of the WADI Development program of the hamlet. Manian Kunan is respected and idolized by the tribal people of the Parapandara hamlet for his leadership and decision-making skills. He now inspires people to accept sustainable farming practices to improve their standard of living. The villagers who were initially reluctant are now joining hands and have started accepting the WADI program under the leadership and guidance of their old and wise leader Manian Kunan.

The WADI project encourages farming and soil conservation in hilly areas. It gives the people a chance of alternate livelihood using agriculture as their primary occupation. It takes a great deal of encouragement and monetary support for simple tribal people to believe in the cause and dive into an unknown territory never explored before. Nonetheless, the WADI project has come very far and is a successful example of human will and determination paving the way for success. Channeled properly, it has created jobs for the majority of tribal in the area and has converted the hamlets into a self-sustaining village, capable of employment generation.

Lessons Learnt

- 1) The leaders, government and development agencies play a crucial role in the planning and implementation of rural development strategies. (In this case the government, NABARD, ASSO (NGO), Leaders (Manian Kunan))
- 2) To gain the acceptance of the community and to promote the development schemes leading by example is the best strategy. (Here the facilitators did not train and educate the people by conducting lectures etc. but instead made them see the impact generated themselves through various examples and live demonstration.)
- 3) In addition to the financial assistance provided to the economically backward tribal people training and awareness and making them realize the importance of the scheme, in the long run, it helps in promoting their capability and wellbeing.
- 4) Make the community collectively realize the importance and the impact generated by the program rather than lecturing them and forcing them to adopt these practices.
- 5) The key to successful leadership lies in choosing a leader who is an active participant from the village itself and encourage others to follow suit. Their ability to influence others and achieve goals in spite of obstacles and difficulties will be more effective in comparison to any facilitator from the development/government agency.

Questions for Discussion

- 1) Explain the role of leadership and how they help in shaping the future of the village in the long run? What is the importance of critical mass in a program at the initial stage?
- 2) What can we do to ensure sustainable development of the tribal people? Why is it said that Self Help is the best help?

- 3) Should development programs focus on short-term improvement goals or long-term sustainable goals?
- 4) What are the ways to entrust support from other villagers? How do we empower or create awareness among the villagers and pursue them to work hard and not just depend on government and other NGOs for their living? (By making them understand the impact generated through live demonstration and letting them decide, instead of forcing them to participate. Also how the leader encourages and inspires the people is important)
- 5) What challenges may arise in ensuring participation from other villages in the vicinity?

Course Positioning

The caselet is suitable for a course in Rural Planning Development and Management and Collective Action and Co-operation and helps show how there was an improvement in the standard of living of the farmers due to their initiative. It would help introduce topics like strategies of rural development, strategic interventions, rural planning, participatory approach, and role of leader and government in rural management.

About the Author

Archana Kamath, is a postgraduate student at the Institute of Rural Management, Anand. The inspiration for writing this caselet has come from the Village Field Segment experience in the village Attappadi in Palakkad District in the state of Kerala. Attappadi is struggling with a high infant mortality rate, alcoholism and low standard of living because of poverty. In an endeavor to find the solution to these problems while conducting village field surveys, she stumbled upon the success story of these two farmers of the Parapandara hamlet of Attappadi village. This story needs to be told to students who are a part of this rural planning development and management course. This can help them to identify the problems and design an innovative and effective solution at the grass-root level.

The Curious Case of Kala Raksha Vidyalaya, Kutch

Avi Jain IRMA

Challenge

Ramesh Bhai is the newly appointed marketing manager of Kala Raksha Trust and has been asked to revive the Kala Raksha Vidyalaya which is facing a downfall in terms of artisan's community participation. Established in 1993, Kala Raksha Trust, has worked effortlessly towards preservation of traditional arts and crafts in Kutch, Gujarat. Marching with their vision of creating artisan's traditional part-time handicraft into economic parlance, Kala Raksha provided support to these artisans irrespective of community, caste and gender. Kala Raksha was formed to promote income generation as its priority among the artisan constituency. Kala Raksha facilitates the transformation of traditional arts into contemporary products. Kala Raksha also focuses on involving women artisans in the design, pricing and marketing of their products. In the initiative of preserving traditional arts and crafts, artisan participation serves as the strongest pillar of Kala Raksha's work. The trust seeks design education as a potent way to encourage artisan's innovation and creativity into their work.

Kala Raksha Vidyalaya in 2005 has been established to provide design education to these artisans in Tundavand. It is one of its charitable initiatives that stepped in India. The Vidyalaya is a long-term solution for ensuring the sustainability of craft as the livelihood. It aims to empower artisans from around the region of Kutch, which is prone to drought, earthquake and cyclone. The first institute of its kind, Kala Raksha Vidyalaya is an educational institution with a direct marketing link, open to working traditional artisans of Kutch, estimated at 50,000. While the Vidyalaya began with the advice and support of design professionals, today, it is driven by artisans themselves. The Vidyalaya's environment, curriculum and pedagogy are and customised as per the artisans' needs and their vast existing body of traditional knowledge. They are taught in the local language and arranged to accommodate cultural and livelihood schedules.

The Vidyalaya's goal is to promote respect, social status and capacity as well as promote increased returns. The effectiveness of the education provided tested in the regular market meets with the commercial sector. The Vidyalaya aims to honour and strengthen the creative, conceptual aspects of traditions, in addition to utilising skills, to enable artisans to target new markets directly. The trust performed a social audit of Kala Raksha Vidyalaya from artisan's perspective to get an insight into the social impact Kala Raksha Vidyalaya made in the lives of these artisans. They came out with a new set of findings. The artisans feel more educated about the work that they are employed. They feel more confident about their work and design. These artisans have access to market, and they also have the knowledge about which segment of the market to cater and which is the target market for their product. However, the new group of young artisans are not motivated enough to join Kala Raksha Vidyalaya to pursue the design education and seems disinterested in the field of handicrafts. They aspire to join modern-day courses related to engineering and commerce. This has led to a sudden decline in the overall creativity and handicraft output of Kutch.

Ramesh Bhai is seeking a solution to motivate new artisans and motivate them to engage in the traditional arts and crafts of Kutch achieving the ultimate aim of Kala Raksha trust to preserve the handicrafts of the geography.

Response

To increase the reach and lucrative offer that Kala Raksha Vidyalaya provides to the artisans, Ramesh Bhai has thought of the following alternatives:

Engagement through Advertisement

Ramesh Bhai has decided to follow the conventional medium followed every year by Kala Raksha Trust to publish advertisements in the local newspapers. The ad is further supported with one success story of an artisan who graduated from the school and made a fortune out of skills and knowledge he or she nurtured during his/her design education. Refer to Exhibit 1 to read one such story published in the newspaper (the story was published in Gujarati. It has been translated to English for the case analysis.) The newspaper is circulated in every village of the district and has a readership of nearly 2,00,000 readers.

Engagement through Field Assistants

Kala Raksha Trust has one field assistant assigned in every village of the district. The primary work of the field assistant is to collect the handicrafts from the artisans and bring it to Kala Raksha main office from where they are dispatched to various retail centres and outlets. Ramesh Bhai engaged each field assistant with a target of delivering at least one artisan per village to enroll in the Vidyalaya. The personal connection of a village to another villager would yield better conversion rate.

Organizing Artisans Fair and Fashion Show:

Kala Raksha organizes one fair and fashion show at the graduation of the artisans from KALA RAKSHA VIDYALAYA. The event is attended by significant designers, faculties and design students across the world. This year Ramesh Bhai brought all the young artisans from different villages to witness the grand event. The intention was to introduce the young artists to the appreciation and reach the arts and crafts have in the world. The expense concerning staying, roundtrip and meals were covered by Kala Raksha Trust.

The following three attempts were made to anticipate a set of curious response from the artisans further inducing them to enroll for the school. However, the story sailed far away from the shore. In total, 15 participants enquired about the program, while only three promised to join next year. The concern that shadowed their decision to join the school revolved around better employment prospects in a metropolitan city. Moreover, as most of these artisans were female, they feared to start something of their post-graduation. Though Ramesh Bhai offered them to become an artisan at Kala Raksha Trust, all went in vain.

Action Taken

After receiving a futile response over the activities planned by Ramesh Bhai, he comes across the idea of using collective action to attract the young artisans. He carefully planned a community engagement activity to engage the older artisans of the village and the graduates from the Vidyalaya. The idea was to engage the young artisans in existing handicrafts project. The final output from the collaboration will be specially labelled as the work of a particular group and then sold in the market. It was done to help the young artisans understand the peculiarity of the art and how unique it is when it gets in the market. Moreover, it was to help artisans associate their own identity with their work, which is not only unique but also valuable.

Lessons Learnt

1. It is essential to consider the aspirations and vision of the beneficiary before you plan and implement a rural development intervention.
2. To promote Rural Development through education, it is crucial to understand the dynamics of society and the social identity of each individual. It helps in better understanding the roles that each one of them plays in building a better community.
3. An income-generating intervention should present some immediate output and have a clear overview of the long-term goals of an individual.
4. Forming collectives is not a good idea when a group has a heterogenous employer, and there are multiple income sources.
5. Institutionalization can help only when it is serving to the higher needs of an individual in a group. Merely fulfilling the necessities cannot form a strong foundation to sustain the institution model.
6. An indigenous resource like arts and crafts can only be preserved when it can serve to fulfil the gap between artisans and their future aspirations.

Questions for Discussion

1. Starting a collective group all the time is not a solution to a community-oriented problem. Do you think Ramesh Bhai was right in forming the collective groups in each village? Discuss from the angle of Social identity model?
2. Why did the conventional method used by Ramesh Bhai fail?
3. What are ways to manage the problem associated with the aspirations of young artisans?
4. If the government (handicrafts commissioner) is brought into the scene, then how should he or she seek a solution to the problem? Should the government promote initiatives like Kala Raksha Vidyalaya?
5. In what ways can existing graduates from KALA RAKSHA VIDYALAYA help in attracting the young artisans to the Vidyalaya?

Annexures

Exhibit 1

Ramji visited Kala Raksha in 2007 and met Judy Frater to whom he presented his work but could not bring Judy to confidence for his work. The reason was not his design but the material of cloth that became a hindrance to his dream of becoming a well-defined traditional weaver and designer. His journey began when Judy offered him a fellowship at Kala Raksha Vidyalaya, popularly known as Kala Raksha Vidyalaya. Ramji used to visit Kala Raksha Vidyalaya mela to see the way the artisans used to learn at school and transformation that they went through during their fellowship.

As described by him, Kala Raksha Vidyalaya was the turning point of his life. Ramji came across a process of learning which took him through understanding the importance of colours to finding patterns and conceptualising the same to finishing and presentation. The pedagogy was highly effective and new to him, adding continuously to his knowledge and art of traditional weaving. He was supposed to learn for a fortnight at the institute and then work back at his place for another 15 days. This learning process went on for a year which ended with a KALA RAKSHA VIDYALAYAMela, where all the fellows of different batches represented the kind of work they did in one year during their fellowship. Exposure to learning from faculties from institutes like NID, Srishti and Kutch University added to a change Ramji observed in his professional as well as personal life. His life took turns in making of a new innovative and creative weaver of Maheshwari family. What he found most helpful and insightful in terms of their profession was studying and understanding market and presentation. Ramji went to different trips to Ahmedabad and researched shops, local street market and malls to understand his customer and need of the market. They were also taught to create and work on their brand, and that is where Tana Bana, a brand by Ramji Bhai came into existence.

Kala Raksha Vidyalaya has been not only influential but also critical in moulding and creating more professional and artistic weaver who not only possess knowledge of their products but also the market where they will be channelising their masterpiece.

Course Positioning

The case is an interesting one and is based on a real situation that was experienced by KALA RAKSHA VIDYALAYA. The case can be resourceful to subjects like Rural Planning and Development, Collective Action and Cooperative, Non-For-Profit Management, Public Policy and Livelihoods. The case involves multiple sets of problems which can be analyzed from a different perspective.

About the Author

Avi Jain is currently pursuing Post Graduate Diploma in Rural Management at the Institute of Rural Management Anand. He came across the problem during his engagement with Kala Raksha Trust as Rural Development Consultant. He has prepared the case solely for class discussion and does not indicate the performance of any organization. Furthermore, the author would like to thank Kala Raksha Trust for hosting and sponsoring him during the engagement.

The Nilgiris - Tribal Residential School

Sangeetha M IRMA

Challenge

An initiative to uplift and to bring a new light to Adivasis by nurturing young kids with an extensive education through an exclusive tribal residential school which is stopped by local community people due to land conflict issue due to an existing graveyard nearby which is scary to the kids', thereby increasing school dropouts during the building extension of the school. What is to be done to tackle this situation and to achieve the main purpose of establishing the school and minimizing the dropouts.

Response

The 'Adivasis' also called as tribals whose economy is still largely at a pre-agricultural level, with a low literacy rate and a minimal exposure to the outside society and modern medical facilities which is almost non-existent and a high poverty level with rampant malnutrition and starvation deaths. In Nilgiris, the Wynad district a contiguous Gudalur Block has a higher concentration of Adivasis than an average. According to the 2011 Census, the ST population of Tamil Nadu is 1.1%, while the Nilgiris district solely accounts for 4.46% of the total general ST population. Nilgiris is the unique biosphere in the Western Ghats which is characterized at the higher altitudes by savanna and shola forests in the ravines, moist and dry deciduous forests and thorn and scrub in the middle and lower ranges, and evergreen and semi-evergreen forests to the West.

Ambalamoola is a small Village in the bordering areas of Tamil Nadu and Kerala, under Nellakotta Panchayat in Gudalur Block, Nilgiris district of Tamil Nadu. Tribal rich Gudalur has four Primitive Vulnerable Tribal Groups (PVTG) namely: Paniyas, Mulla Kurumbas, Betta Kurumbas and Kattunayakans having languages of its own. Adivasis are deeply imbibed in their own culture and custom living within deep interior inaccessible forest ranges between wild animals. These customs led to dropouts of children who stay for a long period in their relative's home in a single visit and also the girl child education was hindered by their long customary puberty function. These are some of the main reasons along with long-distance and road connectivity issues leading to very high dropout ratio. Football is considered to be very important sports activity among tribal students associated with their culture making the students to keep their attendance.

To find a solution to this dropout problem, the Government of Tamil Nadu built a residential school, ACCESS RESIDENTIAL SCHOOL (ARS) in Ambalamoola, Gudalur. The school was built by the government in the local community land in the same premises of Government Higher secondary school which has largeCommon football ground. This school is being run by the local NGO, Nilgiris Wynad Tribal Welfare Society (NWTWS).

Due to the increase in student's strength and with the permission of the government, NWTWS is planning to extend the building on its left side for which the local community people are opposing. But if the school is built on the right side, it falls very near to the graveyard. Students are already getting scared by funeral rites being performed over there. During extension, it gets close to the graveyard, and hence may lead to drop outs again.

Action Taken

Common meeting was conducted with both parties to resolve this land issue. NWTWS had made discussions in the lines of their major concern of children being getting scared at night. Local community had put their own arguments of main pathway will get blocked and difficulties for heavy vehicles coming in and going out. The overall sports ground space will get reduced and also mentioned about their future plans to build stadium in the ground. But the untold and underlying reason behind this entire issue is, 1) Localities do not like local NGO because NGO are facilitating the tribals in excess to the society and making tribals more powerful. 2) Practicing of Jajmani system, serving upper-class people generation by generation, over a period of years. Adivasis usually work in localites' home and in their estate as daily wage labour. They do not want this cycle to get disturbed by nurturing young tribal generation with education.

Endogeneity of institution and self-interest played a great role in case of localities along with the unofficial support from local bureaucrats and leaders. In the end, NGOs did not get the land in their favor on the left side and started the construction in the right side of the building to accommodate more dropout student's. The construction is still going on and NGO should take some remedial measures once the new building starts functioning. Belief and perception change among the younger minds need to be done to reduce future dropouts.

Lessons Learnt

- 1) Types of tribal people in Gudalur Block, The Nilgiris
- 2) Lives and culture of tribal people and struggles in empowering the most deprived Adivasi community.
- 3) Existence of old Jajmani system in the interiors parts of the country.
- 4) How endogeneity and self-interest along with the power of the community can win the ethics on the other hand.
- 5) Alternative plan and risk management should be there while panning for the project (Now, NGO has to plan the next best alternative to meet the objective of ARS establishment.)

Questions for Discussion

- 1) What are the different ways to enlighten Adivasis and which is the best thing to short immediately to reap the sustainable long term output?
- 2) How the protagonist (NGO) will validate its argument stronger to favor the case towards tribal kids?
- 3) How to control the endogeneity and self-interest of the local community?
- 4) After losing the case, how the protagonist will ensure no further dropouts from the school after the functioning of the new building?

Course Positioning

The caselet is ideal for the course in “Tribal Development” as it narrates the turnaround story of struggles faced by the minor community and how to come out from all bad situations. It would be helpful in introducing topics like lives of tribals, struggle faced by the tribals, issue of dropouts, play of ethics in real scenario, power of dominant community, endogeneity and self-interest, Jajmani system.

Annexures

Exhibit I



Fig1. Lives of Tribals within deep forest

Exhibit II



Fig2. Tribal students at residential school playing football

Exhibit III



Fig3. A) Old building, B) New building

Reference:

http://censusindia.gov.in/2011census/dchb/3310_PART_B_DCHB_THE%20NILGIRIS.pdf

About the Author

This caselet is written by Sangeetha M who got the inspiration to write this caselet from village fieldwork Segment (VFS) in Tamil Nadu.

XYZ Farmer Producer Company Limited: What went wrong?

Parth Sarthi Ramje IRMA

Challenge

While sitting in his office, Manish, President of XYZ Farmer Producer Company Limited XFPCL) was thinking about the hard work he has put in the last 3 years to make XFPCL a success. Sitting on his desk he was wondering what would be the fate of XYZ Farmer Producer Company Limited (XFPCL). Will it become a dormant Farmer Producer Organization (FPO) just like many others in the country? Or what is the exit clause for this Farmer Producer Company (FPC)?

About Region

XYZ was started in Jhirniya region. Jhirniya is a block in Khargone district of western Madhya Pradesh. Demographically Jhirniya block is predominantly inhabited by tribals. District headquarters Khargone is 50 km away. It has all the characteristics of tribal area. It is sparsely populated with scattered settlements. Infrastructure in terms of road and electricity reached in 2005. Predominant soil type is black soil. Land is less fertile. Average summer temperature is 40 degree Celsius and average winter temperature is 21 degrees Celsius. Average rainfall for the whole district is 36 inches. There are two cropping seasons in the region - Kharif & Rabi. Sowing decision in Rabi depends on water availability in farms. Major kharif crops are – Soybean, Cotton, Chilies. Major Rabi crop is Wheat. There is no irrigation facility in terms of canal in the area. Farmers use bore well and wells for irrigation. A rough estimate says that about 80-85% of farmers are small & marginal farmers. Nearest market for agricultural produces is Khandwa which is 30 km away. Nearest mandi (where agriculture produce can be sold) market is Jhirniya block headquarters.

Seeing the remoteness of the area, traders and businessmen in Jhirniya are notorious. They often sell products at high prices and don't give appropriate prices for produce. Traders also take advantage of this opportunity and exploit farmers by not giving good prices at the farm gate.

Origin of XYZ Farmer Producer Company Limited (XFPCL)

XFPCL is a Private company incorporated on 11 February 2016. It was promoted by an NGO under its Institutional Development and Support Services (IDSS) vertical. The FPO was setup to help farmers in production, harvesting, processing, procurement, grading, pooling, handling, marketing, selling, of primary produce. Members could also import goods or services for their benefit. Principle notion for forming XFPCL is to connect producers to market opportunity for getting remunerative prices. Another objective is to increase producers bargaining power as they are mostly small and marginal farmers and it is impossible to do this in their individual capacity. Today the Farmers Producer Organizations (FPO)/ Farmers Producer Company (FPC) are the buzzword in rural. They are promoted as savior from everything. They are perceived as solution to any and every problem.

The Issue

NGO spread awareness about farmer producer organizations and its benefits. They started mobilizing farmers. They had fixed registration fees of Rs. 300 to become a member. About 250 farmers paid this fees and availed membership. Given this area as tribal with mostly small and

marginal farmers, this amount was seen as very high. There were 700 farmers who agreed to be part of FPC. NGO registered XYZ Farmer Producer Company Limited with Registrar of Companies in Gwalior circle. It has 5 members as board of directors. All of them were Patels (social head) of some village. After registration, these directors persuaded farmers to pay registration fees and become members officially. Farmers started to elude from paying and eventually some farmers refused to pay. Seeing this behavior other farmers who haven't paid yet, also refused to pay. This went on for two years. Seeing this, farmers who have paid the fees felt cheated. They were disheartened. Due to this the FPC was not able to function. It has not done anything that was initially promised i.e. no aggregated buying of input or aggregated selling of produce. Meanwhile Manish negotiated a deal with a Soybean processing factory to supply Soybean directly from farmers to factory through FPC. But the deal went in vain as farmers were not willing to give their produce without instant payment. But the deal factory stated that the payment will be made within 15 days of delivery of goods. This shows that farmers don't have trust and they require immediate cash to repay their loan.

NGO also appointed an external person as CEO to oversee the day to day working of FPC. As already said that the area is remote in nature, within two years 2 CEOs left the job. Now NGO isn't able to find CEO and XFPCL is without CEO for about a year.

So the problem boils down to this – There are certain farmers who have paid the membership amount to be a part of XYZ Farmer Producer Company Limited. But they are not able to harness the benefits of this membership. It is because the FPC is nonfunctional since its inception. There are many farmers who haven't paid membership fees and the board of directors is not able to persuade them to do so. NGO, who initially promoted this FPO, has left operations in this area. NGO had good presence at grass root level and it was the trust of people on this NGO that was used as critical mass for mobilization. As NGO promoted XFPCL, people trusted it. Manish wonders how to solve this issue and make XFPCL work.

Response

During the initial days, board members and CEO tried to persuade people to pay membership fees. Persuasion was mainly done by illustrating benefits of FPO. The content of persuasion was the same for all types of farmers. Slowly the interest of board members faded. The CEOs also left the jobs. Seeing this, there is a moral breakdown of people who've given fees. They now think FPOs as an invention fooled them. People who evaded from paying fees now became indifferent to this issue. FPO/FPC is not the solution of all rural problems.

Action Taken

There is no action taken. The FPO is alive on papers but no work for which the FPO is formed is done. The last balance sheet update was done on 31st march'2018 (as per mca.gov.in). Talking to people who've paid fees brings out their pain. They feel that they're cheated. None of the promises made at the time of mobilization is kept.

Lessons Learnt

There was no strategy for persuasion and the same message was delivered to all farmers. Instead if farmers would've been segmented on some basis say income or land then the same message could be tailored for different segment. Showcase the same benefit in different ways to different

segments of farmers would've been a better persuasion strategy. If that would've been done, it would've made farmers more responsive and the chances of them paying fees would've been increased.

Normative can be used as another persuasion strategy. Slogans like "Sangathan me Shakti hai" and likewise can be used. Given this is a rural setup; societal norms are an important aspect of rural life. Identify broad markets beforehand to include in your communication. This would build trust with farmers. Also include the tentative raise in income per unit of land if they become members with FPO. This raise in income will come from reduced transaction cost and higher prices. Include this in the communication while mobilizing farmers.

Questions for Discussion

- How did XFPCL get formed? Who were involved?
- What is the problem in the case?
- How should FPO/FPC mobilize the producers?
- How to decide the optimum number of members for FPO/FPC?
- How to make compliance mechanism strong within FPO? Can something other than normative be used here (given this is a village setup)?
- What should be the optimal time for handholding for FPO/FPC?
- How to effectively design communication strategy for mobilization?
- How to decide the optimum fees for registration?
- How dispute resolution mechanism should be designed in FPC?
- What are the exit clause for an FPO and how will the members be compensated in cases like this?
- Were farmers not willing to give produce because they did not trust FPO or because they did not trust buyer?
- How to convince farmers to pay fees?
- What steps should be followed for incorporation?
- What are the challenges that the FPO/FPC faces?
- Was FPO really needed? Which other form of collective enterprise could work better here?

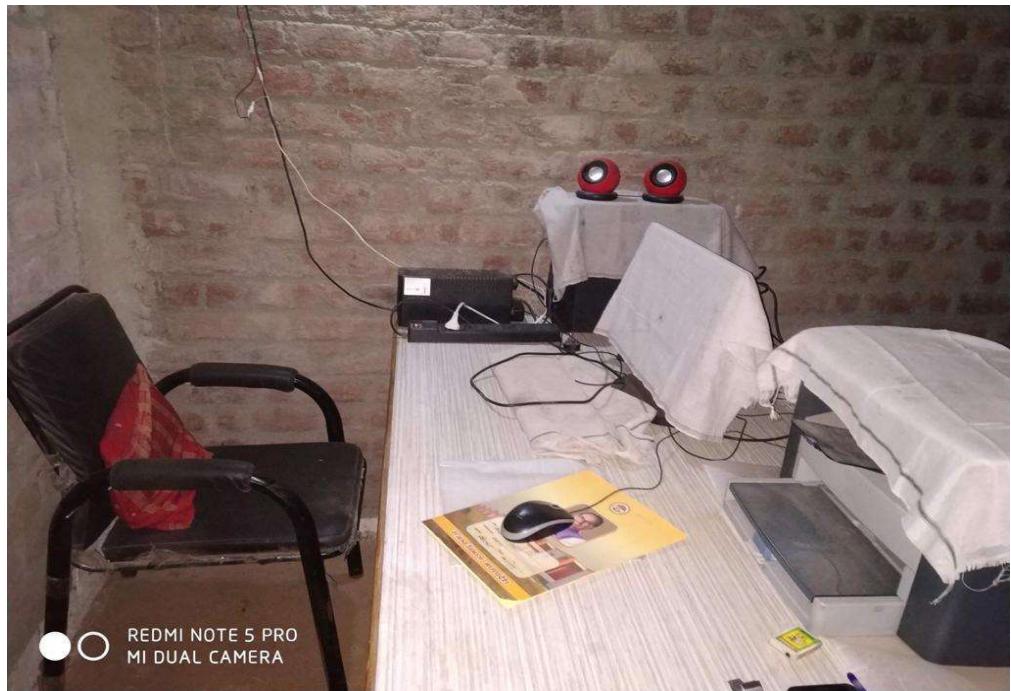
Course Positioning

This case depicts how an FPO can fail even at conception stage. FPOs are an important element of rural economic development. It is important to know the causes of failure of FPO. This case compels to think about the importance of mobilization for a successful FPO. This case depicts how rural economy suffer setback when FPOs fail. This can also help to understand how and why FPOs in rural areas fail.

About the Author

This caselet is written by Parth Sarthi Ramje. He got the inspiration to write this caselet from his village fieldwork experience in Madhya Pradesh.

Annexures



The Untouched Livelihoods for Tribes of Dharamnagar

Saurabh Shailesh Hirekhan, IRMA

Challenge

Dharamnagar is a village in Maharashtra where the economy is agrarian and based on migration laborers. Due geographical and climatic factors of the village, people are forced to migrate out of their village for livelihood and they end up doing labor work rather than working in their own fields. Employment structure in the village is not much diverse. Employment opportunities outside the village are also very less. Even though a good number of establishments are present in the nearest town, it is unable to provide employment to the villagers. Diversity in professions is also limited to a few people. Remoteness of the village and lack of transportation has led to long-term migration for the people which is a major cause of distress to the residents. They need alternate livelihood options to avoid migration and eliminate distress.

Response

Dharamnagar, resides in the hilly terrains of Maharashtra in Konkan division and takes its beauty after Western Ghats. The lush green ambience of the village makes it a home to diversity of flora and fauna. It is one of the few remaining tribal regions of Maharashtra. The village has a population of 445 people (all tribal families) with 101 Households. Majority members of this community follow the traditional tribal culture of forest farming, hunting, worshiping nature etc.

A good portion of the households were initially involved in agriculture for livelihood which is now limited to subsistence. Reasons for this shift, were climatic and geographical conditions. The village now receives lesser rainfall than before, and being a hilly terrain, natural sources of water bodies are absent. Hence even the small proportion of rainfall seeps down to the low lying villages. Unable to cope up with water crisis (which affected agriculture), the villagers started to migrate to urban cities for labor work. Being un-skilled, even the labor market was unable to provide them even marginal wages. Majority of the villagers had undergone distress migration and were desperately searching alternate livelihood options.

Unemployment had hit the village adversely. Agriculture which was once the major source livelihood had reached to its decline phase long back. Being a hilly terrain, a handful of them were able practice floriculture as many were rigid to give up on their existing agricultural practices. The village caught the attention of ADRF (Ashirwad Development Research Foundation), an NGO which worked for development tribal people. ADRF made some interventions to the village to evaluate livelihood options. After studying the dynamics of this village, it came up with a solution of shifting the existing practices to cultivating fruits and flowers with minimal use of resources and took a pilot test of this location which was replication of similar activities executed in other nearby villages earlier. However, water still remained a major cause of concern for many people in Ramnagar.

Action Taken

In 2007, ADRF implemented the Sheti program in 13 villages of the Block. The Sheti program was directed to reduce migration and provide stable income and employment at the village level. In a Sheti plot of one-acre land around 200 jasmine plants can be grown in spaces between trees. The Sheti program was started on a small scale, initiating it with participation of only five people. The

NGO provided each of the five households with 20 Mango and 40 Cashew plants, which, the people later considered as cash crops. It also provided Jasmine plants after the successful implementation of floriculture in nearby taluka. The NGO helped villagers by providing a market value for Jasmine production. With the success of the program, 20 more households joined it. Now under the Sheti program, a total of 25 households are involved in the production of Jasmine, Mango, and Cashew and had become members of the Sheti program. Production varies across different months however, cultivating jasmine was the prominent one amongst all. It is comparatively lower between June and January, peaks in February and May. The NGO also facilitated a network of supply chain, where each member's produce was collected, weighed, recorded and transported to the urban markets everyday where the produce got its true price and then were paid accordingly. The complete shift in this newly introduced livelihood approach boosted the morale of people. Slowly with time other people started to replicate the cause by their own self. Hence, effects of Sheti program were able to reduce the overall migration and distress of the village to a large extent.

People in the village also discovered a new sense of collaboration after the implementation of Sheti program. A feeling of socializing emerged within themselves when they realized how this network effect helped the economy of their village to grow even they focused on their own self. This gave people an incentive of facilitating each other as resources to achieve common goods and goals. They formed groups and constructed mini ponds in their field premises by helping each other. These ponds were sufficient to collect the rain water which was later used during sowing time for cultivating vegetables and grains which they earlier produced. People were also able to think ways to store the rain water for domestic use which they never earlier thought they could.

Such a small impetus was able to solve major crisis the village had been collectively been seeing for a lifetime. The small fraction of people still migrating in search of jobs, persist in the village. However, on a bird's eye view the village is out of distress migration.

Lessons Learnt

1. One small intervention or an idea, if implemented with the participative approach of rural poor, could bring changes to the remote parts as a whole on a large scale.
2. Collective approach leads to cooperation and welfare of individuals, yielding higher productivity.
3. At times it is necessary to change the existing livelihood patterns and get accustomed as per the conditions simply to avoid distress until a solution is found.
4. With proper collective approach, major problems of rural geographies can be addressed with just simple solutions with minimum investments.
5. Collective action and cooperation is a good way of boosting the morale of people from marginalized backgrounds.

Questions for Discussion

1. What are the advantages of collective approach of people?
2. How does support from an external agent help in the rural development?
3. What are the ways in which NGO's could facilitate various developmental initiatives in rural belts of the country?
4. How did the Sheti program assist people in avoiding migration?
5. To what extent, exploring alternate livelihood opportunities are feasible for people in distress?

Course Positioning

The caselet is suitable for a course in Rural Development and Human resource management. It covers certain concepts like, group dynamics, participatory approach and collective actions to eradicate major problem of villages. It also sets an example on how cooperation could help people in becoming financially self-sufficient. This caselet will also be helpful in introducing topics such as roles played by NGO's in shaping up the rural economy.

About the Author

Saurabh Shailesh Hirekhan, a civil engineer graduate, wrote this case after staying in a village for 45 days which was a part of his curriculum for PGDRM at Institute of rural management, Anand in 2019. Saurabh worked as a teaching faculty and a business development executive at "CL educate" for two years before joining IRMA. Saurabh worked closely with residents of the village to understand grass-root dynamics of the village which helped him develop insights to write the caselet.

Annexures



Banana trees planted as a part of the WADI Program



A 42-year-old Veldon Giri standing with his mother and sister who have played an influential role and supported him in his fight against alcoholism



A 60-year-old, Manian Kunan, head of Parapandara Hamlet and WADI program smiling happily with his grand-daughter who is now sent to study in a nearby school.

Exhibit 1. Socio-Economic Category

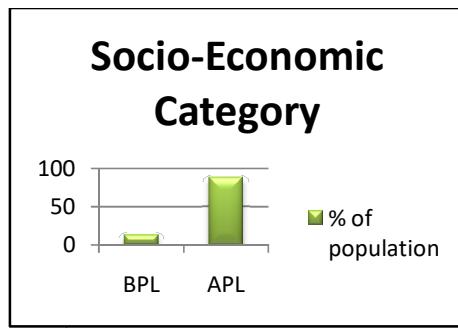


Exhibit 2. Type of Houses

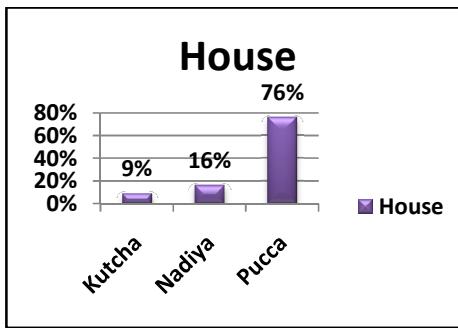


Exhibit 3. Data Validation of Arjun survey with respect to old survey (2018)

Particular	Variation
Basic Household details (Includes number of household members, age, family size etc.)	2%
Facility (TV, Freeze, AC, Vehicles etc)	5%
Agriculture land	65%
Livestock	8%

Blessed but Barren: The Curious Case of Trisha

HRISHIKESH KRISHNAKUMAR IRMA

Challenge

Trisha Waterhead is situated at the foot of the Karakoram Range, on the banks of the river Siachen, in Ladakh. This village is part of the fabled Silk Route. Agriculture is the primary source of employment for the people of Trisha. Every family in the village has access to cultivable land. The farmers of Trisha follow a single season cycle for a year. Their agriculture season begins in April and extends to the end of September. The people of Trisha follow conventional methods of cultivation and have nominal usage of mechanized equipment. Currently, the output from farming in Trisha is only for the purpose of subsistence. A very minimal amount of agricultural produce is only sold by the farmers in the market. This is mainly due to the absence of a viable market in the local economy, as every household in the Siachen Valley do subsistence farming and reaching out to farther markets is impossible due to geographical constraints.

The main source of irrigation in the village is the glacial streams formed due to the melting of glaciers at the top of the Karakoram range. The system of regulating water supply to the village is known as churpon. In this system, the glacial stream is brought into the village using the main canal and a further grid of small canals is used to divert the glacial stream into all the fields of the village. This system is effective throughout the agricultural season, excluding the months of April and May because glaciers melt at a very slow rate in these months. During the months of April and May, the usage of water for irrigation is regulated to one household per day. During this time period, the River Siachen is in maximum capacity. The location of Trisha is in the flood zone of one of the glacial lakes situated on top of the Karakoram range. Flash floods are caused due to the excessive uncontrolled glacial melting, which leads to the bursting or overflowing of the glacial lake.

The above-given description is a far cry from the situation of Trisha during its prime – when the Silk Route existed. The farmers were able to cultivate crops during all times of the year except the 4 peak months of winter (November, December, January & February). The agricultural products that they were able to produce were enough to host multiple caravans of traders which were more than 500 strong in numbers, over and above their yearly subsistence needs.

When we dig deep in order to understand the reasons for this drastic change in the lifestyle of the village, we can pinpoint two answers, Change of Climate and The Silk Route becoming extinct. Due to the change in climate, the agricultural productivity of Trisha has gone down considerably as their farming practices have been thrown off-course. As the Silk Route slowly ceased to exist, the demand for agricultural products produced by the villagers also began to decrease, thereby steadily bringing down the agricultural production in Trisha.

In the present-day scenario, the most consistent way of income for the villagers of Trisha are salaried government jobs. The village did not have constant power supply till 2017. Now the village has a steady electricity supply from 5 pm – 11 pm. The market availability for the agricultural produces has decreased gradually after extinction of the silk route, which led to the unused and unsold agricultural produces piling up in the village and eventually decaying. The nearest market

available for the farmers is the city of Leh (situated 140km away), which is currently being catered to by farmers from villages in its proximity. The farmers from the Siachen Valley are not able to compete with them on prices due to the extra transportation cost borne by them. Most of the farmers have reduced the area under cultivation to nearly one-third of their landholdings as the agricultural produce serves only the means of subsistence. The challenge faced in this scenario is how to resurrect the agricultural sector in the village of Trisha, by providing adequate market linkages, so that the incomes of farmers can be increased.

Response

In order to overcome the water shortage during the commencing period of the agricultural season, the villagers had constructed a Watershed on the foothills of the Karakoram to accumulate water for irrigation during April and May. This worked out just fine for the villagers of Trisha till the month of July in 2019, when a flash flood struck the village. The watershed was situated in the flood zone of the glacial lake, this led to the magnification of the impact of the flood. Two families lost their complete harvest of the year as a result of this flood.

Action Taken

In order to provide the villagers of the Siachen valley with adequate market for their agricultural products, a vegetable Cooperative Society was formed in the village of Sumoor, which is located 20km away from Trisha. This Cooperative Society procured the vegetables from the farmers and sold it to the Indian Army battalions stationed at the outposts of the Siachen Glacier. The major drawback of this cooperative was that Army being their customers they had to provide the vegetables at subsidized rates. This deprived the farmers from getting a profit that was relatable to the open markets. The low volumes of production considerably decreased the bargaining power of the farmers.

Lessons Learnt

As the events of this case study describes an ongoing situation it does not have a defined conclusion. The major learnings from this case are:

1. Cooperative action is not a ready-made solution for all agricultural situations, it has to be tailor-made to suit the situation in hand.
2. Change in climatic conditions are bigger and direct shocks for farmers and the agricultural sector than the urban population.
3. The distance between villages and low population density are major limiting actions for collective action in Ladakh

Questions for Discussion

1. How can collective action be implemented effectively in the landscape of Ladakh?
2. Which is a better alternative for the farmers of Siachen Valley to reach out to markets which can pay profitable margins?
3. How can the usage of electricity, which is a new resource in the area impact the improvement of the irrigation facilities?
4. Can organic farming play an important role in adding value to the farm products and also as a tourism opportunity?

Course Positioning

The caselet is suitable for a course in Rural Livelihoods and Production System, as the caselet explains the livelihood problems faced by the villagers inhabiting the village of Trisha, in Ladakh. The case nudges the reader to probe in different possibilities that can be explored to improve the livelihood of the Ladakhi farmers.

About the Author

The author is an Electrical Engineering Graduate currently pursuing Post Graduate Diploma in Rural Management from Institute of Rural Management Anand. He is a travel buff and an amateur photographer. The experiences mentioned in the above caselet is derived from multiple visits to Ladakh, both for work and pleasure.

Is New Generation Leadership Redefining Social Paradigms?

Abhinav Verma IRMA

Challenge

Today the role that Youth Leadership can play in bringing about social change is indisputable. They are emerging as a new generation of opinion leaders and change agents. However in their attempt to create a just and equitable society, they confront various challenges. In their effort to eradicate oppressive practices like social and political dominance, violence against women, etc. they have to face the powerful social hierarchies and their long-established practices based on caste, gender, class etc. These powerful hierarchies tend to work against them and make them appear as illegitimate leaders. Moreover, youth often found themselves at the crossroad of modernity and traditional values. Issues like inter-caste marriages, inclination towards nuclear families etc. has created a mental block amongst the older people in accepting youth as leaders, especially in traditional pockets. It is believed that the new generation in their bid to modernize the society are happily ignoring the rich traditions that have been inherited from our forefathers. Hence this case ponders on how young generation leadership can make themselves more acceptable and emerge as New Opinion Leaders and redefine Social Paradigms. It tries to stress upon how the new generation can play an important role in reviving the rich cultural practices free of oppressive tendencies and strive for a more socially empowered society.

Background

Things have changed drastically since Shankar, took charge as village Sarpanch of Raikuna village. He is the richest farmer in the village and enjoys good support from the people of his class, which is a socially, economically and politically dominant class in the village though not numerically. He owns more than 40 acres of land and rents out farm machinery to the small and marginal farmers in his village and the adjoining villages, making him a well-known name in and around the village.

It was in October 2007 when Manohar, father of Shankar died. All the family members were aggrieved by the loss of their patriarch. People from political circles, community members and others from neighbouring villages flocked their house for many days to express their grief and sorrow. Manohar was a politically and economically influential person. However, October being month of festivities with Dussehra, Diwali, etc. at the anvil, people of their own village looked unfazed by the demise of Manohar. They were busy preparing for the festival with the same vigour and in fact, looked even more excited.

Dussehra is celebrated across India every year signifying the victory of good over evil. This festival has been celebrated for a very long time in the village but at that time, the situation was different. Shankar was unhappy with the attitude of villagers. In Hindu culture, family and extended family of the deceased person does not celebrate the first festival after the demise of the family member and the celebration for all the festivals occurring within a span of year from the death, remains subdued. It is considered as a way to show respect for the deceased and mourn his/her passing away. But in this village, everyone seemed to be happy and forthcoming to celebrate the festival, which didn't go down well with Shankar and his family.

Manohar was not a much-liked figure in the village. His family has been very powerful and renowned throughout the history but due to his social and economic biases, ill-speaking and oppressive behaviour, he was infamous among the villagers. He has been accused of never working for the welfare of the village; he rather used his position and clout for personal gains. He tried to restrict social mobility so that whip of power remains in his hand.

Shankar, even though aware of the opinion of the villagers about his father, took the celebration of Dussehra by the villagers, as a confrontation by villagers against him and his family. He understood that the villagers are celebrating the death of his father. The situation worsened as the festival was nearing, he berated some of the local villagers for decorating their houses and rejoicing. As the matter escalated, all the known people from the village were called and a sabha was organized, where all the Panchas were present. Shankar being the Sarpanch and the influential man in the village, the decision went in his favour. It was that day and today that Dussehra was never celebrated in the village.

Dilemma

Today, many years after, even though the post of Sarpanch is held by Sukhpal, the decision making power rests with Shankar. Most of the critical decisions are taken by Shankar on behalf of the Sarpanch. However, from the last few years, Shyam has emerged as a leader loved and followed by not only the youths but the elders of the village. It is in contrast with the usual belief of elders in the village, who think that only people of older age can lead the society in the right direction.

Shyam is a graduate in Agriculture, working with a local reputed NGO for livelihood generation in the region. He is also a progressive farmer and farmers from the adjoining village often visit him for his guidance. While belonging to the economical and politically dominant family, Shyam's family also enjoy the respect of the villagers. Shyam is also credited with organizing a campaign involving local women against the increased liquor consumption in the village. In this campaign, he along with many youths sat on a hunger strike till all the people in the village stop drinking. The condition to call off the strike was that the person has to sign an agreement that if found drinking again will have to pay a penalty of Rs. 5000. This campaign had put a lot of social pressure on the villagers and people, who used to drink liquor, were forced by their wives to sign the agreement, making it a grand success. Even the local media covered the story well and the same pattern was followed in a few adjoining villages. This has provided Shyam with huge fan following in the village and even the government officials working in the village listen to him.

Being in his late 20s, Shyam has become an ideal of the youths in the village because of his knowledge, empathy and oratory skills. He also enjoys his newfound respect and appreciation and aims to fight upcoming panchayat elections. He remains committed to his responsibilities towards the village. Local people from same and adjoining villages, on a daily basis, gather around his house with problems, as much related to their day to day life as to the larger issues with respect to schemes by government like MGNREGA, etc.

Now coming was the day of reckoning. The Dussehra festival was approaching close. Shyam from his childhood has been very enthusiastic in celebrating all the festivals irrespective of religion, more so for Dussehra, as it is a festival of burning all the feelings of enmity & negativity and starting afresh.

Having seen villagers not allowed to celebrate the festival throughout his growing up has left distaste towards political, economic and social dominance of one family upon the whole village.

Having seen Dussehra celebration during his college days and appreciating its relevance, he always wanted to restart the practice in his village. He used to reflect, that due to some incident that happened many years back, is it right that the coming generation should be bereft of a festival, which is so highly placed in our culture. He used to ponder on ways it could be restarted. But he has his own set of dilemmas – Would he ever be able to convince Shankar and people supporting him to let bygones be bygones and make a new start by allowing the people to celebrate the festival like it used to be 10 years back? What should be the future course of action?

Action Plan

After a lot of brainstorming, one solution that Shyam could think of, was that, last month his grandfather died, now if he celebrates Dussehra in spite of that, he may be able to convince Shankar that what happened 10 years back, was not meant to offend his family. However, at the same time, Shyam is in dilemma that his action might be seen as against the Hindu culture, which may offend his family members and other villagers (he celebrating the festival just after the death of his grandfather). It may offend Shyam and his community members, who form a considerable proportion of the population and will withdraw their support in his other activities and upcoming elections. If things go wrong, he might be weaned off his hard-earned status in the village. He might be seen as someone who has no respect for his own culture. Or is he over thinking, as based on his past social initiatives, his idea may be readily accepted for larger good of the society? What should he do?

This incident is a small narrative of the crossroad where youth often finds itself standing whenever they try to go against the long-established practices. Thus they are easily cornered when it comes to leadership roles.

Lessons Learnt

Social and political dominance plays a prominent role in the functioning of our village system. After years of affirmative actions taken by the Government, social and financial dynamics play a dominant role in the decision making. However, youth leadership can play a constructive role in overcoming the barriers to social mobility.

Youth Leadership always deals with this dilemma of what, how much and with what pace a desirable social change can be brought about, that will be acceptable to all the pillars of the society. More often than not, steps taken by youth leaders while fighting this dilemma lends them into a situation where they become less acceptable to society, more so in hinterlands. In this situation, Youth Leadership in the village is expected to become a bridge connecting the past values with opportunities in the present and future. It is the testing time to see how social paradigms can be redefined.

Failure of Local Self Governance – the objectives of 73rd Amendment Act to establish decentralised democracy is still a distant dream. The decision making power still rests with the economically dominant, irrespective of who wins the election.

This case study is thus open for all of us to think what is right as a responsible citizen, as a responsible youth, as a responsible human being, which can enable us to reap the benefits of what the future entails.

Discussion Questions

1. Was it offensive on the part of villagers to continue celebrating the festival? Critically Examine.
2. Was the step taken by Shankar to forbid people from celebrating Dussehra, was just as a Sarpanch of the village? If not, what he could have done to express his displeasure?
3. What should be the course of action for Shyam, who is an emerging leader, to restart the Dussehra festival in the village?
4. Does Social and political dominance still has a stronghold in our villages and to what extent? If yes, how can it be eradicated and what role can youth play?
5. How effective is our local self-government structure? What are the challenges?
6. What should be done to create an equal and just society? Discuss the role youth leadership can play?

Course Positioning

This case requires no prior expertise and may be used for teaching and classroom discussions for undergraduate students. The course would be a good fit in the course, evaluating social dynamics

Exhibit 1

Village Raikuna

The village was formed 400 years back in the tribal dominated area. It is situated 18 km from its block headquarters and 75 Km from its district headquarters. The nearest railway station is at a distance of 38 km. Though connected by a State highway to all the nearby cities, poor roads and transportation system makes the village less accessible to major facilities including health centres, police station, formal banks, etc. Due to this remoteness, villagers rely on facilities available locally. According to 2011 census population of the village was 1310 since then population has increased at a rate of approximately 2% p.a. currently, 2018, it has a population of 1504. There are 243 households in the village.

Note: The name of the village and protagonists were changed in order to conceal the identity.

About the Author: This case is written by Abhinav Verma, a student of Post Graduate Diploma in Rural Management, Institute of Rural Management Anand (IRMA). The idea of writing this case was conceived after his village fieldwork segment experience at Madhya Pradesh.

The Village without Land

Arkopal Saha, IRMA

Background

The village of Rajeev Nagar comes under the district of Raisen and Salamatpur Panchayat which is 35kms away from the City of Bhopal, Madhya Pradesh. It is located on the opposite side of the Salamatpur railway station. The peculiarity of the village lies in its very location and settlement history. A team was sent to study the village under the guidance of the host organization which was an NGO, headquartered in Bhopal, MP. The village of Rajeev Nagar is one of the recently intervened villages (in terms of capacity enhancement for the people) amongst the ones located in Sehore, Panna, Barwani, and Raisen districts. The NGO has intervened and has been successful in imparting masonry training to 50 women within the village to augment their incomes. The residents of Rajeev Nagar neither are the owners of any land nor do they possess any assets that may potentially be utilized to uplift the quality of their lives. This is what makes it one of the most challenging villages for the application of any intervention by an organization. The whole settlement has come to exist because of the presence of a factory adjacent to the settlement. The lure of employment opportunity in the factory had drawn in quite a huge populace from not just within the state but from many adjacent states. But, about 20 years ago, the factory was shut down due to internal politics at the managerial level rendering the people of this area jobless. These people who had migrated and settled here out of convenience, who were completely dependent on the factory for running their livelihoods, now hardly had any source of income left. The people were now making less than ₹3000 per household, which in the absence of land or any other assets, indeed made their livelihoods very difficult to sustain.

Over the years, the villagers had encroached upon the forest land and created a settlement for themselves. The government, which until recently was unable to provide an alternative settlement to these people, was now issuing them ownership rights under the PMGAY scheme. But this ownership right was also provided in limited numbers. Others still lived in "tappariyas" or mud houses using the plastic shed as roofs. The people of the village were living in a state of abject poverty with no means to uplift the quality of their lives. One of the major problems was the lack of all-weather motorable access to and from the village. The village was accessible only by a kutch road from Salamatpur station through a small underpass through the railway track. This underpass used to get flooded frequently during the monsoons, leaving the people with no other option than to cross the railway track. All the institutions imperative for a household's sustenance could only be accessed by crossing over and reaching Salamatpur, be it the PHC, the panchayat Bhawan, the high school or the nearest market. Because of this, many people had lost their lives. These casualties had become so frequent that a death caused by this came as no surprise for the villagers.

Kamal Bhai is one of the oldest residents of the village and was formerly employed in the factory as a permanent employee. The factory he says was the only source of livelihood for more than 98% of the people in the village and after it was shut down many people lost their jobs and many households came to a standstill. Rajeev Nagar, he says, requires the aid of panchayat and NGOs more than any other neighboring village because the quality of life here is very poor and lacks proper sanitation and hygiene. He says, "unless we have a regular source of income throughout the

year, we cannot think of implementing the suggestions of the NGOs and other organizations. For the success of any of these action plans public participation is most desired. For us to become an integral part of these interventions, it is a must that we have a constant source of employment. I find work on some days and on some days, I don't. The thought of not having two complete meals haunts me but I have no other alternative employment opportunity that I may resort to." As management students, you should start appreciating the fact that even in his meager income, people like Kamal Bhai and all the others in that village are able to sustain themselves and prevent themselves from perishing. He says that one NGO has intervened and has been successful in imparting masonry training to 50 women within the village to augment their incomes. But there still remains a lot to be done. As managers, we must ponder over the possibilities for further interventions including those in the fields of employment, health, and sanitation, skill development, etc. Simultaneously, we must also realize that the intervention should be such that it augments their lives and not make it difficult for them. Any intervention is only as strong as the number of locals it mobilizes and involves. We should be capable enough to make appropriate judgments on these lines. These are some of the problems that we as rural managers and future policymakers must-have solutions to.

The Hidden Challenge

Lack of employment has heavily affected the quality of life that these villagers are leading. In absence of substantial income, the residents of Rajeev Nagar are forced to sustain their lives in subhuman unhygienic conditions. They don't have access to decent sanitation and sewer facilities. Although located on the other side of the railway station of Salamatpur, which has a sparse population, there seemed to be a lot of solid and liquid waste, which was littered all around the village. The consumption pattern of the villagers was that of subsistence and all the daily wastes that were generated were discarded in the open without proper treatment. As a fallout of the same, the incidences of physical ailments and diseases were common. The villagers had developed unhealthy habitual methods of generation and disposal of waste which gave rise to a mentality wherein the hazardous consequences of inefficient waste management were not a priority. There was a dire need to challenge and check these kinds of activities around the village. As a wise man once said "cleanliness is next to godliness" – unless these practices were taken care of by a third-party intervention which sensitized the residents about the ill effects of improper and ineffective waste disposal, including both solid and liquid waste, incidences of diseases would be frequent throughout the year. There also has to be an element of moral obligation among the residents not to encourage similar activities. Proper disposal and management of waste would inculcate a sense of cleanliness among the people and by extension instill in them an urge towards leading a better life. Though easier said than done, any similar initiatives would have to encourage & motivate the residents to augment their livelihoods. Mahatma Gandhi had said "cleanliness is more important than political freedom. If a person is not clean then he cannot remain healthy. Only villages in India can be made ideal with better cleanliness. It is important to keep the toilet clean like your living room."

Response

The response to the current scenario is such that most of the people of Rajeev Nagar are unaware and indifferent to the consequences of their unhygienic practices. There, however, existed a group of households that were willing to practice, and maintain hygiene and sanitation but lacked proper resources to carry out the same. Kamal Bhai was of the opinion that the interventions regarding sanitation and waste management must be fully funded either by the government or a particular

NGO so that they might not have to put in their own money and construct certain amenities within their homes. Without aid and awareness, Kamal Bhai and his neighbors tend to dispose of all kinds of wastes in water bodies, thereby clogging the drains which in turn leads to an infestation of flies, mosquitoes, ticks, worms, and other insects. Kamal Bhai and others did not realize that the wastes were also disposed in and around the underpasses, the fallow land or simply outside their homes in the open. "The most we can do is to burn the wastes," says Kamal Bhai. He is unaware of the hazardous consequences they might be exposing themselves and their children in the near future. Due to improper disposal of types of waste (wet /dry), the soil and water table of the surroundings get contaminated with various harmful bacteria and viruses. This also pollutes the water from the hand pump that the residents used for washing and cleaning purposes. This water which was already unfit for drinking because of high iron content, became even more unhealthy due to this contamination, adding yet again to the woes of the villagers. Another aspect that is noteworthy is that the families of Kamal Bhai and his adjoining neighbors still practice open defecation. Human excreta was also negligently disposed of without proper caution giving rise to frequent cases of diseases like haiza (cholera), malaria, dengue, hepatitis, and typhoid. Kamal Bhai says "There is no garbage disposal unit or a mode by which these household wastes can be carried out from the village and disposed off properly – largely due to the dilapidated condition of the road that connects the village to the main Salamatpur area."

On average a typical village household threw about one hundred grams of biodegradable waste and fifty grams of non-biodegradable waste every day. This amount of waste if properly managed could significantly improve the villagers' lives and solve many of their problems.



Road to the Village



Waste mismanagement.

Action Plan

A plan of action regarding the current waste management scenario seemed quite imperative in order to improve the quality of life of the residents at Rajeev Nagar village. The members of the NGO had a meeting with Kamal Bhai and like-minded individuals and decided upon creating a viable disposal mechanism along with an awareness drive for sensitizing the villagers with respect to cleanliness and waste differentiation. Few steps were taken for the benefit of the villages. Firstly, an awareness drive was conducted by the NGO in the village regarding the importance of sanitation and hygiene. They were made aware of the diseases that the residents and their children fall victim to from time to time, which were caused by their own unhygienic practices and improper disposal of household wastes. Secondly, the NGO and the active villagers conceptualised the idea of creating “naadas” (pit) at some specific locations around the village where the residents could discard their household (biodegradable) wastes at their convenience, and cover it up once it got filled – later it could be converted to manure by proper treatment. The residents were asked to maintain waste bins in their household. They were made aware of the benefits they would reap if the waste was discarded properly; in monetary terms as well as in terms of employment if any. The creation of toilets in collaboration with the panchayat or NGO can prove to be effective in this cleanliness drive. Moreover, the people were also made aware of the social consequences of not constructing a toilet or using it regularly, with the help of telefilms. The objective was to make them morally obligated to take up the task and enforce the habit of using toilets in the near future. Lastly, a non-biodegradable waste collection mechanism is to be created to tackle the situation of poor waste disposal in the area of Rajeev Nagar.

This plan they decided, after mapping the entire village, would require seven hundred dust bins, two for every house. If these dustbins were brought in bulk, then the cost of the entire project would amount to only ₹42000. Each dustbin would cost only ₹6. The Sarpanch of the village who understood the long term benefits of the project agreed to lend his support and provide the aforementioned amount for the implementation of the project in the village.

Implementation

The implementation procedure for the awareness programme as mentioned above was through FGDs (focus group discussions with the NGO) consisting of fifteen to twenty members at eight convenient locations in the village. Here the residents were sensitized about the importance of proper hygiene and also about the importance of constructing toilets in their households. The villagers were taught about the difference between the two types of wastes (biodegradable or non-bio-degradable) and the methodology to classify them by the experts and experienced individuals from the NGO. Moreover, these member participants were asked the distance they were willing to travel to discard their non-biodegradable wastes. These were taken to be the potential locations of placing garbage rakes – which would later be cleared by local salvagers (kabadiwalas) once or twice a month. These salvagers could sell this waste to the recycling industry thereby augmenting their income in the process.

The biodegradable waste was thrown by the villagers in ‘naadis’ inside their own house or a nearby place which was dug by them on their own. When a naadi fills up, it would be covered with soil. This would increase the fertility of the land, thereby providing villagers with an option to grow vegetative plants to increase their self-reliability. These interventions also helped to improve the aesthetics of the area which in turn encouraged the villagers to adopt better livelihood options.

****Note** - Pradhan Mantri Gramin Awaas Yojana (PMGAY), already Indira Awaas Yojana (IAY), is a social welfare lead program, made by the Indian Government, to give lodging to the provincial poor in India. A comparable plan for urban poor was propelled in 2015 as Housing for All by 2022. Indira Awaas Yojana was propelled in 1985 by Rajiv Gandhi, the then Prime Minister of India, as one of the significant lead projects of the Ministry of Rural Development to build houses for the BPL populace in the towns.

Lessons learnt

1. Improper waste management may lead to wide-spread diseases.
2. Non-biodegradable and biodegradable waste must be collected separately.
3. A village's inaccessibility is gauged by the condition of roads that lead to it.
4. Landfills and Naadas are a good alternative where the proper waste management is at a nascent stage.
5. Cleanliness augments the aesthetics of the residents of an area and motivates them to change to better livelihood options.
6. In respect of waste management, dry and wet wastes must be collected and disposed of separately as each category of waste has a different mechanism to be treated.
7. Improper/No waste disposal leads to Land Degradation, Groundwater pollution i.e it pollutes an important natural resource and creates an additional burden of cleansing/treating groundwater resources with specialized tools.

Questions for Discussion

1. How is the definition of rural different from what is generally perceived with respect to this case ?

- How can imposing moral obligations stimulate individuals to follow social norms? As described in the caselet, it was easy to implement the changes in the village but it would be difficult in any other village. How would you tackle such situations and what interventions would you introduce to change the mindset of the villagers?

Course Positioning

This case requires no prior expertise and may be used for teaching and classroom discussions for undergraduate students. The course would be a good fit in the course, RW2 - Solid and Liquid Waste Management

About the Author

This caselet is written by Arkopal Saha. He got the inspiration to write this caselet from his village fieldwork experience in Madhya Pradesh.⁸

⁸The author is grateful to Samarthan Centre for development at Madhya Pradesh which has been instrumental in being a guiding force behind this caselet. The work done by the Centre has been inspirational and worth spreading nationwide.

Attappady Wasteland Comprehensive Environmental Conservation Project

Sohail Habeeb IRMA

Challenge

Attappady is a diverse region of steep hills and lush rainforest which lies 75 km from Palakkad. Attappady- a tribal block located at east of Silent Valley in Western Ghat is considered as one of the major impoverished and an ecologically degraded region. It is home to a population of 39% indigenous tribal people. Attappady had 100% tribal population during the 1930s and 1940s. Forest covered more than 75% of the land of Attappady and agriculture had extraordinary crop diversity, productivity and sustainability provided food security. Attappady was having fertile land and immense resources of the forest. In 1950s settlers from TamilNadu and Travancore of Kerala started migrating to Attappad .The settlers started cutting down the forest for timber and had resulted in large scale devastation of forest . Deforestation and unsuitable agricultural practices were leading to soil erosion and degradation of soil fertility. It has resulted in continuous reduction of tribal household income and poverty level in Attappady which was highest in the state (83 %).Attappady had largest percentage of wasteland in the state and it was experiencing recurrent drought and starvation deaths due to loss of productivity and fertility of the soil.

Response

Under these circumstances the Attappady Wasteland Comprehensive Environmental Conservation Project (AWCECOP) was started in 1996 to tackle processes of ecological and social deterioration and improving the economic condition of the affected tribal community. The implementing agency of AWCECOP was the Attappady Hills Area Development Society (AHADS) which used participatory model of eco-restoration and sustainable resource management. The development assistance loan of Rs 219- crore was provided by Japan International Cooperation Agency (JICA) to AHADS. Broadly the project had two major components

- 1) Eco restoration by participatory approach that can ensure the sustainability of the project
- 2) Income generating activities by livelihood security.

Due to the failure of previous government development projects and the socio-economic conditions of the tribals, the tribals initially had an indifferent attitude towards the project. The illiteracy among tribals raised concern for the success of the project. AHADS knew that a participatory approach considering all the stakeholders of the project can lead to the success of the project. Hence AHADS spent initial two-three years of the project for organizing beneficiary association at the grass-root level and capacity building of tribal to administer project implementation. These includes, participatory rural appraisal techniques, group meetings in tribal hamlets, environmental literacy campaign, training programmes to elected members from User Groups, Ooru Vikasana Samithy (OVS), Joint Forest Management Committees(JFMC) ,Income generation activity group, maintenance of accounts, conflict resolution for the smooth handling of execution of works and to help them maintain transparency. AHADS approached the project in a holistic way that can influence the livelihood of tribals and their resource management which ensured the participation from the tribal. For the implementation of the project AHADS employed only tribal people among the grass-root level as well as for supervision also. The wages offered for the implementation of the project were higher than what they get before that gave incentive for the tribals to cooperate with the project.

Actions Taken

For the project implementation at the field level, the Attappady block was divided into 146 micro watersheds, and villagers living in 93 micro watersheds were organized into User Associations (UAs) or user groups were engaged in planning, implementation, and management for the construction of facilities for the recovery of the environment.. Remaining 53 micro watersheds were state forestland, and villagers living in this neighborhood constituted Joint Forest Management Committee and engaged themselves in plantation and forest protection. In 166 villages of the Attappady block, Ooru Vikasana Samithies (OVS) was established .Income Generation Activity groups were established for income increasing the income of the members. The number of groups, the number of members, and their function is mentioned in Exhibit 2[1]

A minimum number of women members were needed to be selected in all people's institution and women were considered as the agents of change. Before the project, women do not have much interaction outside the community but the project helped in the empowerment of women to acquire skills and interaction with NGOs, banks, and government .People's institution comprised of

1 User Association or User Groups-It consisted of people residing in the micro watershed area irrespective of social group i.e. settlers and tribals. User groups consisted of 9 members out of which at least six must be tribal and at least five must be women. The user group's objective was not only eco-restoration but also self-sufficiency of the members in the house, food, health, employment and agricultural production aiming long term improvement in the life of tribals. The user group handled the contract works of AHADS and ensured transparency by appointing three members as social auditors.

2 Ooru Vikasana Samithy (OVS)or Hamlet Development Committee-It consisted of only tribal belonging to particular hamlet in the micro watershed area. Two adult member from each family was members and they selected the 13 member executive committee out of which five must be women members. The objective of OVS was the cultural and economic development of tribals by the construction of toilets, schools, medical center and cultivate a habit of savings.

3 Joint Forest Management Committee(JFMC)-It was open to those willing to participate and depending on forest produce. Apart from the project objective of AHADS, it also aimed at sustainable and equitable access to forest produce to tribals. In JFMC, 3 out of 9 members must be women but the number of ST people was not fixed. JFMC also hired watchmen from tribal to protect and monitor forests in association with the forest department.

4 Income Generation Activity(IGA) Group- IGA group of 12-15 members were formed under user groups .They planned for income generation activity by the marketing of forest products to tribal. They also trained tribal for livelihood generation activity like broom making etc.

All the activities of the AHADS project were carried out by these people's institutions .The inclusion of tribal communities in the planning and implementation of the project helped in gaining trust among the community. People's institutions had the option to do auditing if they found any discrepancy or corruption in the implementation of the project. The project helped in the financial inclusion of tribals by creating self-help groups and credit facilities. By experiencing the benefit from the project people started cooperating with the project.

This is fine. What were the initial steps taken to bring in the trust among the villagers to adopt this? Were there any resistance? How did they bring the community together? these are important to discuss in the class.

The activities involved were

- 1 Forestry Activities –This consisted of Afforestation activities and conservation activities in forest. The project was successful in planting trees in 11000 hectares of barren land .The wage offered was Rs 100 and Rs 80 for men and women respectively .This was double that was offered if they work outside
- 2 Soil and water conservation activities-This included recharging of aquifers, spring protection and rain harvesting methods that ensured water conservation. Contour bunds, bench terraces ,water percolation pits and check dams where created to conserve soil from erosion and prevent landslide
- 3 Agriculture and livestock activities-AHADS brought 5000 hectares of fallow land back to agricultural activities and it also supported wadi project that helped in conserving environment as well as a livelihood opportunity for the tribal. Organic farming and growing medicinal plants where adopted by tribal by support of AHADS. AHADS also supplied goats to tribal which helped diversifying the livelihood of tribal
- 4 Income Generation Activity-They provided training to tribal and helped in setting up tribal store which provided market linkage to forest produce that helped to obtain good price for their produce Dal processing unit and fencing post making company was started .

Outcomes of the Project

The project was successful in regenerating forest cover in the region .Approximately seventy lakh saplings were planted during the project and the survival rate was 70 percent in forest areas and 62 percent in private lands. Exhibit shows impact of intervention on wasteland .The combination of afforestation and water and soil conservation activity helped in rejuvenating streams and water sources throughout the region which were dried up decades ago .The ground water availability improved along with discharge that ensure better water supply for irrigation as well as domestic purpose .With availability of water agricultural land was able to get expanded and land productivity improved which enabled tribals to gain more income .The details of cultivated areas and productivity is showed in exhibit . The project helped in creating forest produce enterprises that procured and marketed forest produce as well as value added products .This enabled tribal to avoid exploitation from middlemen and gain more price for their products .For example brooms which middlemen pay only 10 per piece was able to get upto 40 per piece when they directly marketed it .Before the project for financial credits tribals needed to depend on local moneylenders who charged very high interest rates while after the project, self-help groups that were formed during project were able to give credit facility to members from their member money savings .The project had many other effects like improving status of women ,tribals able to have management skills etc.

Annexures

Exhibit 1 Project Profile

PROJECT AREA PROFILE (ATTAPPADY BLOCK)	
Geographical area	745 sq.km
Forest land	444 sq.km
Private land	301 sq.km
Waste land	507 sq.km
Development unit	15
Micro watershed	160
Human inhabited micro watershed	93
User associations	93
Ooru Vikasana Samithi (Hamlet development committee)	146
Total Population (1991)	62,033
Tribal Population (1991)	24,227

Source-AHADS

Exhibit 2 - The number of People's Institution, the number of members and the functions

Name of the people's institution	The number of groups	Total number of members except income generation groups	Functions
User Group	93	30,702	To plan, construct and maintain facilities
Joint Forest Management Committee	53	9,227	Plantation and maintenance of forests
Ooru Vikasana Samithy	163	19,754	To plan, construct and maintain facilities for community development
Income Generation Activity groups	220	12-15 members in each group	To be engaged in income generating activities

Source: AHADS

Exhibit 3: Showing impact of Intervention on wasteland.



Attappady before Afforestation Activity



Attappady after afforestation activity

Lessons Learnt

- 1 Participatory approach of natural resource management by grass root democratic institution can help in sustainable environment conservation.
- 2 Coordination of multidisciplinary teams can help in replicating the physical implementation of different structures for soil and water conservation, in different development unit.

Questions for Discussion

- 1 What are various activities adopted for the Attappady Wasteland Comprehensive Environmental Conservation Project
2. What are challenges on the post project sustainability?

Course Positioning

The caselet is ideal for the course in Rural Planning and Development as it describes strategy to face environment degradation through natural resource management and solve a prevalent tribal problem. The caselet will be helpful in explaining how environment problem can be overcome by participatory livelihood intervention.

Chakhaji – The Ideal Village

Susmit Biswas, G Surya Theja IRMA

Challenge

Despite a sultry July afternoon, Ritam was sipping his third cup of tea looking at Akhil with the same amused look regarding how to proceed with the project. Ritam and Akhil are summer interns with an International Organization called Water Management International (WMI) which had initiated a pilot project in the village regarding solar irrigation and had asked them to do a detailed impact evaluation of the project. They were given seven days to visit the village and prepare a plan regarding the methodology for the impact evaluation and report back to the organisation.

Water Management International (WMI) had been a huge critic of the existing solar irrigation scheme of Bihar called BIHAR SAUR KRANTI SINCHAI YOJANA (BSKSY). They wanted to propose an alternative policy model with the use of solar irrigation service providers to reduce the dependence on diesel pumps. For this, they chose to launch a small pilot in a village in Bihar. After much consideration, they chose the village Chakhaji in Samastipur district of Bihar and launched the pilot in Dec 2016 with privately-owned solar pumps. In 2018, they sent two summer Interns to see how these have been successful in removing the dependence on the diesel pumps and how the solar pumps have affected the agronomy of Chakhaji.

Akhil and Ritam are first-year students from a premier rural management institute producing brilliant rural managers since 1978. On visiting Chakhaji, they find that the village is characterised by fragmented landholdings wherein the farmers are cultivating parcels of land which are located at different places in the village. There are solar pump owners who were selected strategically to cover the entire village but owing to the fragmented landholding of the farmers even their customers were overlapping (Refer to Exhibit 1 and Exhibit 2 to see the map of Chakhaji and obtain the number of customers under each solar pump owner). They must decide on the sampling plan to be adopted for this study and also the parameters through which they can showcase the impact on the economy of Chakhaji. WMI had not done any study in Chakhaji before implementing their pilot, and hence baseline data was unavailable. It has been two days; both of them are yet to figure out the best methodology for their project. If they cannot come up with a suitable methodology, WMI might scrap their entire project all together leaving their future in jeopardy.

Response

Agriculture in Bihar

Bihar is located in the river plains of the basin of the river Ganga. It is endowed with fertile alluvial soil with abundant water resources, especially groundwater resources. This makes the agriculture of Bihar rich and diverse. Rice, wheat, and maize are the major cereal crops. Arhad, urad, moong, gram, pea, lentils, and khesaria are some of the pulses cultivated in Bihar. Bihar is one of the largest producers of vegetables, which is dominated by potato, onion, eggplant, and cauliflower.

In fruit cultivation, it is the largest producer of lychee and the third-largest producer of pineapple, as well as a significant producer of mango, banana, and guava. Sugar cane and jute are two other

major cash crops of Bihar. If we look at the cropping intensity of Bihar, it is 142%, which is higher than the India average of 136%. Around 77% of the total population is engaged in agriculture, and also more than 60% of the entire land is sown, which is just an indicator of how fertile the land in Bihar is. In Bihar, according to 2015-16 statistics, the net irrigated area is 2958000 hectares. Recently, high-value horticulture viz floriculture and aromatic plant cultivation have caught the imagination of the farmers because of its increasing demand.

Bihar is considered a destination for second Green Revolution in the country. Several reports including the National Farmers Commission, have emphasised the need for accelerated development of agriculture in eastern India for securing food security of the country. Dr A.P.J. Abdul Kalam, the then President of India has described Agriculture as Core Competence of Bihar. The State Government is implementing a Road Map of Agriculture development. The Agriculture Road Map aims at Food and Nutritional Security of state population, increase in farmer's income, gainful employment to the agriculturist and check on migration, equitable agricultural growth with focus on gender and human aspects and sustainable use of natural resources for sustainability of production system. In Bihar, where almost 90 per cent of all holdings is marginal, the average marginal holding size is 0.62 acres. On top of that the farmlands in Bihar are fragmented and broken into several parcels with each parcel being separated by great distances. Owing to this, there lies a system of leasing in and leasing out agricultural land as per convenience between farmers. The local measure for calculating land area is Katha. (1 Acre = 22 Kathas, 1 Hectare = 54.36 Kathas)

When we look at the Eastern Belt in terms of Water-Energy Nexus Map, we can see that there is a shortage of electrical structures in the region. On top of that, owing to the Ganga-Brahmaputra basin, there is an abundance of groundwater resource in the area. Owing to this, there are mostly diesel pumps in the area which are environmentally unsustainable and have many operational deficiencies. These reasons mainly facilitated a potential for solar pumps to operate in these regions and act as an alternative to the existing diesel pumps. Despite sitting on one of the world's best groundwater aquifers, farmers in Bihar face economic water scarcity due to the lack of rural electrification and the high price of diesel. Over the last decade, the irrigated area in Bihar has grown by a mere 5 per cent per annum (GoB 2014). The extent to which economic water scarcity limits agrarian growth is illustrated by the fact that only 37 per cent of the cultivated area is cropped more than once; the corresponding figures for Punjab, Haryana and even neighbouring West Bengal lies between 85 and 90 per cent (FAI 2011). Some scholars have argued that multiple cropping in Bihar is constrained by cultural and climatic factors while others have argued that recurrent floods and waterlogging restrict winter cultivation while the severe heat discourages summer cultivation. However, these arguments seem weak when we compare Bihar's cropping intensity with that of neighbouring West Bengal which faces similar severity of heat but where boro (summer) paddy is highly productive. In 2008, the government of Bihar started a conditional cash transfer scheme to provide subsidy on diesel to mitigate the effects of drought on paddy production. This scheme intends to provide support to drought-affected farmers so that they are not compelled to leave their land fallow. By 2013, the government had spent close to ₹1,923 Cr. but the scheme has proven to be ineffective in promoting protective irrigation. Instead, it ended up being a drought relief scheme giving payment to farmers who produced a diesel receipt. Kishore (2015) found the scheme riddled with poor targeting and high transaction cost.

Bihar Saur Kranti Sinchai Yojana (BSKSY) - Bihar Government's Initiative to provide solar energy to farmers for irrigation

In 2012, Bihar Government came up with their Bihar Saur Kranti Sinchai Yojana (BSKSY) which provided farmers with a 2HP-2KWP pump at a 90% subsidy. The main issues with this scheme were the 2HP-2KWP pumps which pumped water from a depth of 70-100 ft. And were ineffective during Zaid season when the water level fell below that level in many regions of Bihar. For a small 2HP-2KWP, the subsidy (90%), as well as the unit cost, is very high (140000 per KWP) while the unit cost is only 75000 per KWP for a 5HP-5KWP solar pump with only 60% subsidy. The smaller pumps also irrigate up to only 0.3 acres or six kathas in a day whereas the 5 HP pumps can irrigate up to 1 acre or 22 kathas in a day. The smaller pumps can be run efficiently for 80 days in a year whereas the 5 HP pumps run efficiently for more than 200 days in a year. These factors clearly show the sub-optimal outputs of the smaller pumps promoted under BSKSY⁹

WMI Intervention and Critical view of BSKSY

WMI felt that the problem with this scheme was that the model was an owner-centric model where farmers having land holding less than 5 acres, a functioning bore well were provided with a 2 kW solar pump. It aimed at providing irrigation facility by providing 90% subsidy to the farmers. However, this completely ignored the fragmented landholding of the farmers, which made it impossible for the farmers to irrigate their farmlands using a single solar pump. As a result, even with lucrative subsidies, there were very few takers for solar pumps under this scheme. They argued that the farmers should be incentivised to buy these solar pumps by providing them with an income-generating option. They argued in favour of providing large solar pumps to a few farmers who can then sell irrigation water to other farmers at a lower price. This would give additional income to the pump owner and also for the cost of irrigation would be less than the cost of operating their diesel pumps. Thus, a buyer-centric water market would be created with pump owners being referred to as Solar Irrigation Service Providers (SISPs).

As policy advocacy, WMI proposed an alternative model of creating a solar irrigation water market with 5HP-5KWP pumps provided at a 60% subsidy. The main objective of the intervention was to show how farmers are willing to adopt solar technology if they are provided with proper incentives. The response not only created an irrigation water market where solar pump users can sell water but also worked on the core belief that a saturated irrigation market would lead to efficient utilisation of water. This alternative model was introduced in Chakhaji in Samastipur, Bihar with 7 Solar Irrigation Service Providers (SISPs). They were also provided 1000 ft. of buried pipeline to distribute water to the buyers.

Action Taken

Ritam and Akhil remembered the Sampling Techniques and Methodologies taught in the Statistics and Research Methodology course at their institute. They had initially thought that random sampling would have sufficed for the project, but on viewing the village, they are no longer sure. Moreover, they must decide on the parameters for seeing the impact of the solar pumps and also decide how to show the differences in those parameters in the absence of baseline data. They have

five more days to decide on this as they are due to present their methodology for approval at WMI. They decide to meet the SISPs tomorrow and talk to them regarding their area of operation, mode of operating the solar pumps and the number of customers. They feel their insights would be valuable for giving them further clarity regarding how to proceed with the project and help in preparing a map for the study area with the service areas indicated. For the parameters, they can either use the recall of the farmers to obtain data points before and after the intervention or for more accurate data they can identify another similar village-like Chakhaji which is completely diesel irrigated and compare the parameters to obtain the impact. There are 3-4 villages around Chakhaji which are thoroughly diesel irrigated namely Chandoli, Bela, Kajiya and Jagadishpur.

Lessons Learnt

1. Application of Statistical tools in Rural Environment
2. The challenges in applying sampling and methodology tools in different village scenarios
3. Deciding proper methods for Impact Evaluation- Using Propensity Score Matching or Difference-in-difference etc.

Questions for Discussion

1. Evaluate the Bihar Saur Kranti Sinchai Yojana as a policy evaluation.
2. Explain whether the students feel that the WMI intervention will be successfully adopted by the Bihar villagers when applied on a large scale? If there are some inherent problems with the model proposed?
3. Describe the parameters on which impact evaluation should be done by Akhil and Ritam.
4. How should the sampling be done?
5. Should the protagonists use the recall of the villagers for obtaining data points for 2016 and 2018 or collect data from Chakhaji and a similar diesel village for 2018?

Course Positioning

The caselet is suitable for a course in Quantitative Statistics and Research Methodology in the field of Rural Management especially how it is required in Impact Evaluation of Rural Development Interventions. It talks about how applying statistical tools can be complicated in a rural scenario. Though it talks about one village in Bihar, the caselet can be applied generally in any village scenario where an individual can go for impact evaluation.

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About the Authors

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A B.Sc graduate in Economics with honours with specialisation in Econometrics and Development Economics at Calcutta University. Currently pursuing second year Post Graduate Diploma in Rural Management at the Institute of Rural Management Anand. He has research interests in the area of Development Interventions, Alternate Energy in Agriculture and Applied Econometrics in Research Studies.

G Surya Theja

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Annexures

Exhibit 1

Map showing the service provision area of solar pump owners (SISPS)

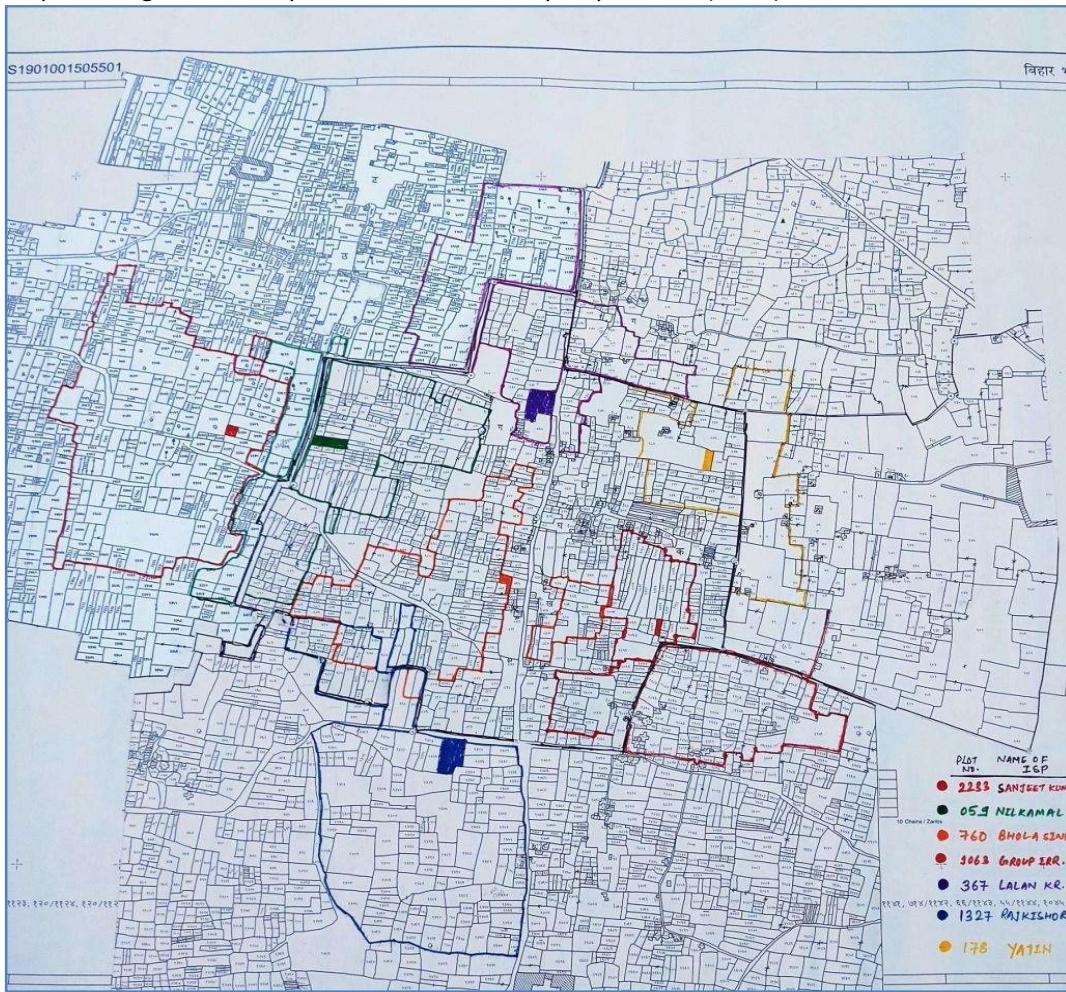


Exhibit 2**SISPs Profiles and their area covered**

SISPs	Pump Operation is done by	Areas Covered (Acres)	Number of Buyers
Sanjeet	Operator	30	60
Neelkamal	Self	55	120
Yatin	Self, partly assisted by Father	31	91
Rajkishore	Operator	35	134
Lalan	Father	42	40
Bhola	Son	30	100
Group ISP	Operator	37	110

The Unheard Voice of Nilgiris

Arjun V S, IRMA

Challenge

Again the lights went off as they opened their books to prepare for tomorrow's half-yearly exam. Madan Das, a tribal leader of the Paniya community was taking tuition class for the children in his hamlet of Athichal. Athichal is a small tribal hamlet of the Paniya tribal community in Cherangode village of The Nilgiris district. Of the twelve students that he took tuition, all of them except for one felt relieved as they can go back to their house and sleep because they knew the power is not going to come back any time soon. Keerthi, the daughter of Madan is the only one regretting the situation unlike the other students as she was keen to learn and wished to help her father one-day in working for the development of the tribal community. Madan Das being the eldest son of Chathi, who was the leader of the Paniya tribe in the previous generation by which Madan is expected to take over the leadership and lead the community in this generation. After completing his schooling in Ooty and graduation in Pondicherry, he came back to his village and dedicated himself to contribute to the development of his community. Madan is the only person from their community to do graduation and is considered the wisest of all in their community. Having good relationships with an NGO working for the development of tribals in that area, Madan understands that the major challenge for his community is the lack of education.

Background

Athichal is one of the Tribal hamlets in the foot of Cherangode Mountain. Cherangode is geographically the largest village in the southern part of India. It is located in the district of Nilgiris in Tamil Nadu. The Village is a tri-junctional situated between Tamil Nadu, Karnataka, and Kerala. It has a total geographical area of 18518.08 acres, with 74 hamlets. It is rich in its biodiversity and the diverse flora and fauna that range from elephants, tigers to Neela kurinji which is a shrub that flowers only once in 12 years. Eucalyptus is among the commonly growing coniferous trees in this hilly terrain. One among these hills is the Cherangode Mountain which is the identity of the Cherangode village and most of the tribal hamlets are located around this mountain (**exhibit 1** gives a rough idea about the village map and the surrounding geography). There are four important tribal groups with diverse tradition, culture as well as language in this village as it is the geographically sharing border of three states. The details of tribal groups and other population in the village is given in **exhibit 2**. These tribal groups are categorized as "ParticularlyVulnerable Tribal Groups (PVTGs)" by the government of India.

Response

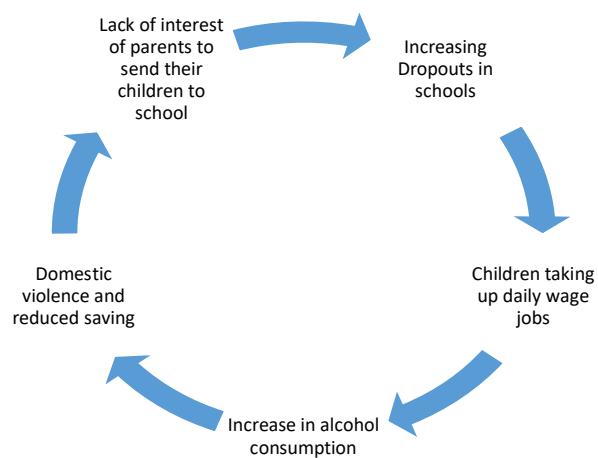
Madan traces the cause of lack of proper education to high dropout rates in schools and alcoholism in the hamlet. For solving this problem, initially, he thought an interest need to be created among the children for which he started taking tuition classes. The classes were taken in an interactive way such as asking them what happened in school that day and what were their aspirations for the future. He also provided books and food to the children who came for classes even though he was not financially in a position to provide them these facilities. On the contrary, parents in the hamlet were not able to understand the importance of education. They just wanted to send their children to school because they will be provided with the mid-day meal and now as Madan is providing a similar

incentive they considered it as a privilege. Children from their community find it very difficult to continue education after reaching eighth standard as they would be forced by their parents to take up daily wage jobs. So children had to discontinue their studies and hence the need for tuition from Madan was also reduced for the students on reaching high school.

Actions Taken

On observing further, it occurred to him that the lack of education is just a symptom of several factors, one being the addiction towards alcoholism. As a result, Madan decided to change the perception of parents towardsthe prevailing alcoholism that leads to joblessness and domestic violence. He tried conducting awareness programs in the hamlet to address this issue by inviting NGO, influential people but found it to be ineffective as alcoholism was a problem prevailing across all ages and across genders. Raising his voice against the sensitive issue of alcoholism had turned up a few people in the community against him as they considered alcohol to be an inevitable part of their life. Madan also understands alcohol is something that cannot be kept away from these people as it is considered as a part of the tradition and culture. Alcohol is even considered as an offering to their god. However, these issues cannot be addressed in isolation as one issue leads to another and is rooted in several cultural practices. The problems form a vicious cycle as represented.

Vicious Cycle



Madan is currently doubtful of breaking the vicious cycle and bringing a change single handedly. At the same time, he wishes to protect his children from this vicious loop. Thus he thinks of moving out of the hamlet as it would at least ensure his children a better place to get an education and allows himself to get a job.

Lessons Learnt

A leader should think in the perspective of the members of the community. Only then can a leader motivate the community to progress. The motivation should come within the community as it should be a participatory approach which is why the awareness programs conducted by outside people failed. Also, attaining self-sufficiency through progressive change and showing the results might create a spark among the people of the hamlet.

Questions for Discussion

1. Should Madan stay in the hamlet or should he move out of the hamlet for better prospects at least for his children?

He arrived at this situation as he is not clear if his contributions are reaching the people of his community in an intended manner. He made several efforts to address the issues faced by them but neither was he able to make considerable progress nor the people want to put the effort to better their condition of living. As he puts more efforts he is finding himself aligning in a way that is contradicting actions and views of more and more people in his own community.

2. Will Madan moving out hamper the morale of the people in the hamlet aspiring for a change?

3. In the light of failing interventions in the hamlet by Madan, discuss your views on the effectiveness of any potential interventions by government or NGOs in the future.

Course Positioning

The case let would be suitable for showing a light up on problems faced by a tribal community. The discussion of the case is aimed to understand that for their development of a community of people such as a tribal community, instead forcing a change on them, they should be enabled with resources and skills to adapt to the world outside their ecosystem and become competent to survive the challenges.

About the Author

This caselet is written by Arjun V S. He got the inspiration to write this caselet from his village field work experience in The Nilgiris, Tamil Nadu.

Annexures

Exhibit 1: Village map of Cherangode

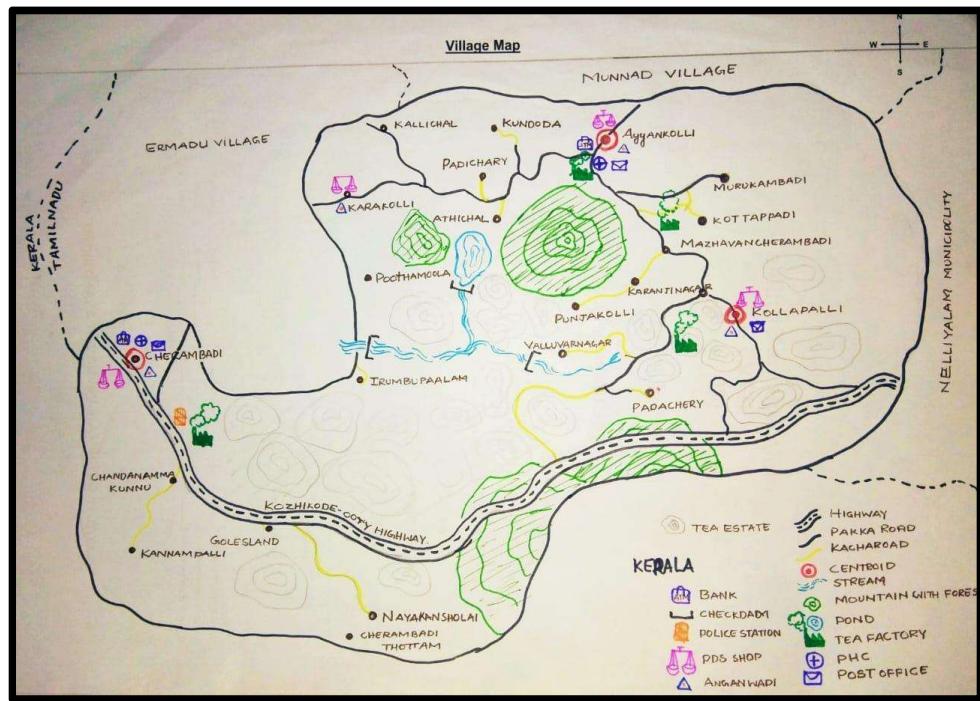
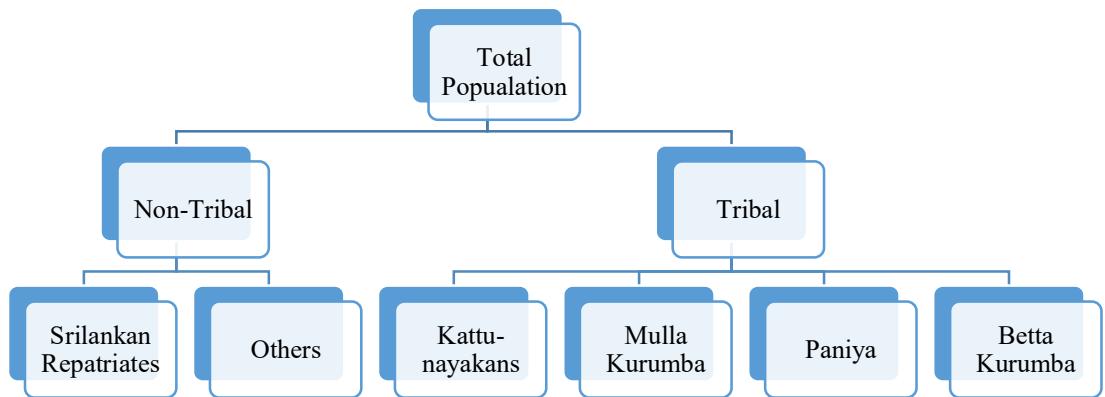


Exhibit 2: Diversity of Population in the village



Transforming Lives of Women Homeworkers in a Village Near Bareilly

Isha Jain IRMA

Challenge

Heena, a 28-year-old female zardozi craft homeworker from a village near Bareilly, Uttar Pradesh, explains her situation:

“Every morning I wake up with a hope to get some work to earn bread for my family. I don’t have many options to feed my children. Only regular work can support us to earn a living.”

Like Heena there are 300 million homeworkers in the developing country most of whom are women and 80% are from the poorest families.¹⁰ They work for subcontractors or an intermediary for a piece rate under informal work arrangements. Home-based work is different from domestic work done in other people’s homes for cash income or unpaid household work done for their own family.¹¹ It has been practiced in form of traditional handicraft production such as weaving and embroidery and processing of natural products by women who have restricted mobility due to cultural factors. Handicraft was used as a coping strategy for shocks by the women artisans who were illiterate, unorganized and in dire need of money. But now due to lack of employment opportunities in the formal sector and increase in demand for handicrafts in the export market, the practice of subcontracting has grown which is promoting flexible contractual work. Thus, home-based work once linked to traditional handicraft industry is gaining significance in modern and non-traditional industries such as garments, accessories, footwear, etc. A large number of companies have homeworkers in their supply chain. Although being a significant part of the workforce these women are invisible and ignored. The supply of work is irregular and they do not have access to working terms and conditions entitled to employees. The reliance on such work for income is increasingly making them vulnerable paving the way of exploitation such as low wages, insufficient social security and benefits, poor health and safety, discrimination and long working hours. Due to dispersed location of the workers it is difficult for companies to reach them and track the quality of the produce leading to an increased cost. The business and ethical risks in this complex supply chain are increasing day by day. There are evidences of child labor. Many companies are criticized for irresponsible and unethical practices in the supply chain.

Response

Roshni Sansthan, an NGO working for women empowerment in the region identified the issues faced by women like Heena. These women were geographically scattered and worked in silos which made it very difficult for them to harness economies of scale resulting in inefficiency. Information asymmetry led to differential piece rates across region and they were exploited by the middlemen. Roshni Sansthan started educating these women on how collective actions could increase their bargaining power which could help them in getting more work and fair wages. Heena along with 15 other applique artisans formed an SHG to collectively work under Roshni Sansthan who bought

¹⁰ Neelam Gupta, Invisible labor: Social security for home-based workers of the garment, agarbatti and papad industries, SEWA Bharat, Delhi, 2001, pp v and vi

¹¹ <http://www.homeworkersww.org.uk/homeworking>

occasional work from local markets. Roshni's association with Handwork Foundation has helped artisans to upgrade their traditional skills, get technical support and link themselves to national and international market. They worked from their homes which allowed them to combine childcare and domestic chores with income generation activity. As the work was occasional, they worked beyond 8 hours and often involved their children in work to ensure completion of work and extra earnings. The international orders involved adherence to policies and high-quality standards which was not possible with home-based work. The ethical and responsible companies were trying to improve the traceability and transparency in their supply chain to address the challenges and recognize the work of these invisible workers. To empower the homeworkers and improve their working conditions good practices and strategies were adopted which involved institutionalization of these homeworkers. Village based centers were established in a household where women came and worked together for fixed hours.

This helped them to build confidence and engage with women who came from other communities. The capacity building trainings, regular interactions enable these women to see the world with a wider perspective. The record keeping has made the collection and distribution systematic. Efficient micro level management has been possible through an organized payment mechanism. It acted as a catalyst to ensure transparency and accountability and made them independent and self-sufficient. The involvement of child labor vanished. The improved working conditions helped to reduce the risk of health degradation. The quality of the produce improved as the cases of spill over and spoilage reduced in the village-based centers which forbade the occurrence of such situations and provided consistency.

But the village-based centers have by and large made them face the socio-economic differences based on castes prevailing in the village. The inferiority complex was absent when these women worked from home. Many women now travelled 5kms on foot every day to come to the center for work. The working hours were stretched and they sat at the same place all day leading to health issues among these women. They did not get sufficient resting hours and were compelled to align their domestic chores with the Centre timings. There was no provision of food for them or food and care for their children back home in the afternoon. There was a need to establish a strong business environment for Handwork Foundation without compromising the needs of the artisans.

Action Taken

By adopting a collaborative approach these village-based centers were transformed into Distribution-based centers from where these women would be collecting the raw materials, working at home and delivering finished products back to the centers.

In order to comply with the international policies by the customer company village-based centers were established. But these centers were disturbing the current natural system of the communities and the interest of larger stakeholders was being compromised which further affected the productivity too. The ILO (International Labour Organization) convention addresses the issues and challenges faced by homeworkers which were adopted by the companies to improve the lives of the women artisans. The time and work management became more flexible and convenient for the women in accordance with their priorities in case of distribution-based model. Given an instance that someone who is in dire need of money and is unable to give enough hours during the assigned

time would feel it to be a lost opportunity. The concern here is what if the need of money makes the artisan push her limits and she work beyond the assigned hours leading to health issues. This was tackled by providing raw material which could be completed in the assigned number of work hours allowing the women to devote work to other activities. This arrangement also enabled children to cultivate the art by observing their mothers. Although there were traces of child labor were further resolved by timely monitoring and providing par wages to the artisans. The trainings were provided to homeworkers on weekly, monthly and quarterly basis in the distribution-based centers. These trainings were not only related to work but also included health and safety. The cost of spoilage of material was conveyed which helped in acquiring certain commitment from the artisans. The collectiveness of these women attracted regular work.

Lessons Learnt

1. How collective action helps artisans in transforming their lives.
2. Market availability and linkages are important for sustenance of income generating idea.
3. Socio-cultural factors affect the working and influences the decision making of the organizations sourcing from rural India.
4. The home-based work as a source of livelihood for women in rural areas.
5. Community engagement is very important for the success of any intervention in the rural areas.
6. It is important to give trainings to build the capacity of the people along with other benefits for an organization's success.
7. A model might not be all pervasive and needs continuous monitoring at the ground level.
8. NGOs and community-based organization plays a very vital role.

Questions for Discussion

1. Why was it important to establish collective organization like SHGs for women artisans?
2. What were the problems faced by women artisans in Village-based center model? How did Distribution-based model tackle these issues?
3. Enumerate the challenges faced by homeworkers. What are the ways they adapted to tackle these?

Course Positioning

The caselet is suitable for a course in Rural livelihood and production system. It elucidates how the marginalized women artisans successfully organized themselves as a collective, it will be helpful in introducing topics like strategies of rural development, participatory approach, and the role of leader, NGOs and private companies to empower the people in the rural areas. It will also give learners an insight of organizational structures which are prevalent among artisan community and the socio-cultural dynamics which influences these structures.

About the Author

This caselet is written by Isha Jain. She got the inspiration to write this caselet by working with women artisans in Bareilly for ETI (Ethical Trading Initiative). She had a similar experience during her village field segment with Rang sutra in Barmer district of Rajasthan.

Untapped Potential of Feminine Bharat- Story of Lalita

Kritika Wadhwa IRMA

Challenge

Why are rural women still secondary for consideration in providing employment opportunities? Nandai village (name changed) is located in Betul district in south of Madhya Pradesh. The village shelters a small population of around 1100 in 191 households (according to Census 2011). Situated 20 km away from the nearest town Betul, the village has very limited natural resources and transportation facilities. Economic activities are limited to agriculture and allied activities. Majority of the farmers are engaged in subsistence farming and landless households look for working on the fields of those who own land, in return for a share in yield during the harvest.

This story is about a 40-year old woman, Lalita Gangare, who resides in Nandai. She is the lone earning member in the family of six members. Survived by a disabled husband, diseased father-in-law and three school-going children, she struggles to earn enough to fetch two meals a day for her family. Despite being skilled in doormat weaving, papad making and manufacturing incense sticks (agarbatti), she faces a challenge of making livelihood due to absence of market linkage. She is bound to hop among odd jobs throughout the year to earn a living. Skills in village mean nothing if there is no consumer need and market awareness to the producer.

Response

Conventionally, finances have been part of the male domain, be it earning bread and butter for family or managing the family assets. This is one of the primary reasons that wealth generation activities have so far eluded women. But with the country being progressive, women in India are now considered equal stakeholders in economic growth of India. Women have been indulging in all kinds of available opportunities from manufacturing industries to government services. This has been possible not just by encouragement they have received but also by targeted awareness and education. However, such is not the case with all parts of India. With larger part of the country staying in Bharat, rural women still struggle to enjoy financial freedom. Dearth of employment opportunities for women in rural India is a serious roadblock in combating poverty.

Financial conditions of Lalita's family were not worse until Suresh Gangare, Lalita's husband, met with an accident while working in a factory two years ago, where his eye got severely injured. Lalita tried hard getting compensation from the factory owner for Suresh's operation, but since there was no formal contract with the factory owner, her efforts went futile. She had to borrow money from relatives and neighbors for her husband's treatment at high interest rates. Due to shortage of money, Suresh couldn't get required treatment on time due to which he became partially blind and was recommended not to work till his eye healed.

Lalita used to work in the fields of large farmers during sowing and harvesting season, which used to ensure the food security. Being under debt, Lalita had to go the extra mile to make both ends meet. She looked for some work in Betul and got a seasonal work as domestic help during major festivals like Diwali, Dussehra, Holi, etc. She would earn a relatively decent amount that would be used for

medication and domestic purposes for several months to come. But she couldn't travel each day to the city for work because of poor transportation facility in the village and her duty towards the family. The family was under idiosyncratic debt and found no feasible solution as to what could be done to make the situation better.

Action Taken

A reputed development foundation took an initiative to make the lives of residents of Nandai better. While the foundation officials identified the major occupation as agriculture, they intervened by providing agri-inputs (mainly seeds of both Kharif and Rabi seasons) to small and marginal farmer households to improve their income. They also brought allied sector, dairy in forefront by offering artificial insemination technique to increase production of milk in the village to give an alternate source of income for the households. The model of Village Development Committee was also made to encourage women to take part in economic development. The head of the committee was also chosen a female, who could mobilize other women in the village.

But these efforts didn't do much good to Lalita as she didn't own any land or cattle. The MGNREGS was also not active in the village where she could get daily assured wages for 100 days of the year. Although she was skilled in making different kinds of handmade papads, she didn't know how to turn the skill into livelihood. Due to lack of awareness and resources, she was unable to fetch a stable source of livelihood and was forced to work in seasonal jobs like farming on others' fields, in jaggery making units, as domestic help, etc.

A year ago, officials from another NGO visited the village and observing the condition of women, they decided to undertake a capacity building project wherein they would provide skill training to all women of Nandai and other nearby villages. Lalita and other women were very excited to learn new skills, but society didn't welcome to the proposition. Men were against the idea of empowering their wives and believed that women should stay within the four walls of the home. They didn't find any relevance in the skill training for women. Gunpal, a resident told, "Vasudha (his wife) can't go out and work as I do. The finances should be left for men in the family. The primary responsibility of my wife is to take care of home and family. If she goes and learns this course, it will hamper the daily chores of my home. I am not sending her for any class." Meanwhile, Vasudha sobbed in the kitchen as she dearly wanted to join the course.

However, the NGO took a lot of effort in bringing women together from their homes. They mobilized the people by an awareness campaign where they gathered and talked to elderly women of the village, who would usually sit idle at home, but have a higher say in the family. Once, they were convinced of the idea, they pulled a larger crowd from and outside Nandai. The NGO representatives briefed all the women about the course which was free of cost and would add value to their income generation. They got 43 enrolled on the very first day of the course. Seeking the possibility of stable livelihood opportunity, Lalita also enrolled for the training course. It was a 45-day course in which women were taught how to make agarbattis (incense sticks used for religious purposes) and weaving doormats using waste clothes. Women were inspired by the course and felt empowered. Raw material and two trainers were provided by the NGO for an hour session every day. Towards the end of the course, women were hopeful that the NGO would also provide them with a job where they could utilize the skills to earn money, but the excitement didn't last very long as after the course, the NGO had completed its project and marked it successful. But the rural women were clueless of what

to do with the skills they acquired after putting so much time and effort to learn. This was disappointing for Lalita and other participants of the course.

Lalita was determined to change her financial status and initiate a small business with the help of other women in the village in similar conditions. She called for a meeting of all the attendees of the course to discuss and understand future prospects about how can they make their skillset productive. For after dinner meeting, only a few women gathered to talk about the issue. Suchitra, Lalita's daughter started writing the emerging alternatives from the discussion.

After a long discussion, they boiled down to two major alternatives as,

1. They would form an SHG in which they all pour in a fixed small amount of money and apply for a collective loan thereafter to start a small functional unit of manufacturing agarbattis and selling them in the nearest city, Betul, on Sunday markets or,
2. they would request the Sarpanch of the village, Jagdish Choudhary, who also happened to be a large farmer among very few in the village, to lend the woman some money to start the unit with a promise to return as soon as they reach breakeven point of the business

In both cases, the group was vulnerable as they didn't have the initial capital investment. According to the convention, Self Help Groups can be given loan after a minimum of six months of their inception. Women were demotivated when the Sarpanch denied to lend money to the women citing the reason that he had saved money to buy hybrid seeds for the coming season.

In the hindsight, Lalita is very heartbroken as she doesn't have any other choice except for taking up odd jobs and feeding family. Acknowledging that all her efforts to learn new skills, gather women to crack a business idea, seems to be wasted and she is back to square one. She wonders why do organizations and Government emphasize on skilling people when there is no employment opportunity and further market linkage facility planned.

Lessons Learnt

1. Critical Mass is essential to start and accelerate a collective action. It is usually an influential person or a small group which believes in the intent of action strongly and draws less interested people from the society
2. Government and development organizations should not follow supply-driven development model as done by the NGO in this case. The officials visited and decided to skill the women in certain activities, which may or may not be of interest/use of the participating women. Demand driven solutions are always more productive when the population is asked regarding what kind of actions they would want the organization to take for a more holistic development
3. The mindset of society towards women plays a very important role in development. Societal roadblocks for women in coming forward and contributing to the financial activities of family and economic growth of a country as a whole, makes them dormant gender. Considering women as equal to a man is as important as treating any disease from the body, as this would help women to enjoy financial freedom and have a sense of ownership, which is missing in society, especially in rural India

4. There is a lack of emphasis on market side of the supply chain while designing a module of development. While skilling people, Government/organizations should also look into aspects like employability, market linkage, etc. This would help lead skill training to a productive use

Questions for Discussion

1. What would you have done better if you were at Lalita's position?
2. Suggest some interventions which both the development organizations could make to help people from all sectors of the village, keeping in mind inclusive society is highly sustainable in the long run.
3. Do you think the reason Sarpanch quoted while refusing to lend money to women justified? Think of some possible reasons which may exist, but not explicitly mentioned in the case.

Course Positioning

The case is ideal for the course in Rural Livelihood and Production System as it describes the strategies currently applied to solve prevalent rural problems. It takes into account various angles of the rural issues like gender bias, rural development, market linkage issues. The case imparts a useful lesson that the skill-based programs shouldn't be imparted without any sight of utilization of the skill. Income-generating activity introduction should follow the training and skill development. Job opportunities will give learners a thought on how the problems and challenges of remote villages can be understood and explore the right strategies for overcoming the problems.

About the Author

Kritika Wadhwa is passionate about understanding the ground realities and finding solutions from within the society. She likes singing, reading, travelling, meeting people from different walks of life and exploring different regional cuisines. She also likes to indulge in philosophical talks about life.

Editors' Profile

Dr W G Prasanna Kumar

Dr. W. G. Prasanna Kumar, PhD in Education with basic degree in Social Work and Master's Degrees in Sociology, Public Administration and Political Science has professional education in Environmental Economics, Public Relations, Communication and Training and Development. Presently Chairman, Mahatma Gandhi National Council of Rural Education (MGNCRE) under the Ministry of Human Resource Development, in Government of India strives to promote resilient rural India through Higher Education interventions. The national initiative of reviving Mahatma Gandhi's ideas of NaiTalim, spearheaded by Dr. W G Prasanna Kumar, has met unprecedented success at both national and state levels. The primary objective of this initiative is to promote Gandhiji's ideas on Experiential Learning, NaiTalim, Work Education and Community Engagement, and mainstreaming them in School Education and Teacher Education Curriculum & Pedagogy. As Professor and Head Centre for Climate Education and Disaster Management in Dr MCR HRD Institute, conducted several capacity building and action research programmes in climate education, disaster management and crowd management. He has handled many regional, national and international environmental education programmes and events including UN CoP11 to Convention on Biological Diversity and Media Information Management on Environmental Issues.

He was Director in National Green Corps in the State Government for over 11 years and Senior Social Scientist in State Pollution Control Board for 6 years. Conducted various curriculum and non-curriculum related training programmes in environmental education. He was a Resource Person for AP Judicial Academy, AP Police Academy, AP Forest Academy, EPTRI, Commissonerate of Higher Education and Intermediate Education, State Council for Educational Research and Training and National Council for Educational Research and Training New Delhi, CCRT, Bharathiya Vidyapeet University Pune, CPR Environmental Education Centre Chennai and Centre for Environment Education Ahmedabad. Dr W G Prasanna Kumar was trained in Community Consultation for Developmental Projects in EPA Victoria Australia in 1997 trained as State Chief Information Officer by IIM Ahmedabad and MCRHRDI Government of Andhra Pradesh in 2004 and trained in Environmental Education and Waste Management Technique by JICA, Japan in 2011.

He was awarded Best State Nodal Officer of National Green Corps Award from Centre for Science and Environment, New Delhi, 2008, Jal Mithra Award from Earthwatch Institute of India and Water Aid New Delhi, 2014 and Certificate of Commendation for the services in UN Conference of Parties to Convention for Biodiversity conducted at Hyderabad from 1-20 October 2012 by the Government of Andhra Pradesh 2012.

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Dr K N Rekha, is a PhD Graduate from IIT Madras. She has 13 years of experience in training and education Industry. She works at Mahatma Gandhi National Council of Rural Education (MGNCRE), Hyderabad as Senior Faculty. She is involved in curriculum development on Rural Management and Waste Management. Prior to this, she worked as a researcher at Indian School of Business, Hyderabad, a short stint at Centre for Organisation Development (COD), Hyderabad. She has Co-authored a book on "Introduction to Mentoring", written book chapters, Peer reviewed research papers, book reviews, Case studies, and caselets in the area of HR/OB. She also presented papers in various national and international conferences. Her research areas include Mentoring, Leadership, Change Management, and Coaching. She was also invited as a guest speaker at prominent institutions like IIT Hyderabad.



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