May all be happy.
May all be free from disabilities.
May all look to the good of others.
May none suffer from sorrow.
Om Shanti Shanti Shanti.
From food creatures come into being; 
from rain is produced food; 
from yagya comes forth rain and yagya is born of action.

Know action to be born of Brahma (the Veda). 
Brahma springs from the Imperishable. 
Therefore the allpervading Brahma is ever established in yagya.

Verse - 14-15, Chapter - 3. 
The Bhagavad Gita
Wardha is the land of prominent personalities - Gandhiji, Vinobaji and Jamnalalji Bajaj. Describing my grandfather, Gandhiji once said "Jamnalalji is the man of the people - a fisher of men - one who had the knack of gathering people around him and inspiring them with his idealism." Very active during India's freedom struggle, Jamnalalji was a philanthropist who delighted in donating most of his wealth for worthy causes. It was the profound conviction of my grandfather that the wealth of a business enterprise was bequeathed to it in sacred trust by society. Jamnalalji was always more involved in social and philanthropic activities than business. Jamnalalji made Wardha the centre for Gandhiji’s economic and social development programmes. He persuaded Gandhiji to start branch of his Satyagrah Ashram in Wardha. Gandhiji invited Vinoba Bhave to start an Ashram in 1921.

We are not only proud of our roots in Wardha but also feel part of the community of Wardha district. With a view to commemorate the memory of my father Shri Kamalnayan and grandfather Shri Jamnalal, we have established Kamalnayan Jamnalal Bajaj Foundation (KJBF) to support the cause of socio-economic development of Wardha district, while retaining basic human values. Looking at the grim and deteriorating socio-economic condition of the agrarian community in Wardha district in particular and Vidarbha region in general, we are committed to providing support to the rural community of Wardha district.

In 2009, we moved one step forward to achieve our goals. We have defined our focus areas and team has worked persistently with the communities to make sustainable development of the rural households of Wardha district. Currently we are reaching to 3 talukas of Wardha district (Arvi, Seloo, Deoli) and soon we are aiming to reach in rest of the talukas. Our interventions are based on the philosophy of involving people for their development and enabling them to make sustainable differences in their life.

Although we are reaching to the people with all our efforts and resources but we do feel that there are tremendous scopes to work with numerous local resources, guides, development agencies, corporate houses, research institutions and Government organisations. Our staffs have put their missionary zeal to make all kind of developmental networking and partnerships. We are also thankful to NABARD to recognise us as a pioneer organisation in Wardha. We have received a project in partnership with NABARD for the 1100 tribal household. We seek cooperation from all the development stakeholders to work together to really make Wardha a socio-economically developed and a truly Gandhian district.
We are part of development fraternity since time of my Great Grandfather Shri Jamnalal Bajaj but 2009 was a significant year for all of us and we initiated our development interventions through Kamalnayan Jamnalal Bajaj Foundation (KJBF) which works through livelihood approach focusing on improving the quality of life of the rural community of Wardha. Out of 1031 villages in Wardha district, currently we have reached up to 101 villages and have planned to cover 100 more villages in the next fiscal. Average rainfall of the district is 1062 mm, however water for irrigation is one of the major issues. Our focus areas are Natural Resource Management, Water harvesting, Enhancement of livelihood opportunities and Human resource development. The beauty of the development interventions lies in the participatory approaches where community is involved in planning, implementation and management of projects.

Due to over exploitation of the natural resources, global climate and eco system is increasingly becoming fragile. We may think of using these challenges as opportunities. Gandhiji once said that mother earth could fulfil our needs but not our greed and hence efficient and judicious use of our natural and human resources is indispensable to sustain our eco system. Apart from many water conservation structures, this year we have also demonstrated three models - first is 'interlinking of water bodies': a concept of trapping excessive water through waste weir in the next water body. We have successfully interlinked four percolation tanks. Second intervention is revival of rivers/streams through their deepening and widening and third one is excavation of farm ponds for in-situ water conservation. It will also conserve water during unpredictable rainfall. Two unpredictable rains in the month of November and January have saved crops of various farmers in chondi village. The participatory approach is important as it involves people to get what they want. Water is precious, it needs to be conserved, its supply needs to be managed and its demand needs to be put judiciously. Many farmers have been technically and financially supported to enhance their livelihood. We have supported dairy farming activity as alternative sources of income and also to fulfil their nutrition need. We also support farming community through our agriculture development programme. Under this programme demonstrations have been carried out on the farmers field. We also promote organic farming and different composting structures. It is very important to draw a regular and sustainable income equation for the farmers and reduce their risk. Horticulture is one of the sustainable agriculture practices and hence we promote it extensively. With integrated water conservation measures we aim to convert rain fed farming into irrigated farming. Human Resource Development is another main focus area of our organisation. Regular trainings, exposure visits and demonstrations motivate community to change their mind set towards development. Efforts are being made to promote people's institutions which are important for the decentralised planning. We also revive old institutions from dormant and defunct stage. Mass awareness events like street plays and seminars are organised to spread awareness and it provides a platform to community to share their experience.

We are making collaboration with various development agencies and Government organisations. A project “Wadi” in collaboration with NABARD for 1100 poor tribal families is being implemented in the 21 project villages. Same way we are also exploring partnership with Government of Maharashtra, Sir Ratan Tata Trust and IFAD. In the last I would like to express my sincere thanks all the primary and secondary stakeholders of the development fraternity for supporting us to make Wardha a real model district.

Kushagra Nayan Bajaj
We are part of development fraternity since time of my Great Grandfather Shri Jamnalal Bajaj but 2009 was a significant year for all of us and we initiated our development interventions through Kamalnayan Jamnalal Bajaj Foundation (KJBF) which works through livelihood approach focusing on improving the quality of life of the rural community of Wardha. Out of 1031 villages in Wardha district, currently we have reached up to 101 villages and have planned to cover 100 more villages in the next fiscal. Average rainfall of the district is 1062 mm, however water for irrigation is one of the major issues. Our focus areas are Natural Resource Management, Water harvesting, Enhancement of livelihood opportunities and Human resource development. The beauty of the development interventions lies in the participatory approaches where community is involved in planning, implementation and management of projects. Due to over exploitation of the natural resources, global climate and eco system is increasingly becoming fragile. We may think of using these challenges as opportunities. Gandhiji once said that mother earth could fulfil our needs but not our greed and hence efficient and judicious use of our natural and human resources is indispensable to sustain our eco system. Apart from many water conservation structures, this year we have also demonstrated three models- first is 'interlinking of water bodies'; a concept of trapping excessive water through waste weir in the next water body. We have successfully interlinked four percolation tanks. Second intervention is revival of rivers/streams through their deepening and widening and third one is excavation of farm ponds for in-situ water conservation. It will also conserve water during unpredictable rainfall. Two unpredictable rains in the month of November and January have saved crops of various farmers in Chondi village. The participatory approach is important as it involves people to get what they want. Water is precious, it needs to be conserved, its supply needs to be managed and its demand needs to be put judiciously. Many farmers have been technically and financially supported to enhance their livelihood. We have supported dairy farming activity as alternative sources of income and also to fulfil their nutrition need. We also support farming community through our agriculture development programme. Under this programme demonstrations have been carried out on the farmers field. We also promote organic farming and different composting structures. It is very important to draw a regular and sustainable income equation for the farmers and reduce their risk. Horticulture is one of the sustainable agriculture practices and hence we promote it extensively. With integrated water conservation measures we aim to convert rain fed farming into irrigated farming. Human Resource Development is another main focus area of our organisation. Regular trainings, exposure visits and demonstrations motivate community to change their mindset towards development. Efforts are being made to promote people's institutions which are important for the decentralised planning. Self Help Groups (SHGs) of women are promoted for enterprising activities thereby women's empowerment. We also revive old institutions from dormant and defunct stage. Mass awareness events like street plays and seminars are organised to spread awareness and it provides a platform to community to share their experience. We are making collaboration with various development agencies and Government organisations. A project "Wadi" in collaboration with NABARD for 1100 poor tribal families is being implemented in the 21 project villages. Same way we are also exploring partnership with Government of Maharashtra, Sir Ratan Tata Trust and IFAD. In the last I would like to express my sincere thanks all the primary and secondary stakeholders of the development fraternity for supporting us to make Wardha a real model district.

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Wardha is named after the river Wardha, which flows through the region. In 1960 Wardha became a district of the newly formed state of Maharashtra. Wardha district in the Vidharba region constitutes about two per cent of the area of the State with a geographical area of 6310 km². The total population of the district as per the 2001 census, is 12,30,640 with Males constituting 52% of the population and females making up 48%. The Male: Female ratio is 1000:936. Wardha has an average literacy rate of 80%, which is much higher than the national average of 59.5%. Male Literacy is 83%, and Female Literacy is 76%. The total rural population is 905,695 with Scheduled Castes making up 14.04% and Scheduled Tribes constituting 15.68%. 11.39% of the population fall Below Poverty Line (BPL).

Wardha has a hot and dry climate throughout the year except during the south-west monsoon season between June to September. The maximum temperature is 47.9°C while minimum temperature is 10.2°C. The average rainfall is 1100 mm. The average annual rainfall over the last ten years in the district varied from 832.40 mm (Ashti) to 1131.48 mm (Seloo) and has decreased over the years. The district forms part of Godavari basin. The entire district is mainly drained by the Wardha River and its tributaries - Yashoda, Wunna and Bakli. The district is divided into 39 watersheds based on geomorphology and drainage pattern.

The People of Wardha are mainly dependant on farming as their primary source of livelihood. The agricultural practices followed in this region are archaic and unsustainable. Little attempt has been made to adopt sustainable agriculture practices or adapt to new market trends. Since the income generation from agriculture is low, large number of farmers are barely able to make ends meet and their ability to take risks is very limited. Farmers are debt ridden and have lost hope in agriculture being a gainful source of income. Small industries like textile mills, weaving, ginning and pressing, handloom and leather tanning, are some of the other industries in this area. However despite a high level of education the youth do not have many lucrative opportunities and there is a general sense of dejection with the state of livelihood options. Also the people are resigned to their fate and are less motivated to get out of their miserable condition. Perhaps all these pressures may have led to the notorious spate of farmer’s suicides in Vidharba, in the recent past. With the lack of opportunities for alternate livelihoods, the youth especially, want to migrate out of the villages in pursuit of better opportunities.

**Vision**

**Mission**

Integrated development of the society through participatory approaches that sets benchmarks and standards for sustainable development. Empowering the rural community for efficient and judicious use of human and natural resources to improve the quality of their lives.
1. INTRODUCTION

Context

Wardha is named after the river Wardha, which flows through the region. In 1960 Wardha became a district of the newly formed state of Maharashtra. Wardha district in the Vidharba region constitutes about two per cent of the area of the State with a geographical area of 6310 km². The total population of the district as per the 2001 census, is 12,30,640 with Males constituting 52% of the population and females making up 48%. The Male: Female ratio is 1000:936. Wardha has an average literacy rate of 80%, which is much higher than the national average of 59.5%. Male Literacy is 83%, and Female Literacy is 76%. The total rural population is 905,695 with Scheduled Castes making up 14.04 % and Scheduled Tribes constituting 15.68 %. 11.39 % of the population fall Below Poverty Line (BPL).

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Kamalnayan Jamnalal Bajaj Foundation (KJBF)

The Bajaj family set up the Kamalnayan Jamnalal Bajaj Foundation (KJBF) as a tribute to the two stalwarts, Shri Jamnalalji and his son Shri Kamalnayanji Bajaj, who relentlessly worked for the socio-economic upliftment of the weaker section of Wardha.

Field Intervention

KJBF was registered in 2003. However field work in the Wardha district started in September 2009. KJBF operates through an Administrative office in Mumbai and a Field Office at Manohardham, Dattapur Wardha.

Once the core staff members were in place, they started interacting with the local communities, organizations already working in the area and government agencies involved in the development of the district. The KJBF team interacted with the agrarian community and developed an understanding of the local knowledge, skills and practices followed in the region. The team realized that there was a need to take up developmental interventions in the area. Some of the factors that encouraged KJBF to start work here were:

- The people of this region have low incomes. The average annual income of the small and marginal farmers is Rs.18,000/- per annum.
- Average land holding is decreasing.
- Most farmers practiced only rainfed agriculture and are able to grow only one crop/annum due to unavailability of water for the second season.
- Around ten percent families were landless and survived on income from daily wages and minor forest produce collected from the forest.
- Although rainfall was good, it is erratic and therefore agriculture income is unstable.
- Efforts for conserving rain water were inadequate and therefore availability of water for agriculture is a major challenge.
- Existing water bodies are silted up and so agriculture lands get waterlogged and soil erosion takes place.
- Traditionally the farmers followed a pattern of mono cropping with cotton being the main crop growing on 41.62% of the land. Land allotted for other crops is low e.g. pulses (10.37%), oilseeds (20.75%) and vegetables (0.49%).
- The cattle owned by community were of poor quality. Since the farmers were not following good cattle management practices, their milk yield is also poor.
- Many village institutions were dysfunctional.

KJBF Staff providing technical input to the farmers on use of improved variety of seed in Gaurkheda village.
Programme Area

Since August 2009, the Kamalnayan Jamnalal Bajaj Foundation (KJ BF) is working in 100 villages of Deoli, Arvi and Seloo talukas of Wardha district through its Programme office located in the premises of the Maharogi Sewa Samiti (MSS) in Dattapur village, Wardha. KJ BF plans to eventually work in all eight talukas in order to truly make Wardha a model green district.

Selection of Programme Villages

In the initial phase, many factors were taken into consideration before selecting three talukas for KJ BF’s developmental interventions. Several factors such as the availability of water for irrigation and the status of natural resources were considered before KJ BF selected a particular village for intervention.

The Deoli taluka

- Has the largest scheduled caste population of the district, making it an ideal programme area for reaching out to the poorest community in the district.
- Received poor rainfall over the last two years.
- Most of the rivers and streams had been silted up.
- Despite high level of education, youth do not have appropriate opportunities or lucrative livelihood options.
- KJ BF selected 62 villages in Deoli.

The Arvi taluka

- Has a predominantly tribal population.
- Has undulating land that poses a challenge for irrigation.
- Has a high degree of Soil erosion which affects the quality of productivity.
- Women have to walk long distances to collect wood for fuel.
- Women are not engaged in any economic activity
- 30 villages in Arvi were selected.

The Seloo Taluka

- Has adequate water as it is in the vicinity of the Bor Dam but has potential for promoting efficient water management practices
- Has potential for enhancing the income generated from farming by promoting improved agriculture practices.
- Has potential for promotion of alternate livelihoods such as dairy farming
- Unemployed youth need a sense of direction for improving their quality of life.
- Eight villages of Seloo taluka were selected for intervention.

Approach

KJBF works through a Livelihood approach to empower the rural community to take charge of their own development in a participatory manner by developing and managing natural resources sustainably. The developmental interventions focus on enhancing the income generated from agriculture, which is the principal source of livelihood. KJBF also promotes alternate agro based livelihood opportunities such as dairy farming, organic farming, horticulture and biogas. These alternate livelihoods provide steady additional income and therefore improve the quality of life of the rural community.

Farmers of programme villages have started using micro irrigation system (sprinkler) in different crops.
Office Setup

The KJBF Programme office was set up in July, 2009. The existing building was renovated, furnished and equipped with computers and other equipment required for a functional office. A functional training centre, activities for sustainable living, improved agriculture plots, water harvesting structures, and a Biogas plant have been constructed for use on campus and for experimentation and demonstration. Landscaping of the garden, wire fencing and other maintenance jobs were also completed during the year.

Training and Livelihoods Resource Centre (TLRC)

KJBF has established Training and Livelihoods Resource Centre (TLRC) at Manohar Dham, Dattapur. Since KJBF believes in the concept of self reliance and sustainable livelihoods, it is also trying to achieve self-sufficiency in terms of maintaining the campus and running the programmes.

Objectives:

1. To provide a suitable Resource Centre with facilities and resources for conducting capacity building programmes for community.
2. To serve as a live demonstration model for agricultural and technological experiments and innovations for motivating visitors who come for training and exposure visits.
3. To motivate visitors who come for training and exposure visit to learn from the developmental interventions.

The Training Centre has a well equipped Training Hall with an ambience suitable for rural visitors. Several training programmes for the community are held on a regular basis. Horticulture and improved fodder plots have been developed for Field demonstrations. Dairy farming and biogas are also being promoted through working models. A Roof Rain Water Harvesting Structure (RRWHS) has been constructed for use and for demonstration purpose. Four percolation tanks in Dattapur village have been interlinked by KJBF. This demonstrates how rainwater is captured and excess runoff is redirected so as to minimize water loss. This results in maximizing the recharging of groundwater.

Agriculture

KJBF has taken up the task of reviving the agricultural potential of the campus.

- Demonstration plots for fodder have been developed and plots for medicinal plants are being planned.
- Drip and Sprinkler irrigation systems are installed for demonstrating how good yields can be obtained even with lesser amounts of water.
- Vegetable such as cabbage, fenugreek and spinach have been cultivated for demonstrations.
Dairy Farming

- Construction of improved cattle sheds for housing the cows was completed in 2009.
- KJBF has developed fodder plots on the campus to serve the dual purpose of becoming self reliant for the fodder needs of the cattle in the Gaushala and to pilot different varieties of fodder crops to test out the yield and the nutritive value of the fodder for the cattle. In 2009, three different varieties of fodder plants have been cultivated in 17 acres of land on the campus. KJBF incurred a production cost of Rs. 52,700 to get a total yield of 79,000 kg fodder. Buying this amount of fodder would have cost Rs. 1.58 lakh. This yield was enough to sustain ten of the total thirty cows for one whole year i.e KJBF saved about one third the cost of fodder that it would have needed for the year.

Interlinking of Water Bodies

Two percolation tanks which had been silted-up, were revived by digging. Two new tanks were constructed on the campus. The storage capacity of percolation tanks and ponds determines the maximum amount of water that can be harvested. The waste weir releases the untapped excess runoff into the surrounding area. In order to overcome this problem of ‘wastage’ of precious surface water and to maximize surface storage capacity and ground water recharge, KJBF has come up with an innovative, cost effective environment friendly mechanism of interlinking water bodies through the construction of canals or water channels on the lines of a micro river grid. Four percolation tanks have been successfully interlinked in village Dattapur in Wardha. This is a demonstration model of interlinking water bodies to harvest maximum rain water. The total cost incurred by KJBF for this activity was Rs. 3.51 lakh.

Roof Rain Water Harvesting Structure (RRWHS)

A RRWHS has been constructed for storage of rain water during monsoon. This water is used for drinking. This working model demonstrates how this simple system ensures availability of potable water and motivates visitors to invest in this low cost high value technology for conserving rain water for domestic use.

Biogas- Alternate Energy source

KJBF has constructed a dung based biogas plant for the dual purpose of use as a clean fuel source and also to serve as a demonstration model for an alternate source of energy to be promoted for use by rural communities. Currently cooking in the campus for the training programme is being done using this biogas.

KJBF team members interacting and getting insight from Gautam Bajaj (Pawnar Ashram) in one of the villages of its programme area
Jamnalal Bajaj was an extraordinary man living in extraordinary times. From an early age, destiny carved out a unique role for young Jamnalal. The son of father Kaniram Bajaj and mother Birdibai, Jamnalal was born at Kashi Ka Bas village near Sikar in 1889. At the age of five, he was adopted by Shri Bachhraj Bajaj, a wealthy merchant in Wardha. Throughout his life, he was a staunch follower of Mahatma Gandhi who also inspired Jamnalal to initiate Hindusthan Sugar Mills in 1931. Jamnalal was the founding father of the present-day Bajaj Group of companies. His business interests were the means to a larger and holistic end. Very active during India’s freedom struggle, Jamnalal was a philanthropist who delighted in donating most of his wealth for worthy causes and was always more involved in social and philanthropic activities rather than business. He joined in Gandhiji’s programmes and India’s freedom struggle in 1915. He was elected Treasurer of the Congress party in 1920. From the very beginning, he was in search of a spiritual mentor he found precisely such a holistic and spiritual philosopher and a wise counsellor in Gandhiji. Gandhiji adopted him as his own son in 1920. Jamnalal had the rare distinction of being regarded by Gandhiji as his own protégé. As inspired by Gandhiji, he opened the doors of his family temple, the Lakshmi Narayan Mandir at Wardha, to all, including Harijans in 1928. It was the very first temple in India to welcome Harijans.

Jamnalal made Wardha the centre for Gandhiji’s economic and social development programmes. He established the Satyagraha Ashram in Wardha in 1921. He brought Vinoba Bhave to the Wardha Ashram to nurture it into a national institution. Jamnalal similarly established the Gandhi Seva Sangh in 1924 to assist families of committed Gandhian workers who participated in the Satyagraha movement. In 1936, Gandhiji wanted to shift to a rural habitat. Jamnalal then offered a large piece of his land in Segaon to build the Ashram which is known as Sevagram. Bajajwadi in Wardha was like a home for all eminent national leaders visiting Gandhiji. The meetings of the Congress Working Committee were also frequently held there. The famous Quit India resolution was adopted by the Congress Working Committee at its meeting in Bajajwadi in July 1942. Jamnalalji was thus the main pillar of strength to Gandhiji. Gandhi himself admitted that “It was an easy thing for me to rely on Jamnalal to carry out my wishes. No one has identified himself so much with every one of my activities as he”.

In fact, Jamnalal liberally assisted worthy causes as a matter of duty. When Jamnalal passed away in 1942, Gandhi wrote in the newspaper ‘Harijan’: “Whenever I wrote of wealthy men becoming the trustees of their wealth for the common good, I always had this merchant prince principally in mind”.

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Jairamdas Daulatram, Acharya Kriplani, Sardar Patel, Bhulabhai Desai, Shantikumar Morarji, Jawaharlal Nehru, Maulana Azad and Jamnalal Bajaj (right to left) at a get together hosted by scindia steam navigation

Kamalnayan Bajaj, the eldest son of Jamnalal Bajaj, started shouldering family responsibilities from an early age. After completing his education in Cambridge University in England, Kamalnayan returned to India to assist his father Jamnalal, both in business and in social service. He was a strategist and chose not to court arrest. His purpose was to keep himself free to help those actively engaged in the freedom movement. Keenly conscious of the legacy of his reputed family that he had to carry forward, Kamalnayan once wrote to his father, that "It is no joke to be the son of a big man." Kamalnayan was a man of strict principles, which he never swerved from. He had earmarked a large portion of the income from his family business for public causes and social service programmes, the mantle of all of which he had inherited from his father. He always had a sense of a larger social mission, transcending the dictates of business and the bottom line.

An astute businessman, Kamalnayan envisaged immense potential in India for manufactured textiles. But he did not pursue the profit in that business because of the firm commitment of the Bajaj family to khadi, inspired by Mahatma Gandhi. Clearly expounding his philosophy and his perspective, Kamalnayan observed, "The various industries I am connected with should generate profit. But if any move on our part goes against national interests, I would condemn it and would not be party to it, even if it meant a loss in the bargain." Every new business venture that Kamalnayan got into, eloquently testified to his legendary business acumen. With tremendous foresight and a spirit of zestful enterprise, Kamalnayan acquired ailing industrial units and then miraculously turned them around. He went on to expand the business by branching into manufacture of scooter, three-wheeler, cement, alloy casting and electricals. Besides being an insightful businessman, Kamalnayan was also a philanthropist driven by the passion for serving society at large. He was elected thrice as a member of the Lok Sabha between 1957–1971 from Wardha constituency in Maharashtra.

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3. OVERVIEW OF INTERVENTIONS (2009-10)

Context

Wardha experiences several environmental challenges which affect the livelihood prospects of the farming community. Although the average rainfall in Wardha is around 1060 mm, there has been a steady decrease in the total rainfall received over the last few years. According to a report by the Central Ground Water Board, Ministry of Water Resources, groundwater is the major source for both drinking, as well as irrigation in the Wardha district. Depleting groundwater and traditional cropping practices are one of the major issues of the region. Inefficient use of groundwater and inadequate efforts for replenishing this rapidly depleting resource has resulted in the water table dipping to low level. Silting up of rivers and streams results in flooding and water logging of the fields. During torrential rains, fertile top soil is washed away with the surface runoff and the productivity of land is adversely affected leading to poor crop yield and low incomes for the farmers in Wardha. Rapid runoff also means that water does not percolate into the soil. Therefore if soil erosion is arrested, both soil and water conservation can be effectively achieved. This will also help in maintaining humidity and recharge water in the ground. Thus there is a need to adopt an integrated approach to soil and water conservation as also develop water resources, in order to address the problems of soil erosion and water scarcity.

Soil and Water Conservation (SWC)

KJBF promotes in-situ soil and water conservation measures such as field bunding, contour bunding, nalla plugging and construction of Gabion structures for enhancing the productivity of the agricultural land. KJBF's SWC activity was initiated in November 2009 in Deoli block of Wardha district. Meetings with the community were organized in the project area villages. These meetings helped in identifying beneficiaries. Three Village Volunteers (VV) who were responsible for interacting with the community and also supervising and monitoring the SWC work, were trained and went on an exposure visit to Rahati Watershed project sponsored by NABARD. This familiarized them with the SWC related activities. The VVs interacted with the farmers and motivated them to treat their land with SWC measures. The KJBF team involved each beneficiary farmer in the process of net planning of his own farmland after studying the site in terms of the slopes and contours of the land. The total cost of the SWC treatment was calculated and the ratio of the Farmer's contribution worked out keeping in mind the farmer's resources.

SWC FOR A BETTER TOMORROW

Maruti lives with his parents and younger brother in Saidapur village in Deoli taluka. He owns a 1.2 hectare of partially degraded land located slightly at a lower level compared to the surrounding fields. As a result, his land gets water logged after heavy rains. Since there is no outlet for releasing the water, he is unable to use the land for cultivation during the period when it is inundated with water. He has therefore been incurring losses over last few years. On an average he gets a yield of 2 quintals of cotton, 3 quintals of soyabean and 0.5 quintal of pigeon peas. Thus the income generated is only about Rs.18,000/-. Since the income from agriculture is inadequate, Maruti has been forced to work as a farm labourer to support his family. Although, various watershed programmes have been implemented in the village earlier, he was not a beneficiary and he did not have the financial means for treating his own land.

When KJBF took up Soil and Water Conservation work in Saidapur, Maruti approached a Village Volunteer and requested for field bunding work to be done on his land. KJBF’s VVs inspected Maruti’s land and prepared a net plan for field treatment. Maruti contributed 20% i.e. Rs 2,097 of the total cost of Rs 10,485 for treating his entire field. A waste weir was constructed to remove the excess water from the field. Maruti is very happy now and expects that the productivity of his land will increase by at least 20%. He hopes to therefore earn an income of Rs. 21,600 in the next season. He hopes that his prospects will be even better in successive years.
3. OVERVIEW OF INTERVENTIONS (2009-10)

Section 1: Natural Resource Management (NRM)

Context

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Farm Bunding and Contour Bunding

Loss of fertile top soil was arrested by erecting bunds (earthen barriers) around the field. The water runoff was also trapped by these 'walls' and therefore the moisture content of the soil improved. When bunds were built along the contours of the land, they served as barriers to water and soil getting washed down the slopes. With availability of fertile soil and water, crop yield is expected to improve. In some cases where the fields were too small to permit the contour bunds, farm bunds with outlets were constructed. Some farmers had done terracing on their land earlier. Some of these structures underwent repairs under the supervision of the KJBF team. Waste weirs were provided for the drainage of excess water. Several fruit trees were also planted along the bunds as per the need expressed by the farmers.

Achievement

- A total of 212 farmers from 28 villages in Deoli block constructed earthen farm bunds and contour bunds covering 445.12 hectares of land. 70% of these farmers are small and marginal farmers having land holding of only 3 to 5 acres and practice rain fed agriculture.
- 300 labourers were engaged in the bunding work for a period of three and half months. Thus 300 landless families received livelihood support.
- The farmers contributed 20% of the total cost of the SWC programme. A total of Rs. 3.28 lakh in cash was collected from the community. Rest of the programme cost was contributed by KJBF.
Nalla plugging
Various types of treatment options are available for drainage lines such as nallas depending on the location (ridge/valley), size, velocity of water flow etc. The purpose of the plugging is to reduce the velocity of water flow and trap the eroded soil.

Loose Boulder Structures (LBS)
These structures are proposed at places where the runoff velocity is very high. Such a structure needs to be very stable in order to be able to obstruct the high velocity runoff water. Construction of such loose boulder structures requires quarried stones and skilled labourers.

Achievement:
- A total 130 Loose Boulder Structures (LBS) were constructed in four villages. 15 were constructed at Kakardara a remote village in Arvi block of Wardha district. 115 structures were constructed in three villages of Deoli block of Wardha district.
- The five per cent community contribution was received in cash or kind. Rs 16,059 cash contribution was collected from the beneficiaries. KJBF contribution was Rs. 5.6 lakh.
- Total 25 farmers benefitted by the construction of these LBS.

Gabion structures
A gabion structure is a low head stone barrier (1m to 1.5 m) where the stones held together by masonry work and strengthened by a sausage wire mesh. This is a stronger structure than the earthen bunds and can resist the lateral pressure exerted by water even during peak flow. These structures stabilize the Nalla bed and recharge the water table. The gabion structures also allow temporary water storage and aid in conservation of rainwater.

Achievement
- 18 Gabian structures were constructed at suitable locations. Eight of these were constructed in village Vijaygopal and 10 at village Raghala.
- Rs 17,168/- was collected in cash from beneficiary farmers. KJBF contribution was 1.1 lakh.
- 11 farmers benefitted from the construction of these structures.

Expected Impact
- These structures will arrest soil erosion and conserve in situ moisture in 445.12 hectares of agricultural land. This may result in a 10% increase in productivity as per farmers.
- Since care has been taken to provide proper drainage for excess water, it is expected that around 75 hectares of agricultural land will not face the problem of water logging during the next monsoon.
- The recently constructed 130 Loose Boulder Structures will reduce the velocity of water flowing through the Nalla. This will help in reduction of soil erosion and conserve in situ moisture.
- The 18 Gabion structures will help in stabilization of the Nalla bed and recharging the water table. The structures also allow temporary water storage and aid in conserving soil.

KJBF has revived 1400 metre long stream in the Ratnapur village and has constructed checkdam on the revived stream.
Development of Water Resources

Although groundwater accounts for about 66 per cent of the net irrigated area in the district only about a third of the overall potential has actually been developed. Also, many of the structures constructed earlier under various watershed or other programmes, were found to be ineffective due to faulty construction or lack of maintenance. Effective groundwater development depends on many factors such as availability, requirement for crops, socio-economic conditions and the yield of the aquifers existing in that area and the quality of construction of the recharge intervention.

Water Conservation and Harvesting

Since October 2009, KJBF initiated several water harvesting measures in partnership with the local community in order to enhance the irrigation potential of the area. The community participated in the planning, identification of sites and the execution of the construction work. Community contribution came in the form of cash, material and shramdaan for digging pits etc. Recharging of existing wells, constructing technically improved Farm ponds, reviving and constructing Percolation Tanks, building Check Dams, reviving rivers/streams/ and interlinking water bodies has been successfully undertaken by KJBF.

Groundwater recharge through rainwater harvesting:

In order to have water for support irrigation and for cultivating crops in the Rabi season also, KJBF has initiated several water harvesting measures in partnership with the local community.

Recharge of existing wells through diverting rain water

KJBF undertook the well recharge programme in the Deoli and Arvi talukas of the Wardha district with the following objectives:

- To recharge overflowing surface water of the respective field.
- To demonstrate how a small recharge structure can facilitate recharging of wells in the vicinity.
- To increase the area under irrigation and also provide support irrigation to the Rabi crops to enhance livelihoods.

Since October 2009, KJBF's team along with Village Volunteers (VV) began to interact with the agrarian community in the project villages. Team met farmers and motivated them to adopt recharge activities. A strategy of cost sharing was worked out in discussion with the beneficiary farmers. The farmers agreed to contribute 20% of the total cost in kind. The construction material was unloaded at a common place in the village and each beneficiary farmer made his own arrangements to transport the material to his respective well site. Once the recharge structure was constructed by KJBF, the farmer contributed labour towards filling in the filtration material and curing the constructed pit etc.

KJBF popularized the simple and cost-effective method of recharging wells by harvesting rain water in a small pit (standard size 6x6x5 feet) near the well and diverting the collected water for augmenting the ground water table after filtration. Two models of Recharge pits were tried out viz square and semicircular.

In order to overcome the difficulties in transportatation of material to each site and cost of labour for constructing the pits and curing them etc., KJBF came up with the innovation of using prefabricated sheets for constructing the recharge structures.

Achievement

Well Recharge structures have been constructed for 217 wells in 21 Villages of Deoli and Arvi talukas. The water levels are expected to rise substantially after the rains.
Sureshrao Khadse of Ratnapur village in Deoli Taluka was motivated to invest in recharging his farm well when he heard how rainwater diverted to his well would increase the availability of water for irrigation. He was willing to contribute 20% of the total cost of Rs. 6,000 towards building a recharge tank with a filter. After examining the site the KJBF team decided to construct a recharge pit near the well to collect surface runoff and divert it into well for the purpose of recharging. The location of this structure was such that around 120 cubic metre surface runoff was expected to be diverted into the well. This would result in a substantial rise in the level of water in the well. With a marked improvement in the availability of water, he expects to get a high yield of good quality crop. Since additional water will be available Sureshrao, is planning to also grow vegetables on one acre of land and earn additional income.

**Farm Ponds**

Topographically, most parts of Wardha district especially Deoli taluka, is flat with clayey soil. Therefore traditionally this region had Farm Ponds for storage of surface water for irrigation. When KJBF interacted with the community, the team realized that there was a need to revive some of the existing but now defunct Farm ponds and also construct new ones. Technically sound structures would help in storing rainwater, prevent water logging of agricultural land and also help in recharging ground water. The water stored in the ponds would serve as support irrigation for the Rabi crop and during dry spells or times of water stress. The VV worked closely with the farmers to identify potential beneficiaries. The technical team studied the potential site and worked with the farmers to identify the exact location for the farm pond. Several factors such as rainfall, quality and slope of land, soil type and soil texture were considered before selecting the site and deciding on the size of the structure. As far as possible farm pond sites were selected on wasteland so that precious cultivable land was not lost.

KJBF constructed Farm Ponds which efficiently arrested surface runoff and conserved rain water for support irrigation during dry spells and periods of distress. Initially, KJBF constructed Farm Ponds in three sizes viz:- (45X20X3m), (20X20X3m) and (15X15X3m). The team found that the size 15X15X3 m with average storage capacity of 450 cubic metre was the most suitable option. The Farmer’s contribution was calculated as being 25% of the total cost which was paid in cash and kind.

**Achievement**

A total of 122 Farm ponds were constructed in 28 Villages of Deoli and Arvi talukas. An average of 450 cu.m of water will be stored in each structure. Total 61 Farm ponds got recharged due to two unpredictable rain fall in the month of November 09 and January 2010.

**Expected impact**

Due to the percolation of water into the ground, wells in the vicinity will get recharged.

"Farm pond : An improved way of water harvesting.
If vessels are ready unpredictable rains are gift of God " - Farm pond filled due to rain in November 2009 in Takli (Khode), Deoli.
**The Recharge Miracle: Water for One and All**

**Background**

Chondi village is located at a distance of 18 km from the taluka headquarter Deoli, in Wardha district. Most of 116 households in the village are dependent on agriculture as the main source of livelihood. The average rainfall is about 1000 mm. Since the topography of the land is flat, fields often get inundated with water. With no scope for drainage, the farmers are unable to use the waterlogged fields for cultivation. A lot of soil erosion also occurs due to the water logging and the fertility of the soil is adversely affected.

**KJBF’s Intervention**

When KJBF entered the village, they first examined the ground reality and the worked with the community to identify the problem areas and work out appropriate developmental solutions. The village volunteers maintained constant interaction with the farmers and motivated them to take appropriate action for improving the scope of their livelihood options. Farmers were taken on an exposure visit to see the benefits of developmental interventions. Two farmers - Kamal Dhiran and Siddharth Vani came forward to construct farm ponds as promoted by KJBF. The purpose of the farm pond was to store the rainwater which otherwise inundated the land and rendered it useless for cultivation. Some water would percolate and recharge the ground water table since the soil was of murrum type. The stored water was expected to serve the purpose of support irrigation for the Rabi crop.

**Construction of Farm Ponds**

The KJBF team involved both farmers in the process of site selection and making decisions regarding the size of the pond. The Recharge Miracle

55 year old Diliprao Mahadevrao Gadge owns 5.5 acre of land on the downward slope from Kamal Dhiran’s farm. Diliprao is the head and the only earning member of a family of seven. His income is totally dependent on what he earns from his land. He is also paying for the education of his three children.

**History of failures**

25 years ago he had dug a well incurring an expenditure of Rs. 50,000. The depth of the well was 30 feet and water was then available only at 10 feet. Seven years ago he made another attempt to deepen his well since the water table was depleting rapidly. Although he dug up to 42 feet, this time he spent Rs. 24,000 (after borrowing money), he still did not get adequate water. Desperate to improve his livelihood prospects, he made a third attempt to get more water in October, 2008. This time he invested Rs. 38,000 in digging a 425 feet deep bore well. Unfortunately, he was unlucky yet again! In August 2009, he had sown cotton on 2.5 acres of his land. However the rainfall had not been adequate. Expectedly, Diliprao was greatly worried about the state of his withering cotton crop and the tremendous strain on his vulnerable financial condition.

**Impact**

Diliprao earned Rs. 42,000 from the cotton crop that would have died without getting water at the right time. With more water in his well he hoped to get an additional yield worth Rs. 39,000. However, the yield was greater than expected and he actually earned Rs. 54,000. With water available in plenty, Diliprao decided to also sow wheat and gram, which he ultimately sold for Rs. 20,000 and 6,600 respectively. Thus his total income from his farm was Rs. 122,600 for the year. Thus recharging of the bore well directly contributed to an additional income of Rs. 41,600 in the very first season after recharging of ground water!

Diliprao has also cultivated vegetables and spices such as brinjals, onions, fenugreek, spinach and coriander in two Guntha of land. These vegetables not only add nutritious value to the family diet, but also fetched him a cash income of Rs. 4500 for the surplus produce sold.

Diliprao Gadge’s strong desire to improve his condition, his perseverance and the miracle of rainwater harvesting finally paid off!
In the Chondi village, borewell is being promoted for irrigation near the farm pond down the slope. The technical analysis served the purpose of support irrigation for the Rabi crop. Selection and making decisions regarding the size of the soil was of murrum type. The stored water was expected to drain, the farmers are unable to use the waterlogged areas for cultivation. A lot of soil erosion also occurs due to erosion.

Background

The Recharge Miracle: Water for One and All

Farm ponds, five more farmers have begun work on constructing farm ponds with KJBF's support. The most dramatic impact however was seen in the field of Diliprao Mahadevrao Gadge (see box).

Impact

In November 2009, the area experienced unseasonal rains in January and March 2010. It rained again. The farmers were very happy that both times the farm ponds served the purpose for which they were built.

- 18,390 cubic metre of water was stored in the two farm ponds (Total of 122 Farm ponds).
- The slope of the land and the soil type were conducive for the water to percolate and augment the water table along the gradient.
- Four wells and even a dry bore well in the vicinity have been recharged. A once dried up well belonging to Balunarayana Rao Gadge, now has three feet of water - which is being used for drinking!
- Motivated by the success demonstrated by the two farm ponds, five more farmers have begun work on constructing farm ponds with KJBF's support.
- The most dramatic impact however was seen in the field of Diliprao Mahadevrao Gadge (see box).

Learning

- A properly constructed Farm pond can store rainwater for support irrigation, recharge groundwater and save land from getting waterlogged.
- It is important to educate farmers about the need for the development and management of water resources.
- For a farm pond to be effective, a proper site needs to be identified depending on the gradient and soil type.
- Involving the farmers at all stages of decision making, implementation and sharing the cost of construction leads to ownership over the process and the implementation of the programme.
- Farm ponds prevent water runoff and are useful in storing water during unseasonal rains also.
- Constructing a farm pond on the downward slope of the field tends to prevent loss of fertile top soil due to erosion.
- Since rainwater is harvested in the farm pond, land areas that earlier remained waterlogged and unavailable for cultivation can now be used for agriculture and generate additional income for the farmer.
**Renovation/ Construction of Percolation Tanks**

Since ancient times, Talabs or tanks have been used as reservoirs for water in villages. These tanks are usually very large structures built on common land. The basic purpose of the Percolation Tank is for ground water recharge and so the tank is constructed in an area where the soil type permits maximum percolation. However, the stored water is also used by the villagers for various purposes such as support irrigation and water for cattle and domestic use.

KJBF has revived silted up tanks or/and constructed new Percolation Tanks for capturing rainwater runoff through a watershed area. The waste weir allows surplus water to be drained away. KJBF has constructed percolation tanks in wasteland areas, where there is adequate surface runoff in the catchment area.

KJBF provides the technical and financial support. Five per cent contribution comes from the farmers in cash or kind towards construction cost of new tanks. 5 per cent contribution comes in the form of labour from the community when existing structures are repaired.

**Achievement**

Construction or deepening of five percolation tanks in three villages having a command area of 40 acres was completed. This would benefit 22 farmers.

**Revival of River/ Streams**

In Deoli taluka, the topography is mostly flat. Most of the streams/Nallas have huge catchment areas but due to encroachment and deposition of silt, the water holding capacity is greatly reduced. This results in flooding of the agricultural fields and washing away of seeds. The fields remain waterlogged in the absence of natural drainage and cultivable land is rendered fallow. Also the quantity and the duration of water availability in these sources is adversely affected.

When the KJBF team conducted a PRA exercise, the community identified all these problems and suggested that excavation of streams and nallas needed to be done. This would enhance the water harvesting capacity as also result in the revival of the streams/nalla.

**Achievement**

- 5620 metre of river/stream revival has been achieved by deepening and widening work in eight villages
- Two small check dams were constructed in Ratnapur village.

**Expected Impact**

- It is expected that the farmers will have much better yield the following season as the fields would not get flooded and a more fallow land would be taken under cultivation.
- Erosion of fertile soil and seed wash would be arrested.
- With rainwater getting harvested, there will be a rise in groundwater table, which will lead to the wells getting recharged.

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*Revival of Kolhapur River in Kolhapur village by deepening and widening.*
Check Dams

A Check Dam is a small dam built across a minor open channel or drainage ditch for the purpose of reducing the speed of water flow. It also arrests soil erosion and allows sediments to settle. Since the Check Dam does not have a canal outlet for irrigation, water is usually lifted for the purpose of irrigation.

In 2009, KJBF conducted PRAs in the project villages. KJBF team interacted with the farmers regularly and made them aware about the importance of water harvesting. Discussions with farmers enabled the KJBF team to identify the water harvesting potential of the village. The sites suitable for the construction of Check Dams were selected during the transect walk. A Village Development Committee consisting of volunteers representing the various factions within the community was formed after members were nominated by common consensus during a village meeting. The members of the VDC were given training on various aspects including their role and responsibility during the implementation phase. They were also taken on exposure visits to see successfully working models. The VDC members played a crucial role in motivating the farmers and taking the process of implementation forward. The VDC was also responsible for representing the community perspective, building consensus and collecting the community contribution.

Since January 2010, KJBF promoted the construction of Check Dams in the river beds and streams of Deoli and Arvi blocks of Wardha district to enhance surface storage and maximize ground water recharge. The excess flow of water in the river would be arrested by building masonry structures in the forth coming monsoon.

Achievement

- Eight new Check Dams have been newly constructed in four villages.
- Two Check Dams in two villages have been repaired.

Expected Impact

- After rainfall, the ground water table is expected to rise and several wells in the village will be recharged.
- The farmers are hopeful of getting a good yield in the coming season even if the rains are erratic or inadequate, since support irrigation will be available due to the Check Dam.
- With greater availability of water for irrigation, farmers will shift to cultivation of crops that will bring in better cash incomes.
- Farmers have also started growing fodder crops since water will be available. This will further support the Dairy Farming activity.

Solving Water Woes

Kakadara is a remote village in the Arvi taluka. The village is made up of 80 tribal households. The women of Kakadara had to walk long distances to fetch drinking water especially during the summer months. Although a Check Dam had been built earlier under a Government initiative, it had failed due to faulty construction and the villagers continued to face difficulties due to scarcity of water.

When KJBF staff interacted with the community, it emerged that they wanted the Check Dam to be repaired so that water could be retained. KJBF supported the community in this endeavour by putting Rs. 1.5 Lakh in repairing the Check Dam. The community contribution of five per cent was paid in terms of labour during the construction.

Expected Impact

The community hoped that once the leakage was blocked, water would be retained. The stored surface water would percolate and recharge the wells. One of the wells is being used for support irrigation by the farmers. The other well which was being used for drinking water would also have enough water to provide drinking water for the village. The stored surface water would be available for a longer duration of time. Water would be available for support irrigation during the Rabi season. The community would also use water for domestic purposes and for the cattle.
Interlinking of Water Bodies

The storage capacity of percolation tanks and ponds determines the maximum amount of water that can be harvested. The waste weir releases the untapped excess runoff into the surrounding area. In order to overcome this problem of 'wastage' of precious surface water and to maximize surface storage capacity and ground water recharge, KJBF has come up with an innovative, cost effective environment friendly mechanism of interlinking water bodies through the construction of canals or water channels on the lines of a micro river grid. Four percolation tanks have been successfully interlinked in village Dattapur in Wardha. This is a demonstration model of interlinking water bodies to harvest maximum rain water. The total cost incurred by KJBF for this activity was Rs. 3.51 lakh.

Table 1. Percolation Tank and their Storage Capacity

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Percolation Tank</th>
<th>Storage capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Vinoba Sarovar</td>
<td>0.14 mcf</td>
</tr>
<tr>
<td>2.</td>
<td>Bapu Sarovar</td>
<td>0.60 mcf</td>
</tr>
<tr>
<td>3.</td>
<td>Manohar Sarovar</td>
<td>0.85 mcf</td>
</tr>
<tr>
<td>4.</td>
<td>Jamnalal Sarovar</td>
<td>0.05 mcf</td>
</tr>
</tbody>
</table>

Group wells for irrigation

KJBF promoted the concept of a Group Wells to enable poor farmers to be able to get access to irrigation even though they were individually unable to construct a well. The cost of the construction of one pucca well comes to around Rs. 3 lakh. Even if KJBF subsidized the cost, it was difficult for a small/marginal farmer to shell out Rs.75,000/- as the 25 per cent beneficiary's contribution of the total cost. KJBF therefore facilitated a group of 10 to 12 farmers to collectively contribute 25 per cent of the total cost in cash or kind. Each farmer in the beneficiary group would get enough water to irrigate a one acre vegetable plot (WADI).

Achievement
- One group well in Saldara village has been constructed for a group of 11 tribal farmers. KJBF contributed Rs. 2.25 lakh towards the cost of the Group Well.

Impact
- Farmers who could not afford individual wells for irrigation would be able to benefit from this group venture.
- Eleven farmers will be able to generate an additional income from eleven acres of WADIs along with vegetables.
- The success of this group activity may inspire other needy farmers to understand the benefits of collective action.

Lift Irrigation Scheme (LIS)

When water is 'lifted' by means of pump from a source of water to irrigate an area located at a level higher than that of the water source, the form of irrigation is called Lift Irrigation. A few of the KJ BF project villages are located on the banks of the Wardha river in the Deoli taluka. Since the area experiences shortage of water for irrigation, some farmers suggested that they would like to 'lift' water from the Wardha River for irrigating their fields.

Outcome
- One small group LIS in one village benefiting a group of six farmers has been formed.

Expected Impact
- Since water is available throughout the year the agriculture yield is expected to improve by 50 per cent.
- The farmers will now be able to grow three crops a year instead of only one.
- Farmers will be willing to take the risk of cultivating cash crops.
Collective Benefit: Lift Irrigation Scheme

Background

Vijaygopal village located on the bank of the Wardha River in Deoli taluka has 735 households with a total population of 2995. With erratic and inadequate rainfall, the farmers were facing shortage of water which was adversely affecting their agricultural output. Although the River flows so near the village, the agrarian community of Vijaygopal had still not managed to take advantage of its location and farmers were distressed about the state of their crops due to inadequate water for irrigation.

KJBF Intervention

When KJBF took up work in the village, they interacted closely with the community and learnt about their needs, aspirations and limitations. The farmers requested that KJBF should help them in 'lifting' water from the Wardha River for the purpose of irrigation. KJBF studied the site and came up with the idea of a forming a small group Lift Irrigation Scheme for the purpose of lifting water from the Wardha River and using it for irrigation. The total cost of the scheme was estimated as being Rs. 2.7 lakh as worked out by the technical staff of KJBF. Through several rounds of discussions with the group of beneficiary farmers, a plan for sharing the costs and benefits was also worked out. The farmers' contribution would be 25 per cent of the total cost. Although initially four groups had shown interest in the proposed scheme, only one group of six farmers actually contributed the 25 per cent of the beneficiaries' contribution and formed a Lift Irrigation Society (LIS). A technical plan for irrigating 30 acres of land was designed by KJBF. In the first stage, water was lifted from the Wardha River and transported through a pipe line of 900 m for storing in a water storage tank of size 20x20x3 m. KJBF took responsibility to execute the plan till the water was stored in the common Farm Pond. During the second stage, water stored in the Farm Pond was lifted by farmers to their individual farms. Farmers' were responsible for lifting water from the Farm Pond to their own farms.

Thus, as member of a group, the farmers benefitted from sharing the costs and dividing the risks.
Judicious use of water — Micro Irrigation Drip System

Mr. Ramesh Dyaneshwar Bhoyar lives in of Sonegoan Abaji village with his nine member family. The agriculture output from their 18 acres land does not support the financial needs of the family. Since the last five years he grew chilli, brinjals and bitter gourd during February to April. In 2009 also, he bought brinjal seeds worth Rs. 1,200. However, since the rainfall was very erratic and inadequate and their well had only two feet of water, Bhoyar was worried that his yield would be very low. During interactions with KJBF’s team, Bhoyar learnt about micro irrigation systems which yielded more crops with less water. Bhoyar contacted the KJBF team and applied for installing a Drip system for irrigating his brinjal crop. According to the KJBF scheme, Bhoyar contributed Rs. 6,000, while KJBF contributed Rs. 9,000. The Government subsidy was Rs. 15,000. Today Bhoyar is a happy man. His investment in a micro irrigation system paid off!

Impact

- The net income earned from the Brinjal crop was Rs. 50,000 this year despite having less water in the well. This was far greater than the income of Rs. 12,000 he earned from selling brinjals the previous year.
- When drip was not installed in his fields he was only able to irrigate half an acre of land in three hrs with flood irrigation. With the help of drip system, he was able to irrigate 1.5 acre in two hours.
- Cost of electricity for pumping water for irrigation has substantially reduced.
- Since the drip system does not require application of water manually, the cost of labour had come down.
- He decided to cultivate bitter guard for the next season.

Since Bhoyar is convinced about the advantages of micro irrigation, he has also installed a drip system in 2.5 acres for his cotton crop and hopes to reap a bumper crop.

Improved Water Management Practices

Besides water augmentation, KJBF also emphasized the importance of better management of available water. Farmers were motivated to use efficient micro irrigation devices and improved farming practices for ensuring the efficient and judicious use of available ground water. The use of micro-irrigation technology such as Sprinkler and Drip irrigation ensures efficient water supply to the crops. By changing cropping patterns from high water consuming - long duration to less water intensive - short duration crops, the demand for water is reduced.

Micro-irrigation Systems

Just as it is important to replenish ground water, it is also important to conserve water through better supply side management. KJBF encourages farmers to use micro irrigation systems in order to use the available water judiciously and efficiently.

Sprinkler irrigation is a method of irrigation in which water is sprinkled through a system of pipes usually by pumping. Water is then sprayed into the air and it irrigates the entire soil surface through spray heads with a wide range of discharge capacities. Sprinklers provide efficient coverage for small to large areas and are suitable for use on all types of soil. Using sprinklers ensures 60-75% water to be saved.

Achievement

100 sprinkler sets have been installed by 100 farmers in 48 villages. KJBF contributed Rs. 9 lakh, Rs. 6 lakh came from Government Funds and Rs. 6 lakh was contributed by the benefiting farmers.

Drip irrigation is a water-saving technology which enables slow and regular application of water directly to the roots of the plants. Water is supplied through a network of economically designed plastic pipes and low discharge emitters. Up to 80% of water is saved if crops are irrigated using this system. The crop productivity and area

Mr. Ramesh Dyaneshwar Bhoyar of Sonegaon (Abaji) has used drip system after getting financial and technical support from KJBF. He was able to grow more vegetables and earn more in one season itself compared to the whole year.
under cultivation is enhanced. Using a drip system arrests water and soil runoff. Since the fertile top soil layer is retained, the need to use fertilizers is also reduced. Drip irrigation is environmentally sound and also enhances the farmer's income. As a result of KJBF's efforts, farmers in this region have begun to use drip irrigation for water intensive high yielding variety of crops such as cotton, soyabean, red gram, wheat and groundnut. Besides maintaining a high level of moisture in root zone, drip irrigation also reduces labour cost for weeding.

Achievement

68 farmers in 24 villages participated in this programme and 174 acres area has been brought under drip irrigation system for growing Cotton, Orange, Lime and vegetables. KJBF has contributed Rs. 13,500, Government subsidy was Rs. 15,000 and benefiting farmers paid Rs. 16,500 for installing Drip irrigation systems for one ha Cotton crop. Contributions for Drip irrigation system for one ha fruits or vegetables were: KJBF Rs. 9,000, Government Rs. 15,000 and beneficiary farmers paid Rs. 6,000. KJBF has contributed Rs. 6.72 lakh. Government subsidy was Rs.14.38 lakh and benefiting farmers paid Rs.7.67 lakh for installing Drip irrigation systems.

Drum Kits for vegetable cultivation

KJBF has been promoting the cultivation of vegetables for small and marginal farmers to not only meet their domestic nutritional requirements, but also for getting steady cash income by selling the surplus vegetables. In order to be able to sustain this activity despite the challenge of shortage of water for irrigation in Wardha, KJBF has also promoted Drum Kits developed by the International Development Enterprises (IDE). The Drum Kit consists of a Drum of 200 litre capacity and pepsi drip laterals. Water flows automatically due to gravitational force since the Drum is placed on a stand or platform at a height of 1 m. This system works best for cultivating vegetables in a plot of 100 sq m area. Thus using this drip irrigation system not only saves water but also saves labour for watering the plants.

Achievement

- Eight Drum Kits have been given to eight small farmers in four villages.
- The total cost of one Drum Kit is Rs. 1500 and each beneficiary contributed Rs.375/-

Impact

- Small and marginal farmers were able to cultivate vegetables with effective and judicious utilization of water and earn a steady additional income.
- The nutritional status of the farmers' families improved because they ate home grown vegetables.

Micro Irrigation for Mega gains

Shaikh Abdul Majid and his brothers have nine acres of land in Vijaygopal village in Deoli taluka. Six acres of this land is rainfed while three acres are under irrigation.

In the three acres of irrigated land, they have grown five sweet lemon five orange, five guava, and two lemon trees. Along with horticulture they usually cultivate cash crops like cotton, soyabean, and jowar in the Kharif season and wheat, gram, and vegetables in the Rabi season. They have a 30 feet deep well for irrigation in their field. Abdul explains how every year the water level is up to 10 feet till the month of May. However, in 2009, due to low rainfall, the water level had dropped down to six feet by the month of November. Abdul thought it would be wise not to sow water intensive crops such as wheat and gram considering that water was already scarce. KJBF team member encouraged him to attend the Farmers Training programme. After attending the training programme he was convinced that buying a Sprinkler set would solve his problems since he would still be able to grow wheat with much less water. However he did not have adequate money to pay his contribution towards the cost of the sprinkler set as per the KJBF programme strategy. At this point his younger son helped him by giving him the required amount of Rs. 6,000 from his own savings in the Sanchayani Bank account in his school. Having purchased a Sprinkler set with financial support from KJB, Abdul was confident that he would be able to get good returns on the wheat. In addition he was also able to grow brinjals and chillies for cash income.

Impact

Provided adequate water is available, Abdul got yield of 10 quintals wheat every year. After acquiring a sprinkler set, he produced 14 quintals wheat even though the amount of water was less last year. In addition he also grew fruits and vegetables and earned an additional income. Once the Sprinkler system was set up, the irrigation took place due to pressure from the pump sets. Thus the back-breaking task of creating water channels and watering the field was no longer required to be done. Thus the Sprinkler not only saved water but also saved labour and ensured a higher income for the family.
On efficient use of water for irrigation, KJBF regularly organize training, demonstrations and field day with farmers of the programme villages to promote micro irrigation systems.

The economy of Wardha district is predominantly based on agro-based livelihoods viz Agriculture and Dairy farming. With the agrarian community mostly practicing dry land farming, the fate of the farmers is largely dependent on the vagaries of nature. Also, the traditional cropping pattern is unsustainable as it is both ecologically and economically unviable. Most of the land has an undulating terrain and is partially degraded due to soil erosion. The crop productivity is low due to the poor quality of land and inadequate water. With the adoption of green revolution technologies, the crop diversity has reduced to only a few crops like cotton, pigeon pea, sorghum and soybean. Cotton has been a major cash crop. However, being highly cost intensive and susceptible to pests, the rate of crop failure is very high. Farmers still practice traditional farming which is labour and input intensive, without gainful returns. A lot of the crops grown in the region are long duration crops. Since the traditional pattern is to do monocropping, there is no diversification of crops to reduce the risk of failure. Inorganic farming with excessive usage of chemical fertilizers and pesticides have rendered tracts of agricultural land to become less productive. The farmers have failed to adapt to new needs and market trends in order to maximise profit. Thus agriculture in this region is not a profitable venture. Since agricultural activities are restricted only to monsoon and post-monsoon periods, there is no income generating activity during summer. In fact many farmers have been buried under heavy debts. This may be one of the reasons for the unfortunate spate of Farmers' suicides in this region since the recent past. Unfortunately, in the absence of alternate livelihood opportunities agriculture still remains the only source of livelihood.

KJBF Intervention

Recognizing the need to educate and motivate farmers to adopt sustainable agricultural practices, KJBF team conducted training programmes at the Training Centre in Wardha. They were also taken on exposure visits to see the results of adopting sustainable farming practices. The VVs maintained regular interaction with the community and provided on-site technical advice. The KJBF team encouraged marginal and landless farmers and women especially, to undertake dairy farming as a means of alternative livelihood and promoted improved cattle management practices.
Context

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Sustainable Agriculture Practices

KJBF motivated the agrarian community to adopt integrated farming practices that reduced the risk of crop failure, promoted the cultivation of short duration, less water intensive cash crops combined with horticulture (wadi) and dairy farming. Diversifying mono cropping by cultivating a mix of cash crops, fruits and vegetables reduced the risk of total crop failure. KJBF motivated farmers to practice organic farming and promoted composting. Using improved seeds and efficient technology, also contributed to enhancing crop yields.

Horticulture

Horticulture is being promoted as a long term strategy for the farmer to eventually have an assured additional income when the trees started bearing fruits. KJBF provided saplings of fruit species such as Orange, Gooseberry (Amla), Mango, Pomegranate, Guava, etc. to 37 farmers. KJBF provided financial support of Rs. 57,110. The beneficiaries contributed Rs. 6,229. Technical and capacity building support was also provided to the farmers by the KJBF team. KJBF has partnered with NABARD for supporting tribals to take up horticulture in 21 villages of Arvi taluka. Preliminary work on the programme has begun. A User Group of ten tribal farmers undertook and completed the construction of a Group Well (GW). Groups have been identified and a Group well has been constructed with one of the identified group (see box).

KJBF promotes horticulture which is one of the most beneficial and sustainable agriculture practices. It adds income in the family.

KJBF NABARD Partnership: WADI Project

NABARD has sanctioned a WADI Project to KJBF for supporting 1100 tribal families in 21 villages of Arvi Taluka of Wardha District under its Tribal Development Fund. The WADI project is an agriculture based farming system in the rain fed tribal areas, which envisages empowering poor farmers of the most underprivileged tribal community through community participation, initiatives for micro financing as well as processing and marketing of fruits and fruit products. It focuses on the development of small fruit orchards (WADI), agriculture improvement through inter cropping and restoration of denuded land through soil and moisture conservation measures. The WADI will consist of a horticultural plantation of 25 Mango, 20 Amla and 8 Lemon trees with 325 forestry plants for live fencing, on one acre of land. A total of 1000 tribal families will be supported in three batches of 200, 400, and 400 families over a period of five years each. KJBF will implement the project through the total period of seven years. KJBF will take the responsibility for providing hand holding support to the tribal beneficiaries in the entire process of input supply to marketing the produce.

This programme is believed to be an effective tool for addressing the livelihood problems of the tribal families. A part from income from the fruit tree are also expected to cater to the fuel, fodder and other small timber needs of the tribal farmers. Fruits sold in the market or in the form of processed products would generate cash income for the tribal farmer. Undertaking soil conservation and water resource development is also on the anvil. Women will be encouraged to play a pivotal role in the execution of this programme and will be provided appropriate training. Emphasis will also be given to addressing women’s health issues. Women from 100 landless tribal families will also be encouraged to take up micro-enterprises like vermicomposting, running grocery shops, maintaining milch animals etc. The total cost of this project is Rs. 446.41 lakh. NABARD will bear Rs. 282.46 lakh, KJBF will put in Rs. 121.05 lakh and the Community contribution is Rs. 42.90 lakh.
Cultivation of vegetables

not only provided steady additional cash income to the farmers but also contributed to catering to the nutritional needs of the family. KJBF supported good quality vegetable seeds of Brinjal, Tomato, Spinach, Okra, Raddish, etc. to 225 farmers with financial support of Rs. 54,095. The farmers contributed Rs. 13,500.

Crop demonstrations using improved seeds

Farmers traditionally used the previous year’s grain as seed for the next season. This resulted in poor crop yields. KJBF introduced new and improved seed varieties of Wheat and Gram in the Rabi season of 2009. The team convinced farmers to experiment with these new seed type on demonstration plots within their fields. Five hundred forty eight demonstration plots using the research variety of Wheat named Onkar (20 kg for 0.5 acre) and of Gram named D 21 (10 kg for 0.5 acre) were piloted.

Table 2 : Comparative analysis of the traditional and Onkar wheat

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Variety</th>
<th>Qty. of Seed(Kg)</th>
<th>Area in (acre)</th>
<th>Yield of Traditional variety</th>
<th>Yield in (Q)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Wheat</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Onkar</td>
<td>10</td>
<td>0.5</td>
<td>3.5</td>
<td>5.5</td>
</tr>
<tr>
<td>2</td>
<td>Gram</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>D 21</td>
<td>20</td>
<td>0.5</td>
<td>2</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Remark : Good quality grain which sold at a higher price (Rs. 100-200/Q) in market

Impact

Seeing the bumper crop that the experimental Onkar plots reaped, many other farmers are motivated to use the improved seed the next year. Thus a successful in-situ demonstration enabled KJBF to influence farmers in Fattepur to change from sowing the traditional variety to using improved hybrid seeds for increasing their yield and enhancing their incomes.

Improved Seeds for Enhanced Yield

Rajesh Budh Bavde of Gorkheda village has 4 acres of land. He had always been cultivating the local variety of wheat in his farm for supporting his family of three. After attending a village meeting organized by KJBF, he learnt about improved seeds. Bavde decided to experiment with using the improved seeds of Onkar variety being promoted by KJBF on a small plot of his land. He decided to grow both, the local and the improved seed varieties of wheat and gram in his fields.

Bavde observed that the local variety of wheat yielded 6 quintals per acre. However, the Onkar variety yielded 10 quintal per acre and that too within a shorter span of time. Looking at the positive results he obtained for the very first year of sowing an improved seed variety, Bavde is planning to grow the Onkar variety next year in his entire field.

Bavde also sowed three different varieties of Gram seeds. He used 20 kg of seeds of the local variety and 20 kg of Krishidhan (improved seeds promoted by KJBF). He also prepared a third plot using grains from his last crop as seeds. He observed that Krishidhan had more germination and more branches as compared to the local variety of seeds. Also the seeds of the Krishidhan variety are cheaper than the seeds of the local variety. The farmer saves Rs, 100/- per every 10 kg bag if he uses the Krishidhan variety.

Thus using improved seeds gives multiple benefits of enhanced yields, better returns and lesser input costs!
Organic Farming
Organic farming improves the quality of the crops, reduces labour costs for weeding and reduces the risk of crop damage by pests without the use of harmful chemical fertilizers and pesticides. KJBF’s Training Programmes and exposure visits have been instrumental in popularizing this practice in Wardha.

Organic Composting is a low cost, highly efficient and environmentally sound agricultural practice where biological waste is allowed to decompose under anaerobic conditions in specially constructed pits. KJBF has constructed 107 compost pits of size 5 X 4 X 4 feet benefiting 107 farmers. KJBF contributed Rs. 42,800 towards the cost of construction. Rs. 10,700 was contributed by the farmers.

Vermi composting is the process which uses earthworms to decompose biomass such as cattle dung and farm waste in pits or beds. The worms enhance the decomposition of organic matter into soil, improve the structure, texture, aeration and water holding capacity of soil and prevent its erosion. Vermi compost is rich in humus and essential plant nutrients. Vermi compost prevents nutrient loss and increases soil fertility which not only improves crop yields, but reduces pests and the risk of crop disease. Vermi compost is free of pathogens, toxic elements and weed seeds. KJBF has promoted 91 vermi compost units with 91 farmers by constructing pucca beds of size 10 X 3 X 2 feet. KJBF also provided the seed earthworms for setting up the vermi composting units. KJBF contributed Rs. 1,53,804 and Rs. 50,946 were contributed by benefiting farmers.

Kitchen Gardens
In an effort to improve the eating habits and the prospects of even the marginal and landless farmers, KJBF encouraged them to undertake Kitchen gardening in their own backyards. Cultivation of vegetables like okra, brinjals, drumsticks and fenugreek, herbs like coriander, spices like ginger and garlic and fruits like papaya and were promoted with the primary purpose of ensuring that the families eat balanced meals. Kitchen gardens also brought in some cash income for the family when the surplus produce was sold. KJBF supported 120 farmers by providing seeds and technical advice on growing vegetables, herbs and spices. KJBF provided financial aid of Rs. 19,275 and the benefiting farmers have contributed Rs. 4,800. KJBF also supported eight needy farmers to take up this activity on a commercial scale by supplying them with a drum kit with a drip irrigation system. KJBF contributed Rs. 8,950 for supply of eight drum kits and the benefiting farmers contributed Rs. 4,200.

Cultivation of Spices
Green coriander, onion and garlic have been promoted in the area by KJBF. This not only ensures crop diversification which reduces risk of crop failure, but also leads to an improved steady income for the farmer. Since spices are high value crops. The family too benefits by not having to buy spices for domestic consumption. KJBF has promoted cultivation of spices with 74 farmers. KJBF gave financial support of Rs. 16,650 while benefiting farmers have contributed Rs. 4,440.

Farmers of the programme area have realised the importance of organic farming. Hence they have accepted to be self reliant by preparing vermicompost and normal compost.
Alternative Livelihood Opportunities

Dairy Farming

With improved agricultural practices, crop yield is greater, resulting in an increase in income. However, KJBF motivates the community to also explore other land based occupations such as dairy farming as an alternate source of steady income. Dairy farming also ensures better nutrition for the family. The cattle dung is used for meeting fuel and manure needs. Since women are usually responsible for looking after cattle, dairy farming offers them an opportunity to be engaged in a productive (income generating) activity.

Promotion of Indigenous Cows

Traditionally the rural community reared cows only to fulfil their domestic need for milk. Cow dung was used as fuel and compost for agriculture. Bullocks are used as farm animals. KJBF motivates farmers as well as women from poor families to take up dairy farming. The indigenous breeds are better suited to the local environment and are easier to maintain. KJBF works with the SHGs to provide financial and training support to the women for rearing these cows. With KJBF’s intervention, dairy farming has been promoted as a source of additional income for the landless and marginal farmers also. KJBF has provided financial support through a revolving fund to 18 poor families to purchase one indigenous milch cow per family.

Rearing a Cow for a Better Tomorrow...

A revolving fund of Rs. 1.21 lakh is created by KJBF to provide indigenous milch cows to poor farmers or widows in the programme villages. Rearing indigenous cows which are better suited for the local environment reap multiple benefits for the household. Consumption of milk improves the nutritional status of the family. The surplus milk is sold to earn additional income.

KJBF believes that there is greater ownership and a commitment to work for improving one’s own life if the beneficiary contributes in cash and or kind. Shantabai Nanaji Nehare from Vijaygopal village is a beneficiary of KJBF’s Indigenous Cow programme. She received financial support of Rs. 7000 from KJBF as interest free loan to purchase a cow. She contributed Rs. 3000 to the total cost of purchasing a cow.

Shantabai’s son runs a tea stall in Vijaygopal. Shantabai used to buy eight litres of milk at Rs. 20 a litre everyday from the market. Now she has to buy only three litres from the market, since five litres of milk comes from their own cow. Hence there is a saving of Rs. 100/day. Shantabai is regularly repaying so that revolving fund could be regularly used for other needy families. She hopes that her prospects will improve further with support from KJBF.
Promotion of fodder crops

In order to improve the milk yield of cattle, KJBF demonstrated the benefits of high yielding and better quality fodder crops e.g. Maize (African Tall), Sorghum (MP Chari), Lucern, etc. KJBF provided seeds of these fodder species to farmers who contributed fifty per cent of the total seed cost. KJBF provided seeds of fodder plants to 123 farmers with financial support of Rs. 21,535. The benefiting farmers have contributed an equal amount.

Improved Cattle Management Practices

KJBF promotes improved cattle management practices such as stall feeding, safe drinking water and proper food for the cattle. KJBF provided financial support of Rs. 91,775, for constructing 31 water troughs for ensuring adequate drinking water for the cattle. The farmer's contribution was Rs. 31,000.

Animals perform better if they are stall fed. KJBF supported the construction of 15 mangers for stall feeding the animals by paying Rs.44,302 towards the total cost. The farmers paid Rs. 15,000 as their contribution.

Chaff Cutters are used for cutting dry fodder. There is less wastage of fodder if it is cut before feeding the animals. The cost of purchasing 10 Chaff Cutters was supported by KJBF (Rs. 58,500). The farmers contributed Rs. 6,500 towards the total cost.

Milk Collection Centres (MCC)

After utilizing milk for domestic consumption, farmers sold the surplus milk to private commercial dairies. Since the transportation costs were high their returns from the sale of milk were low. In order to address this issue, KJBF formed a group of such farmers, imparted training and built their capacities to manage milk collection and marketing. KJBF helped farmers to set up Milk Collection Centres with the necessary utensils and fat testing equipment in four villages. The financial support from KJBF

KJBF provides financial and technical support to construct mangers for stall feeding and water troughs for adequate and safe drinking water for the cattle.
Alternate Energy Source - Biogas

Although dung based Biogas plants had been promoted earlier through various development agencies, the programme had not succeeded and the Biogas plants were lying dysfunctional. Therefore initially the community was very sceptical about adopting this technology for the cooking. However when KJBF entered the villages, they made the community aware about biogas being a efficient fuel and its various advantage. They took farmers on an exposure visit to see successfully working plants. One of the VVs constructed a Biogas plant at his own home and demonstrated how it functioned. This motivated a few members of the community to construct Biogas plants. KJBF worked out the total cost of a standard biogas plant as being Rs. 15,000. The beneficiary’s contribution was decided to be Rs. 3,750 which was paid in cash and kind. The beneficiary paid the labour costs. KJBF took responsibility for constructing technically sound structures made by well trained masons.

Achievement:

KJBF has promoted 50 Biogas plants in 21 programme villages giving financial support of Rs. 4.95 lakh. The beneficiaries have contributed Rs. 1.12 lakh. Since all Biogas plants are functioning well, the community is now convinced about the advantages of this alternate source of fuel.

Impact

- Biogas greatly saves the drudgery faced by women and time and energy expended on collecting fuel. This has a positive impact on the lifestyle of women and their families.
- Biogas is a clean and smokeless fuel. Therefore women no longer suffer from the ill-effects of in-door air pollution. Also vessels remain clean and are easier to wash.
- A household using wood and LPG cylinder for cooking and spending Rs.350 on fuel every month, reported a saving of Rs. 1,400 within four months of the installation of a biogas plant.
- The by-product slurry is used as organic manure in the field. As per the farmer’s observation the problem of weeding is greatly reduced.
- Biogas is low cost and uses a non-conventional source of energy. It is therefore environmentally friendly.
A step towards Self Reliance
Integrated Development for Ratnapur

Context

Ratnapur in Deoli Block is a well connected village situated on the Yavatmal Highway. The village constitutes of 176 households with Kunbis being the socially and economically dominant caste (75%) and Muslims constituting the smallest minority (3%). 30 per cent of the population is classified as poor. Excepting a few elderly people, 95 per cent of the people in Ratnapur are literate. 76 Households are classified as being Below the Poverty Line (BPL). There is a cement concrete road inside the village, but the road to the fields is still a dirt track. There are five wells, besides five public and 12 private hand pumps which provide water to Ratnapur. On the whole the village has adequate water supply.

The average annual rainfall of the area is 1170mm during June to September. For the last two years only 900 mm rainfall has been received. Soil type is mostly black cotton soil. Some areas have Murrum soil. The area is mostly flat. There is heavy silt deposition and soil erosion. The soil depth of the area ranges from 2 feet to 7 feet. The depth of ground water table from surface ranges from a minimum of 30 feet to a maximum pf 100 feet. 60 per cent of the households depend on dug wells for irrigation. One household has a bore well. Total land in the village is 322 hectares. 250 hectares of this is unirrigated while 29 hectares is wasteland. Thus only 43 hectares is irrigated land. The main crops grown in Ratnapur include Cotton, Soya bean, Pulses, Wheat, Gram, Sorghum. 80% households are dependent on farming and farm labour as source of livelihood. rest households are dependent on service and other income sources.

KJ BF Intervention

In 2009, KJBF entered the village and studied the ground reality. They found the following problems:

1. The wells were drying up due to inadequate water harvesting measures and therefore there was less water available for irrigation.
2. Since the streams were heavily silted, the amount of surface water was limited and water was available for only a short period of time.
3. The traditional cropping pattern followed by the Farmers was both, water intensive and long duration crops.

The KJ BF team recognized the potential for promoting integrated development in Ratnapur village. Through conducting Participatory exercises such as PRA, village meetings and personal interactions, the KJ BF team was able to gauge the perception and needs of the community. The trained Village Volunteers interacted closely with the community and identified the following developmental needs:

1. Water conservation and management
2. Improved Agriculture
3. Dairy farming

In keeping with KJ BF’s core areas of work, the villagers of Ratnapur were supported to take up soil and water conservation measures, water resources development, follow improved agricultural practices and explore alternate livelihood options. Village Institutions were strengthened and efforts were made to build the capacity of the community to increase participatory involvement in decision making. The community also decided to take income generating activities.

KJBF team members interacting with farmers of Ratnapur to change agriculture pattern and to adopt horticulture and dairy farming.
alternate livelihood options. Village Institutions were strengthened and efforts were made to build the capacities of the community to take up developmental action. The community was involved at all stages of planning, implementation, monitoring and decision making. The community also decided the amount and mode of payment of the people's contribution towards the cost of each developmental intervention.

A street play on the theme of water conservation was developed and performed by a professional group for creating mass awareness about this topic. The community was highly motivated to take up water conservation measures after seeing the performance. **At the end of street paly the village leaders resolved to make their village as RATNAPUR SI DDHI.**

**Capacity Building**

- KJ BF provided various types of training inputs to the community. The Village Volunteers (VV)s were taken to Jalgaon for an exposure visit to see the on-site demonstration of Micro irrigation technology as promoted by the Jain irrigation Systems. The VVs maintained regular interaction with the farmers. Those farmers who were willing to participate in KJ BF's programmes were given additional training inputs.
- Interested farmers were taken on an exposure visit to Ralegan Siddhi and Hivre Bazar to see the water conservation work and model village. This motivated them to take up different kind of water conservation work like well recharging, revival of streams, construction of farm ponds and the use of micro irrigation technologies such as drips and sprinklers.
- They were also taken to KJ BF's Training and Technology Resource Centre at Manohar-dham, Dattapur, to see live demonstrations of water resources development, fodder plots, Biogas etc.
- Farmers were motivated to practice improved agriculture practices after seeing successful demonstration plots using improved seeds and diversification of monocropping.
- KJ BF facilitated the formation and capacity building of a Women's SHG.

**Developmental interventions with KJ BF Support**

- Farm bunding was done on 15.14 hectares of agricultural land.
- 23 well recharge structures have been completed.
- Two borewells have been dug for irrigation.
- Three Farm ponds have been constructed.
- Two Check dams were constructed. These structures are expected to benefit 18 households.
- Deepening and widening of a stream of 1400 metre length has been completed. Farmers in the vicinity of one kilometre area of the stream are expected to get benefit from the revival of the stream.
- 13 farmers have installed Drip irrigation systems on a total of 46 acres of agricultural land.
- Sprinklers have been installed by 9 farmers on 9 acres of land.
- 18 farmers grew improved varieties of crops on one acre demonstration plots.
- Five organic compost pits and nine vermicompost pits became functional.
- 11 farmers took up vegetable cultivation for getting a regular cash income.
- Five marginal farmers have been encouraged and supported to take up kitchen gardening.
- Seven farmers developed fodder plots on part of their land.
- Four farmers constructed water troughs for providing water to their cattle.
- Two farmers built mangers for stall feeding and also invested in chaff cutters for cutting the fodder.
- Five households constructed Biogas plants.

**Expected Impact**

- The agricultural yield is expected to increase.
- Since the deepening and widening of 1400 m stream has been completed, rain water will be collected in the stream bed. Once the rain water is harvested there will be a reduction in water logging of prime agricultural land. This will prevent soil erosion and water logging in the field and production will improve. It is expected that large area of fallow land will now be free for cultivation.
- Construction of check dams is expected to increase surface storage and ground water recharge.
- With the popularization of micro irrigation technology among the agrarian community, will be able to grow more with less water.
- Through promotion of improved seeds of wheat yield is increased up to 1.5 times as compared to the traditional variety. This will improve the agriculture income.
- The SHG has created a platform for women to take income generating activities.
One of the focus areas of KJBF is Human Resource Development. It focuses on building human capital for the sustainable development and improves the quality of life. People of the rural areas have been trained and oriented for the integrated development. They are included in the process of planning, implementing and monitoring. The constructed assets and all developmental interventions of the programme area are aimed to be owned by the beneficiaries of the interventions.
Section 3 : Developing Human Resources

Context

Wardha is a land of many challenges. The natural resources are degraded and the economy of the region is unstable because of the near total dependence on agriculture as the principal occupation. Women who constitute nearly half of the population and the youths in the region have immense innate potential to improve their socio-economics development with professional support.

While efforts are being made to restore, manage and develop the natural capital of the Wardha region, it is also very important to recognize the importance of developing the human capital of the area for sustainable development. Wardha district falls under the six distressd districts, infamous for the recent spate of Farmers’ suicides. The Government and other agencies have responded to this tragedy by announcing many 'development' programmes for the holistic development of villages. There is a scope to bridge the gap between what the community really needs and what is delivered by programmes which do not involve the community in the planning and implementation process. In the absence of efforts to educate the community and develop any soft skills for the management and maintenance of the technological interventions, many of the structures become defunct and efforts wasted due to lack of maintenance. Also there is a lack of ownership when people have not been involved in the process of planning and implementing.

Recognizing the need for investing in developing the human potential in the region, KJBF works on building a sense of mutual trust between the team and the community. KJBF also takes responsibility for capacity building for the community in the areas of knowledge enhancement, developing a positive attitude and learning skills for management of development programmes. Special efforts are being made to involve women in developmental activities and build their confidence to engage in productive activities.

KJ BF’s Intervention

KJ BF initiated its intervention in the Wardha district in September 2009. Staff selection and setting up of the field office were the primary activities during the period March 2009 to August 2009. Once the core staff members were in place, they started interacting with the local communities, organizations already working in the area and government agencies involved in the development of the district. The KJBF team interacted with the agrarian community and developed an understanding of the local knowledge, skills and practices followed in the region. Special efforts were made to meet progressive farmers who had managed to rise above the limitations posed by the poor state of natural resources, learn from the innovative practices they had developed and used them as motivators for the agrarian community.
Selection of Programme villages

Several factors such as socio-economic conditions of the villages, status of natural resources were considered before KJBF selected a particular village for intervention. KJBF identified 62 villages in Deoli, 30 villages in Arvi and eight villages in Seloo taluka on the basis of their potential for developmental work. In order to avoid duplication of efforts, KJBF also decided to refrain from taking up work in the same thematic area as other NGOs. In case another organization was involved in the village, it was mutually agreed that KJBF would only take up supportive activities.

Baseline Survey

KJBF conducted a baseline survey covering 600 households in 30 villages of the three project talukas. This study enabled the team to get an objective understanding of the status of the socio-economic, financial and natural resources. The findings of the study will be used for future planning. The baseline data will also be an important reference when an impact assessment study is conducted in future.

Community Awareness/ Education

- Public meetings were held to orient the community to the organization and its purpose. Motivational films on development were shown and presentations were made to orient the community to KJBF and its purpose.
- Workshops were conducted to orient groups of farmers to developmental interventions. This included training sessions, exposure visits and a discussion on Action Plan for the village.
- Resource persons from within and outside the communities who had succeeded in making agriculture a gainful venture were invited to share their experience with the farmers.
- A special street play based on the theme of water resources management was performed in 10 villages by a professional group. These performances played a significant role in creating mass awareness on the subject and facilitated a change in the people's attitude towards accepting the interventions promoted by KJBF. As a result of these performances, many farmers approached KJBF with a willingness to take up initiatives for improving their livelihood options. Collecting cash contributions was also easier once the community was willing to participate in KJBF's programme.
- Promotional material highlighting the importance of developmental interventions were shared among the communities.
- A documentary film which will help in promoting greater awareness about KJBF's developmental interventions is in process.

Community Interaction

- PRAs were conducted to enable the KJBF team and the community to explore the ground realities, understand the real needs of the community and outline a plan of action.
- KJBF’s Village Volunteers (VVs) maintained regular interaction with the community. They identified beneficiaries and provide information and hand holding support to them. Once the type and cost of a developmental intervention were worked out, contribution and responsibilities sharing was also decided upon, in consultation with the beneficiaries.
- An innovative system of getting feedback from the beneficiaries was to get them to fill up specially designed feedback forms.

Village Volunteers

As a strategy to understand the concerns and needs of the community and find suitable solutions to their problems, KJBF selected motivated youth from within the community and trained them to take up extension activities in the programme villages.

These VVs are also given incentive to continue working with the community.

Village Institutions (VIs)

KJBF believes in participatory bottom up approaches to engage in the process of human resource development and rural upliftment. VIs are platforms for the dissemination of information and collective action. The KJBF team worked towards building trust and a good rapport with the community and conducted training programmes for strengthening VIs. The two major forms Of VIs promoted by KJBF are:
Self Help Groups (SHG)s for Savings and Credit

This activity enables a group to be formed based on the common need to develop financial security and learn the skills of financial management.

- Of the total 108 SHGs in 36 villages, 105 were newly formed during 2009-10.
- Two Women's SHGs which had earlier been promoted by the Panchayat Samiti but were lying defunct were revived.
- One SHG promoted by another organization was also strengthened by providing training support.
- 38 SHGs for Men and 67 SHGs for Women with an average membership of 12 were promoted during the year.
- Total membership of SHGs is 1,405 (Women 898 and Men 507)
- Each member saves Rs. 50-100/month. The total savings in the SHGs amounted to Rs.2.58 lakh till March 2010.
- Linkages with Banks have been established in the case of all the SHGs for savings purpose.
- 4 SHGs have started internal rotation of savings.
- Credit of Rs. 5,500 has been given to the members as per the norms of each group.
- In order to ensure financial transparency, records are maintained and accounts are presented during the meetings in the presence of all members. Every group develops its own set of norms and identifies leaders who are responsible for ensuring the smooth functioning of the groups.
- KJBF provided Capacity building support to the SHGs.
- Once the SHGs became functional, KJBF reached out to poor women, especially widows through this platform for extending a financial support for buying an indigenous cow.

User Groups (UG) / Village Committees

- KJBF promoted a total of 12 UGs consisting of an average of 12 men. UGs were formed for the purpose of implementing a developmental programme in the village. Nine UGs for Check Dams, two for Lift Irrigation and one for Group Well, have been formed.
- The UGs are further divided into sub committees which take up specific responsibilities for functions such as contribution collection, site supervision, water supply during construction, material management and conflict management.
- The UGs undergo specific training for the maintenance and management of the intervention e.g managing sluice gates.

Training Programme for self help groups has been conducted in KJBF training center at Wardha. The institutional trainings are focused on building group behaviour and finance management.
Community Celebrations

Community Gatherings are a way of getting different sections of the community to meet on a common platform and inculcate a sense of common purpose and a feeling of camaraderie.

International Women's Day

KJBF organized a special event at Deoli taluka to celebrate the International Women’s Day on March 8, 2010. Members of the Women's SHGs from all the programme villages were invited. The women from different SHGs came together for the first time and got a chance to share their experiences. A skit on the theme of savings and credit provided an opportunity for education and entertainment. Women achievers were invited as Guest Speakers to motivate the women from the community to become self-reliant.

Inauguration of WADI project

Dr. K.G. Karmakar, MD- NABARD was the Chief Guest at the function to mark the launch of the KJBF-NABARD partnership for the WADI Project. He shared the experiences of the successful WADI projects in other parts of the country and talked about the partnership with KJBF for developing 1000 Wadis with 1000 tribal families and 100 landless families will also be covered under income generating activities. The programme was attended by tribal men and women, other NGOs and bankers.

Capacity Building for the Community

A six day training programme was organized for three VVs at the Rahati watershed programme coordinated by Dharamitra (NGO) in Karanja taluka. They were acquainted with the theory and the process of net planning. Practical sessions on understanding the layout of the land, planning farm and contour bunding and taking measurements of completed bunding work were conducted. VVs were also trained in record keeping related to SWC work such as maintaining a Measurement book, Labour Register and a Muster for labourers etc. VVs interacted with Village Watershed committee (VWC) of Rahati, and had a discussion on issues
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Sixty farmers from Deoli and Arvi taluka were taken on an exposure visit to Ahmednagar district in the first week of February 2010. The visit to Shri Anna Saheb Hazare’s Ralegan (Sidhi) and Hivre Bazar focused on the importance of soil and water conservation. Both model villages are successful examples of change brought about by community action. The Wardha farmers were able to interact directly with the host villagers and learn from their experiences. The exposure visit enabled the farmers to actually see the impact of developmental interventions such as check dams, nalla widening, contour bunding, farm bunding, well recharging, farm ponds, gabion structures etc. Farmers of both these model villages have successfully demonstrated how agriculture output can be maximized despite the poor quality of soil and the scanty rainfall, by taking appropriate measures for soil and water conservation and water resource development. The visiting farmers were very impressed to see that the wells in these two villages remained full of water for the whole year because of the ground water recharging. Once convinced about the positive impact of taking appropriate action for soil and water conservation, the farmers were motivated to adopt these technologies back home and willingly contributed their financial share for the programme interventions promoted by KJBF.

Training programmes to orient the community to the various Projects were conducted as part of the project cycle. Farmers were taken on an exposure visit to see natural farming and organic farming and were taught how to make vermicompost. Farmers were trained to take up horticulture. Training programmes on development of water resources like Check Dams, well recharge, farm ponds and percolation tanks enabled people to understand how to construct and maintain these structures. An exposure to micro-irrigation systems enabled farmers to understand the benefits and motivated them to set up drip and sprinklers on their own farms. In order to take up Dairy farming as an alternate source of livelihood, farmers were trained in better cattle management practices.
Revival of the Lift Irrigation Society (LIS)

Context
Kakaddhara is a remote tribal village in Arvi Taluka. The people are extremely poor to make two ends meet due to lack of resources. They also have to depend on agriculture labour, wine making and selling ‘Matatis’ - an ornament for bulls made from the fibres of the Palash roots used during the Pola festival. Since the literacy levels are very low and the people are not well versed with marketing, they were exploited by traders.

History
The Govardhan Sinchan Cooperative Society was registered as a Lift Irrigation Society (LIS) in 1989. This LIS functioned well for seven years. Byelaws for ensuring equitable sharing of the water and the smooth functioning of the group were laid out. The members of the LIS paid a fixed amount of Rs. 10,000 for the electricity and expected the Government to fully waive off the outstanding amount. Due to some misunderstanding, the group stopped paying for the electricity bill needed to be sorted out with the Electricity Department. As a result of non-payment of the bill, the electric connection was discontinued. For the last nine years the LIS had been defunct.

KJBF Intervention
When KJBF interacted with the community in November 2009, it came to the conclusion that:

- There was potential for the revival of the LIS as all the infrastructure was already in place.
- The problem created due to the outstanding electricity bill needed to be sorted out with the Electricity Department.
- The members of the LIS needed to regroup and strengthen the institution to become functional once again.

KJBF has revived Govardhan Sinchan Cooperative Society (Lift Irrigation) of Kakaddhara.

- Local leadership had to be nurtured in order to be able to sustain the village institution.

The KJBF team had a series of discussions with the community. KJBF intervened on behalf of the community and negotiated a deal with the Electricity Department. Although the total pending bill was Rs. 1,32,000, KJBF managed to get a partial waiver. According to the new agreement, the total amount to be paid for restoring the connection was Rs. 59,750/-. Rs. 12,800 came as contribution from the beneficiary farmers. KJBF extended financial support of Rs. 46,950 payable by the farmers over the next two years.

Capacity Building
Once the connection had been restored, KJBF worked with the members of the LIS to strengthen the institution by formulating norms for sharing responsibilities and resources. The members were given training in the areas of institution building, leadership and financial management.

Networking
The revival of lift irrigation society will help tribal farmers under wadi project in partnership with NABARD of Kakaddhara village.

Expected Impact
- The revival of the LIS enabled the community to once again benefit from all the investment made in building the infrastructure the well, the irrigation channel etc.
- The farmers incomes are expected to improve with water being available for agriculture.
- The revival of the village institution will strengthen local leadership and enable the community to take informed decisions about their own development.
When KJBF interacted with the community in November 2009, it came to the conclusion that: 

- The Lift Irrigation Society (LIS) had been defunct for the last nine years and the electric connection was discontinued. For the outstanding amount. As a result of non-payment of electricity, KJBF expected the Government to fully waive off the bill, but the LIS paid a fixed amount of Rs. 10,000 for the electricity and the Government managed to get a partial waiver. According to the new agreement, the total amount to be paid for restoring the electricity connection was Rs. 1,32,000. Although the total pending bill was Rs. 1,32,000, KJBF worked with the Electricity Department and negotiated a deal with the Electricity Department. The problem created due to the outstanding amount was then sorted out with the consent of the Government.

- The electric connection was restored after the agreement was signed, but due to the misunderstanding, the group stopped paying the bills regularly for the first three years. Due to some financial reason, the LIS had to be liquidated. The members of the LIS needed to regroup and strengthen the institution to become functional once again.

**Expected Impact**

- The revival of the Lift Irrigation Society will help tribal farmers once again benefit from all the investment made over the next two years. In 1989, the Govardhan Sinchan Cooperative Society with the help of the Government had registered as a Lift Irrigation Society (LIS) in order to procure water for irrigation from Padmashree Bhavarlal Jain (Center- seated) at Jain Irrigation Systems, Jalgaon (Maharashtra). The members were given training in the areas of resource management, financial management, and都要 adhere to high standards of excellence and sustainability. The team believes in the participatory philosophy and is motivated to work for improving the quality of life of the rural community, under the consistent guidance of KJBF management.

**Capacity Building (Staff)**

- A training programme on “Designing, Planning and Estimation of Check Dams” was conducted by the N. M. Sadguru Water and Development Foundation in Dahod. Five technical staff attended a seven day intensive training programme which had both classroom sessions and fieldwork.

- A two day intensive training workshop was conducted for a group of staff members and VVs at the campus of the Jain Irrigation Ltd in Jalgaon. This visit enabled the group to see live demonstrations of how effective the micro-irrigation systems such as Sprinklers and Drip systems were even in adverse conditions. This motivated the group to actively promote the use of this technology in Wardha.

- A Workshop on micro-irrigation systems and agronomic practices was held for the farmers.

- An exposure visit to see Natural farming at Shri Subhash Sharma’s farm in village Dorli in Yevatmal district was organized.

- Exhaustive field visits are regularly undertaken by senior staff members for reviewing programmes, providing guidance and sharing experience with the field team.

- Weekly diaries written by the Field staff are appraised by the management after being reviewed by the Programme Manager.

**Systems**

- Budgets for the forthcoming year are prepared by the staff and have to be approved by the Board of Trustees before the end of the financial year.

- In order to motivate the staff, Board members visit the programme area, interact with the villagers, staff, attend village meetings and participate in PRAs.

- A Training Calendar for the staff and the community is planned for the whole year.

- Village meeting with the community are held whenever needed.

- An exercise for setting individual goals is done with each staff member at the beginning of the year. At the field level, staff members are asked to chalk out a plan of action with objectively verifiable indicators for the whole year. The yearly plan is then converted to monthly and weekly tasks.

- A monthly planning and review meeting is conducted to interact directly with the staff members by the management. The team believes in the participatory philosophy and is motivated to work for improving the quality of life of the rural community, under the consistent guidance of KJBF management.

**Staff**

KJBF has recruited multi-disciplinary team of professionals for planning, implementing and monitoring appropriate development interventions which adhere to high standards of excellence and sustainability. The team believes in the participatory philosophy and is motivated to work for improving the quality of life of the rural community, under the consistent guidance of KJBF management.

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Ø agencies and individuals for various purposes such as
Ø of duplicating efforts, KJBF collaborates with other

44

An exposure visit to BAIF at Nashik enabled
the team to see Horticulture development and processing of fruits.

Indoctrinating the right values for working with the community is an integral part of the culture of KJBF. Motivational sessions on basic human values, building positive attitudes and inculcating a sense of moral responsibility for facilitating the upliftment of the community are regularly held. A programme for orienting the staff to the concept and practice of the “Art of Living” were conducted. Yoga sessions are also conducted regularly.

Networking and Outreach
KJBF networks with other agencies engaged in developmental activities in the Wardha district. Instead of duplicating efforts, KJBF collaborates with other organizations to strengthen the programmes and improve the life of the rural community. KJBF has developed informal and formal partnerships with other agencies and individuals for various purposes such as sharing knowledge, experiences and other resources.

NABARD-WADI Project
Ø KJBF will be the anchoring partner responsible for working with 1000 tribal beneficiaries in 21 villages in Arvi taluka. Under this project, one acre horticulture plots (Wadis) will be developed with 1000 tribal beneficiaries.
Ø Micro enterprise activities will be undertaken for providing livelihood support to an additional 100 landless tribal families who will also be beneficiaries under the WADI project.

The total project cost is Rs. 446.41 lakh. NABARD will provide financial support to the project amounting to Rs. 282.46 lakh. KJBF has put Rs. 121.05 lakh. Rs. 42.90 lakhs is expected to come from the community.
Ø Dharamitra, a reputed NGO based at Wardha provided their support to KJBF when required in village level interventions.

Convergence of Agriculture Interventions in Maharashtra (CAI-M)

Preliminary meetings to discuss the type and scope of collaboration with the CAI-M have been held. The International Fund for Agriculture Development, Sir Ratan Tata Trust, Mumbai and the Government of Maharashtra are funding partners for the CAI-M project. The project is going to be implemented for the population of 11.2 million of which approx 45% are Below Poverty Line (BPL).

Outreach

1. KJBF shared information about its interventions in the field of water management at a seminar on “Water Harvesting” organized by the Bombay Chamber of Commerce and Industry.
2. A national seminar on corporate social responsibility was organized by NABARD at Raipur, Chhatisgarh in which KJBF shared the experience of the Wardha programme area.
3. A team from Mahindra and Mahindra visited the corporate and field offices of KJBF in order to gain an insight into setting up community development activities in their areas.
4. Several leading development professionals visited KJBF’s field programme.
5. A documentary film for sharing and inspiring various stakeholders about KJBF’s interventions is in process.

Impact

Ø Mutual trust has been developed between the community and KJBF.
Ø The training programmes and exposure visits have enabled both the staff and the farmers to comprehend the benefits of the developmental interventions and motivate them to adopt the new technology and practices.
Ø The women members of SHG have developed confidence in managing the financial systems of their groups.
Ø The VVs inspired many others to initiate developmental interventions in their villages.
Leading by Example - Arunbhau Ingole

Fifteen years ago, Arunbhau was like any other farmer in Wardha district. He depended on rainfed farming and his agricultural output was about Rs. 60,000 per annum. Year after year he found the quality of the produce degrading and quantity diminishing due to inadequate water and poor quality of soil. In the year 1994-95, he had incurred a debt of Rs. 55,000 and was extremely worried about his future. Arunbhau decided to re-examine his farming practices and take action for improving his fate. He reflected on traditional agricultural practices and thought about ways to improve the productivity. He was inspired to take up organic farming after realizing that his father always used locally available Farm Yard Manure.

Improved Farming Practices

Arunbhau empowered himself by acquiring knowledge about practicing improved farming practices in the following manner:

- He visited innovative farmers and agriculture universities in several parts of the country.
- He undertook SWC measures such as farm bunding, contour bunding, nala plugging for soil conservation and constructed a farm pond of size 20x20x3 m for water conservation.
- He practiced mulching with locally available agro waste for reducing loss of moisture due to evaporation for crops like sugarcane, mango, gooseberry and lemon.
- He invested in sprinklers for cash crop like soyabean, cotton, wheat and chick pea and drip irrigation for horticulture crops. By using water efficient technology and mulching he produces 85 tonnes of sugarcane per acre which is quite remarkable compared to the average production of the area.
- Arunbhau studied the traditional cropping pattern and realized that the land utilization was poor since there were many periods when nothing was being grown. He devised his own ingenious system of drawing up a seasonal map where he carefully planned what he would grow on each patch of his land during the year, so as to get maximum yield in accordance with market trends and needs. He made sure that no patch of land remained unproductive for even for a short period of time.
- He developed a cropping pattern where he divided his land into many small plots to grow cash crops, fruits and short duration vegetables. He planned his vegetables in such a way that he was able to grow off season vegetables which fetched him a higher price in the market.
- He improved the quality of his land by ensuring that the soil received vital nutrients through the application of organic manure. He started making his own organic manure and vermicompost. He completely stopped using chemical fertilizers and pesticides.
- Arunbhau decided to take on the marketing of his produce in order to ensure a better price, when he realized that the market was not geared to grading the quality of produce.
- Arunbhau initiated a group of ten farmers to set up Vishmukti Kendra - an outlet for selling organic products. The Farmers from nearby villages also sell their organic products through the Vishmukti Kendra.
- Pricing and packaging was designed to suit the market needs.

Impact

For five years Arunbhau struggled to make this transition from traditional farming to organic farming a profitable venture. Since then, Arunbhau has never had to look back. His income from his 20 acres of land has increased by 40 per cent.

Motivating Others

Arunbhau is not merely content with making his own profit. He believes in motivating other farmers to take up organic farming. In the initial period he would walk to nearby villages in the radius of ten kilometres to educate farmers about organic farming. Today he is called upon as a Resource person by many organizations across the country, including KJBF to training programmes where he shares his experiences. Exposure visits to his farm enable other farmers to see for themselves the benefits of practicing organic farming and motivate them to shift to this form of cultivation.

Arunbhau Ingole (standing) is sharing his best practise of organic farming and equated agriculture practices in a workshop with local farmers organised by KJBF in its training centre.
Section 4 : Learning

Natural Resource Management

- Having studied the land and initiated several technological interventions, the KJBF team has acquired an in-depth understanding of the soil and water conditions of the area. A better understanding of the soil structure, texture, slopes and water recharge potential etc. will enable the team to plan appropriate and successful interventions in future also.
- KJBF realized that it was necessary to be self-sufficient in terms of machinery and material needs in order to be able to work efficiently. KJBF therefore acquired all machinery required for construction and excavation work. This reduced dependency on local contractors and KJBF was able to deliver on time and with greater quality control.
- In order to overcome difficulties of finding skilled masons, KJBF experimented with using prefabricated sheets for lining the well recharge structures. This saved time and labour.
- Interlinking of water bodies was found to be an effective measure for reducing wastage of water due to excess surface run-off.
- KJBF realized that it was important to educate the farmers about the benefits of the intervention through training, exposure visits etc. Once motivated, it was easy to get farmers to contribute towards taking developmental action.
- Following participatory processes for identifying needs, planning and implementing the interventions was necessary for the sustainability of the programme.
- It is important to build the capabilities of the farmers in terms of knowledge and skills for them to be able to make informed choices and take charge of their own futures.

Enhancement of Livelihoods Opportunities

- KJBF learnt that sustainable interventions in the production systems were needed in order to improve incomes generated from agriculture.
- It was important to develop small enterprise activities such as kitchen gardening, spices cultivation and vermicomposting for augmenting incomes for small and marginal farmers.
- Alternate Livelihood options for the poor and women include developing Dairy farming through the promotion of indigenous cows and improved cattle management practices.
- The transition period between shifting from chemical farming to Organic farming may take as much as five years.
- Understanding markets and also facilitating the building of market linkages is important for farmers to be able to profitably market their goods.
- Capacity building plays an important role in farmers being able to accept new ideas and interventions and acquire skills for implementing and managing new technological interventions.

Human Resource Development

- Enhancing the knowledge base, developing a positive attitude and building the necessary skills are important for people to improve the quality of their lives.
- It is necessary to build trust and involve the community in the development process in order to ensure long-term sustainability of a programme.
- With training support women can be capable for taking up income generating activities and improve the financial prospects of the family.
- The SHG are platforms for men and women to initiate development interventions.
- Capacity building plays an important role in farmers being able to accept new ideas and interventions and acquire skills for implementing and managing new technological interventions.
4. LOOKING AHEAD

Within a short span of time, KJBF has succeeded in creating a rapport with the agrarian community in the programme villages. Thanks to all the mass awareness and education programmes, there is a basic understanding about the developmental options available to the farmers of Wardha. After several months of interaction and the successful completion of several interventions for the management of natural resources and development of better Livelihood opportunities, the community has developed faith in KJBF’s vision, mission and execution. KJBF is working towards making the community self-reliant by building their capacity to acquire the necessary knowledge and skills for taking responsibility for their own development.

Natural Resource Management

Having successfully undertaken soil and water conservation measures, and development of water resources in the programme villages, KJBF plans to scale up the programme.
- KJBF will expand the scope of its activities to four more blocks during the next financial year. KJBF eventually hope to cover all eight talukas in the Wardha district.
- KJBF plans to actively undertake interlinking of water bodies, as successfully demonstrated in Dattapur.
- KJBF will continue to innovate and strive to find cheaper and better alternatives for the community to adopt for improving the quality of their lives.

Improved Livelihood Options

KJBF demonstrated the impact of following modern agricultural practices such as diversifying monocropping by interspersing cash crops with other shorter duration crops such as vegetables and fruits, using improved seeds, practicing organic farming etc. In the next year, KJBF wants to expand the scope of this work to many more farmers in many more programme villages in Wardha. KJBF will also work towards motivating farmers to discard traditional unviable practices and explore more efficient ways of farming.
- KJBF will promote the use of the Cultivator which is a modern agricultural tool which is capable of performing all farming related activities such as ploughing, sowing, weeding, harvesting etc. in a very easy manner.
- KJBF will motivate Farmers to develop their own Seed banks so that they do not need to spend cash on buying seeds at the onset of every season.
- Promotion of Dairy farming, vegetable cultivation and spices cultivation will be given primary importance as these are activities that will improve the condition as also the health of the poorest families in the community.
- Efforts for developing micro-enterprises suitable for landless and marginal farmers are being planned under the WADI project. Activities such as vermicomposting would complement the needs of farmers who will develop fruit orchards under the WADI programme.

Development of Human Resources

- Partnerships with institutes like Government, SRTT, IFAD and UNDP will be explored.
- Existing partnerships will be strengthened.
- Community will be equipped with the appropriate knowledge, skill and attitude to take up the activity and also to use it sustainably.

KJBF revives streams/rivers in its programme village by deepening and widening. Under revival of streams/rivers programme it has revived 1640 metre Pansuda stream in Fatehpur Village.
5. THE BOARD OF TRUSTEES: THE MOVING FORCE BEHIND KJ BF

KJ BF is greatly indebted to the Board of trustees who have been a source of inspiration and have guided the foundation well. KJ BF is governed by a five members Board of Trustees headed by

Shri Shishir Bajaj founder member and Chairman of the foundation. After completing his MBA from New York University with a major in finance, Shri Shishir Bajaj joined the Group Company in 1974 and has since then been shouldering the overall responsibility of Chairman cum Managing Director of Bajaj Hindusthan Limited.

Smt. Minakshi Bajaj co-founder member of the Foundation as obtained her Bachelor of Arts degree from the Calcutta University and is a director of Bajaj Trustee Company Private Limited and Roop Sugars Private Limited.

Shri Kushagra Nayan Bajaj is a Trustee of KJ BF and has also been shouldering responsibility as vice chairman of Bajaj Group limited. Mr. Bajaj is a Bachelor of Science in Economics, Political Philosophy and Finance from the Carnegie Mellon University, Pittsburgh, USA; he earned his Master of Science in Marketing from the Northwestern University, Chicago, USA. He is the moving force behind the social responsibility initiatives of the foundation.

Mr Roshan F. Hinger is the vice chairman and whole time Director of the Company and an active Trustee of KJ BF. He holds a bachelors degree of science from the University of Udaipur.

Shri Rajendra Kumar Panpalia is trustee of KJ BF. He has obtained his Bachelor of Science (Hon.) degree from Bombay University. He is actively involved in social activities. He is director in number of companies.

Staff Strength of KJ BF

The strength of KJ BF has been its staff that all are from various background and expertise in their respective fields. During the year, the staff demonstrated their commitment and dedication to the vision and strategy of KJ BF and contributed to the realization of the same.

<table>
<thead>
<tr>
<th>KJ BF Team, Wardha</th>
<th>Central Coordination Team</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Mahendra Phate</td>
<td>1  Haribhai Mori</td>
</tr>
<tr>
<td>2  Prashant Borkute</td>
<td>2  Subodh Kumar</td>
</tr>
<tr>
<td>3  Ajit Jadav</td>
<td></td>
</tr>
<tr>
<td>4  Ms. Vijaya Thakare</td>
<td></td>
</tr>
<tr>
<td>5  Randhir Patil</td>
<td>6  Chetan Nandha</td>
</tr>
<tr>
<td>6  Durilab Kamaaria</td>
<td>7  Durlabh Kamaaria</td>
</tr>
<tr>
<td>7  Prakash Kher</td>
<td>8  Ramesh Pawar</td>
</tr>
<tr>
<td>8  Ramesh Pawar</td>
<td></td>
</tr>
<tr>
<td>9  Haribhai Mori</td>
<td></td>
</tr>
</tbody>
</table>

Kushagra Nayan Bajaj is interacting with village leaders in one of the programme villages of KJBF.
## 6. FINANCIAL REVIEW

Physical & Financial Progress (2009-10)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Programme</th>
<th>Unit</th>
<th>Physical</th>
<th>Progress (in Rs.)</th>
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<tr>
<td></td>
<td></td>
<td></td>
<td>KJBF</td>
<td>Community</td>
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<tr>
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<td>WATER RESOURCE DEVELOPMENT</td>
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<td>Deepening &amp; Stream Widening</td>
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<td>4</td>
<td>Construction of group well</td>
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<td>Construction of group LIS</td>
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<td>6</td>
<td>Well recharging</td>
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<td>Construction of farm pond</td>
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<td>8</td>
<td>Construction of bore well near farm pond</td>
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<td>SOIL &amp; WATER CONSERVATION</td>
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<tr>
<td>1</td>
<td>Contour bunding / Field bunding</td>
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<td>PROMOTION OF MICRO-IRRIGATION SYSTEMS</td>
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<td></td>
<td>For field crops (drip)</td>
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<tr>
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<td>For field crops (sprinkler)</td>
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<td>IV</td>
<td>NON-CONVENTIONAL ENERGY SOURCES</td>
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<td>DRINKING WATER</td>
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<td>ANIMAL HUSBANDRY</td>
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<td>Water trough for animal drinking purpose</td>
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<td>Promotion of mangers for stall feeding</td>
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<td>5</td>
<td>Dairy / milk marketing</td>
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<td>VII</td>
<td>AGRICULTURE DEVELOPMENT</td>
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<td>1</td>
<td>Crop demonstrations</td>
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<td>5</td>
<td>Kitchen gardening</td>
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<td>6</td>
<td>Promotion of horticulture development</td>
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<td>57,110</td>
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<td>7</td>
<td>Promotion of spices</td>
<td>Plot</td>
<td>56</td>
<td>16,650</td>
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</table>

Data Source - KJBF Office
*LBS - 130, Gabion - 18*
### Details of Capacity Building Programmes

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Topic</th>
<th>No. of Trainings</th>
<th>Total Participants</th>
<th>Expenditure (in Rs.)</th>
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<tr>
<td>I</td>
<td>Institutional Trainings</td>
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<td>1240</td>
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<td>Project Trainings</td>
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<td>Staff’s Capacity Building</td>
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<td>IV</td>
<td>Volunteer’s meeting</td>
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<td>V</td>
<td>Volunteer’s Incentive</td>
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<td>VI</td>
<td>Exposure visits of Community (within district)</td>
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<td>Exposure visits of Community (outside district)</td>
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<td>Workshops</td>
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<td>Workshop on experience sharing on micro-irrigation systems &amp; agronomic practices with farmers</td>
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<td>Workshop on WADI development with farmers, Officials from NABARD &amp; NGO representatives</td>
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<td>Workshop on natural farming with Subhash Sharma &amp; farmers</td>
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<td>4</td>
<td>Workshop on experience sharing with SHG members</td>
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<td>IX</td>
<td>Promotion of SHG</td>
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<td>3</td>
<td>Supported SHG</td>
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<td>X</td>
<td>IEC activities</td>
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<td>1</td>
<td>Pamphlets for mass awareness</td>
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<td>2</td>
<td>Feedback post cards</td>
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<td>3</td>
<td>Street play for mass awareness about current issues &amp; KJBF’s interventions</td>
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<tr>
<td>4</td>
<td>Documentary film on KJBF’s interventions</td>
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<td>XI</td>
<td>Baseline survey study of 600 H/Hs</td>
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<td>XII</td>
<td>PRA</td>
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<td><strong>Grand Total</strong></td>
<td></td>
<td></td>
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<td>16,03,271</td>
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</tbody>
</table>
Programme Area

KJBF has revived Yashoda River in Sonegaon (Abaji), Deoli. 400 metre deepening and widening has been done and a Check Dam is being constructed on the river for water conservation.
May all be happy.
May all be free from disabilities.
May all look to the good of others.
May none suffer from sorrow.
Om Shanti Shanti Shanti.

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