



# E-CUBE

EMPATHIZE ENERGIZE EMPOWER

## Report on Transformation of Village Katarvant- May 2014 to July 2015



2015

Rotary



Under the aegis of a  
Global Grant Project of  
The Rotary Foundation



सेवा सद्भाव विकास

Shroffs  
Foundation  
Trust

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## **1. Orsang Jal Ane Samrudhhi –OJAS program in Chhotaudepur**

SFT is operating in Chhotaudepur, Vadodara and Kutch region covering about 600 villages. The work area includes Three taluka in Chhotaudepur, two Talukas of Vadodara districts and one Taluka of Kutch district served through the five centers i.e. Chhotaudepur, Jetpur Pavi, Sankheda, Ekalbara and HodKo. Each center has full-fledged dedicated program teams. The foundation has 170 person staff to implement the programs.

The Shroffs Foundation Trust works with an integrated area development approach to various activities around the themes like water, land, forest & human resources and their development so that sustainable impact can be created on project communities. Only an integrated approach to land and water resource development, water harvesting, Protection and usage, combining the economic activities related to water and Natural resources Management and community based management system can guarantee sustainable Development. With the approach of peoples partnership i.e. Community based Organization active participation in the Programs the Organization is required only the professional as a catalyst to implement the project in efficient manner.

## **2. Land and water management works in Chhotaudepur Taluka**

In the year 1994, SFT initiated the tribal development work in Chhotaudepur Talukas with community based watershed program with a simple approach of increasing tribal families bonding with their land by increasing access to irrigation water by means of water harvesting. The watershed program has helped in building 249 water harvesting structure resulting conservation of 6.74 Lack cubic meter of water. The program has benefited 12000 ha. Land and increased irrigation over 1265 ha. in 36 tribal villages.

The watershed program had a positive impact on curtailing migration and increasing food security and generation of surplus from agriculture and animal husbandry in the villages covered under the program. The watershed development program in Chhotaudepur has establish learning's that the natural resource management is a pivotal activity in providing solution to the problems of migration, food security and nutrition among the tribal villages in Chhotaudepur.

This learning was incorporated in the Tribal area development vision exercise done by Shroffs foundation trust (SFT). As a result program named "OJAS"- Orsang Jal Ane Smarudhhi- was initiated since 2011. The OJAS program aim at river basin scale management of the land and water resources through micro-planning at the micro-watershed level to fulfill the needs of the

tribal community. The process carried out for river basin scale land and water management through micro-watershed planning at village level is an important learning that involves combination of scientific information and community wisdom.+

### **3. Program Conceptualization**

The program designed in a manner that the organization will play a role as facilitator for scientific knowledge and technical support while community will be in center for planning and implementation.

Thus program preparation has two main aspects. First was mobilization of scientific knowledge and second related to preparing local community for planning and implementation.

A dedicated team combining technical and social human resource was configured to shape the program from the preparatory phase to implementation phase. The team consists of team leader assisted at field level by social mobilize, civil engineer and surveyor was constituted. The field team is supported at the village level by trained extension volunteers who also help the team in collecting village level information.

### **4. Understanding River basin**

The basin and sub-basin level understanding about the land and water resources helps in identification of the means for accessing the availability of water resource and methodology of its planning to fulfill the local needs.

The planning process was initiated with developing understanding about the entire Orsang river basin area. At the national level, river basins in India are divided in to five regions. The common nomenclature adopted by All India Soil and Land Use Surveys (AISLUS) has divided each river falling under region in to Basin, Catchment, sub-catchment and watersheds. It is also published as a National Water Resource Atlas.

In Gujarat state, the watersheds identified in national classification are further classified as sub-watershed, mini watershed and micro-watershed. The river basin wise micro-watershed area details are available with BISAG, Gandhinagar. For understanding Orsang river basin up to micro-watershed level, maps from BISAG, Gandhinagar were collected. In addition to basin area map, the basin level maps of its drainage, soils, geomorphology, relief and slopes were prepared with the help of BISAG, Gandhinagar on the basis of satellite imageries. Apart from BISAG maps literature review and secondary data collected from web site of dept. of water resources, Govt. of India and Govt. of Gujarat.

### **5. Preparing community for program planning and implementation**

While conducting sub-catchment level planning, it was kept in mind that water is a common property resource and everyone wishes to have its user right. In this context, the programme needs to first ensure creation of common understanding about need for proposed micro-watershed based planning so that any conflict can be negotiated and its management becomes effective. In program planning community involvement process was carried out through dialogue with existing village level institutions like watershed samitis, Pani samitis, PRI members and Panchayat functionaries in common meeting representation from villages falling under the sub-catchment.

The importance of the complete treatment of the micro-watershed is conveyed through series of discussions with the village leaders. These discussions focused around how “water and land” availability can help in economic growth in the region. It is also emphasized; the present situation of water shortage and land erosion needs action at individual as well as at community level.

### **6. Planning at Micro-watershed level**

This was the most important part of the planning process carried out for the project and done at the village level. The collected village level secondary information and maps; also information collected from census and various block offices includes

- Demography- Class, Caste, Gender
- Basic infrastructure
- Drinking water facilities
- Crops grown in the area
- Details of existing water harvesting structures and irrigation schemes
- Landuse – irrigated area, forest land, agriculture land, wasteland
- Land holding pattern
- Land records and ownership of land
- MGNREGA job card details
- Land and water conservation works done and planned under other program like NREGA, watersheds, forest dept, Horticulture department

### **7. Technical survey and plan & estimates and approval from Gram sabha.**

The surveyor and civil engineer carried out topographical survey using levels, take note on geological conditions, No. of well in the surrounding area. Based on the survey, the assessment of height and length of the structure, its storage capacity and impounded area is identified. On the basis of the technical survey, the user groups were identified on the maps. Similar process is carried out for the proposed land treatment sites. Detail designs are prepared and on basis of

that quantity of work items prepared. The estimates are prepared based on latest schedule of rates (SOR) published by Govt. department. Site wise material and skilled resource required and estimated time required for completion of the work is prepared which can be useful when work is to be implemented. This also helps community in monitoring of the work.

The complete village micro-plan with treatment map and estimates were presented to the villagers in Gramsabha for its approval and finally incorporate the planning in MGNAREGA and other schemes for implementation.

The village Katarvant selected under e-3 program is one of the 70 villages identified for first batch of micro planning and implementation.

## 8. E-3 Program

### Conceptual Background

The whole of Chhotaudepur district is having undulating topography with hills and sparse valleys are semiarid for about 6- months in a year. The average annual rainfall of 952 mm, though sizable in overall quantum, varies in pattern and unpredictably occurs only over a period of June to September. The erratic pattern, coupled with long dry spells of 8-month in rest of the year and undulating topography of lands in large areas cause Severe crop loss/soil erosion in rain-fed agriculture conditions and shortage of drinking water and lack of irrigation water during summer months. There is no year-round economically significant, gainful activity available in the village. For large part of the year, bulk of the populace is disguised unemployed. As a result, large number of household members in the (the targeted village under this project), especially able-bodied youths migrate to the nearby city Baroda for employment-seeking without having any skills to fall back upon for gainful employ-ability; eventually they end up being marginally employed, prone to exploitation and the resultant deprived state of living – sometimes life-long and often leaving same deplorable state in legacy to their children!

### Project area details

- |                                 |                                      |
|---------------------------------|--------------------------------------|
| 1. Sub-catchment :              | 5D1B7                                |
| 2. Micro-watershed :            | part of a2a                          |
| 3. Name & location of village:  | Katarvant, Ta. & Dist : Chhotaudepur |
| 4. Village Area:                | 167 ha.                              |
| 5. No. of hamlets :             | 3                                    |
| 6. Household (2001) :           | 148                                  |
| 7. No.of beneficiaries :        | 66                                   |
| 8. Total land:                  | 167 ha.                              |
| 9. Pukka wells in the village : | 15                                   |
| 10. No. of Small well s :       | 20                                   |

### About village Katarvant:

Village Katarwant is located in chhotaudepur Taluka of Chhotaudepur district which is around 20 Km. away from head quater Chhotaudepur. The village is divided in to three falia namely Pujariya faliya, Ujadiya faliya & Dhank faliya having total 148 families and population of 740 people belong to Rathwa, Dhank, Nayka & Harijan castes. The main occupation of the villagers is farming & animal husbandry. Approximately more than 100 habitants of Katarwant migrate to south Gujarat for masonry labor work, around 4-5 months in the year.

The residing tribal's are originally forest dwellers; however with degradation of the forest and population growth resulted in stringent poverty among these tribal's. About 90% families are

under below poverty line. Most of the families are small and marginal land holders having high degree of dependency on agriculture production for their food security and income generation. The village Katarvant is having geographical area of 167 hectare which includes 44 hectares of forest land and 22 ha. Waste land. Due to undulating terrain the farm land is subject to land erosion. The farm land are traversed by small ravines and streams filled with sand and soil. In recent years the part of agriculture land is being leveled under the Government land development program and watershed program.

### **Water resources**

There are three major streams in the village apart from river Orsang that flow from southern boundary of the Village. There are four check dams and one pond for harvesting rainwater. People use Orsang river bed for cultivation as well as for lifting water for irrigation. There are individual and common wells for irrigation. Average depth of wells is 40 feet. In summer the water level is 36 feet and in monsoon water level is 18-20 feet.

### **Agriculture and Livelihood:**

Rain-fed agriculture is the main livelihood activity of the majority of families. There are 73 families in the village having own land out of which 39 families are having land less than 1.5 acre. 59 families also involved in animal husbandry. Gottary is also performed by those families having limited water resources and land. There are about 108 milch animals in the village along with 128 bullocks. Every family sell 1.5 litter milk per day in dairy co-operative society. 95% land is hilly and remaining 5% land is rough in the village. Toor, urad and math sowing in rough ground and cotton, paddy, and maize crops are sowing in flat land. 15 famines agricultural land depend on rain water, while 46 families agricultural land has irrigation facility and 59 families is dependent on animal husbandry and 12 families migrating for labor.

### **Rationale for micro-planning**

The Chhotaudepur region is having undulating topography with hills and sparse valleys is semi-arid and drought prone region characterized by recurring droughts. The rainfall varies in pattern and unpredictable occurs over period of June to October. The erratic and long dry spells are causing severe crop loss in rain fed agriculture condition and shortage of drinking water during summer months. As a result large No. of families (entire or earning youth) migrate for labor.

While, the hard rock area restricts the availability of the groundwater for irrigating second crop; the undulating farms result in severe soil erosion problems. The cumulative impact is uncertainty in the agriculture production and availability of fodder that poses serious threat of food and drinking water security to the small and marginal farmers.

In this situation community needs assurance of agriculture production and availability of water for drinking and irrigation when needed. Addressing these needs to ensure both food and water security round the year which can stop distress migration.

**Micro-planning and Implementation:**

The proposed micro-plan intends to demonstrate community based land and water management for creating sustainable livelihoods among tribal families living in village Katarvant in Chhotaudepur district.

The broad project objectives are,

**Project objectives**

1. Demonstrate community oriented water harvesting techniques for optimum water availability for longer duration for local needs.
2. Demonstrate individual land management practices leading to reduce soil erosion and increase moisture retention.
3. Capacity building of women in household and agriculture works for water handling & use, health and hygiene and cooking practices.
4. Involve and organize local communities for solving the problem of land erosion and water scarcity through engraining them in planning, implementation and management.
5. To help farmers check soil erosion and increase access to water for ensuring food and income security to avoid distress migration.
6. To harvest rainwater and runoff for improving availability of water during drought condition and check soil erosion during heavy rainfall.

The increase in income generation from own land will help reduce their dependency on migration for livelihoods which in turn result in regular education to the children and better health & hygiene condition at family level.

**Program Components:**

The program interventions were planned based on village level micro planning prepared under OJAS exercise. Intensive community participation was ensured in finalization of the activities.

**Following are the basic components of e-3 project:**

- A. Community institution building and capacity building.
- B. Soil Moisture Conservation
- C. Water harvesting & recharge
- D. Structures for irrigation facilities
- E. Structures addressing basic household needs

**Estimates of proposed works under E-cube project at village Katarvant**

Sr. No.	Activity	Unit	Estimated cost in Rs.
1	Checkdam-1	1 Nos.	277906
2	Checkdam-2	1 Nos.	253548
3	Pakka Nala Plug	1 Nos.	114531
4	Gully Plug	50 Nos.	151084
5	Group well	2 Nos.	909,317
6	Lift Irrigation	2 Nos.	2359160
7	Earthen bund	1 Nos.	52742
8	Bori Bandh	1 Nos.	5099
9	Land Leveling	31 Acre	510561
10	Bio Gas	10 Nos.	219083
11	Roof top water harvesting system	10 Nos.	567640
12	Cattle Shed	10 Nos.	320878
	<b>Grand Total</b>		<b>5741548</b>

## 9. Community institution building and capacity building.

### **Katarvant Village Vikas Mandli- A vehicle to implement the project initiatives:**

In the field of rural development community organization, capacity building and community participation right from planning to implementation are the key factors of successful implementation and to achieve desired objectives.

A committee named “*Katarvant Village Vikas Mandli*” formed by transparent community process and ensured representation of all community groups of the village. This Committee is the main vehicle to carry the community involvement process, Implementation of planned activities with desired quality.

The committee was imparted several trainings specifically focusing the subjects like, community participation, sensitization on project objectives, knowing various stake holders and their role along with skill building on keeping books of accounts, importance of timely implementation and monitoring quality of works.



### **Users Groups:**

Operation and maintenance and justified distribution of benefits are always key factors for the community assets developed during the program, in e-3project there are community assesses developed in form of one irrigation scheme, two irrigation wells, two check dams, one Nala plug and one earthen bud. The farmers of coverage areas of these structures are going to be benefitted. It is experienced in many occasions that lack of proper management and maintenance system the community structures are either not properly maintained and destroyed before time or some strong person hijacked the benefits.

This factor was taken care of right from beginning and formed various users groups before commencing construction works, so that they can participate in the selection of sites and ensure quality of construction. These groups and Katarvant gram vikas mandli imparted various structured and on field training programs.

**Capacity building of Katarvant Mandli and users groups:**

Sr. No.	Participants	Training details
1	Members of Katarvant Gram Vikas Mandali and key persons	Orientation on project- Objectives and implementation strategies
2	Members of Katarvant Gram Vikas Mandali and key persons	Role and Responsibilities of various stake holders
3	User's Groups	Operation and Maintenance with justified distribution of benefits.

Because of intensive community exercise, capacity building and transparent way of working have helped in minimizing community level conflicts and in case of conflicts we always emerged with commonly agreeable solutions for the benefit of project at large.

**10. Execution of works****1. Prevention of Soil Erosion (By land-leveling, and earthen embankments of farms' peripheries)**

Rainfall in Katarvant area is quite adequate with a long-term annual average of 952 mm. However, almost 95 percent of precipitations occur during four months in a year between June and September. Rain-spells at times are quite intense causing soil erosion regularly in certain undulating tracts of land of 160 hectors of command area. Currently, 3 MT/ Hector of the soil get eroded in this command area.

As per the planning land leveling was targeted in 31.87 hectare of land to cover 100% in the year. This will reduce soil erosion rate to 1 MT / Hector. Total 320 Metric Tons of soil erosion will be stopped over the command area of land covered under the project.

During currant monsoon season (15-16) it is observed that on the hilly farms rain fed crops like maize and pulses were possible, after treatment of land leveling the farmers are able to grow crops like Paddy, cotton and vegetable for long duration and giving more income per



acre; it shows the impact that the quality of land is improved and moisture holding capacity is increased creating enabling conditions to grow high valued and long duration crops.

## **2. Water Harvesting & Preservation (By check dams, stream/sub-stream plugs)**

For the kind of peculiarity of rainfall pattern that prevails in the project command area, plenteous water in streams/sub-streams leading to the adjacent river that flows by/runs off the command area in rainfall months dry up considerably and during the peak summer months (March through June), there is scarcity of water and ground water table is affected adversely. Harvesting rain water to preserve the same for the longer period in lean months by constructing Check Dams, Sub Stream Plugs, Bori Bund (Sand Filled bags barrier), Earthen Check Bandh (Earthen Water Storage), is the second major set of activities/interventions covered under this project.

Two check dams, one stream plug, 28 sub stream plugs and one earthen bund are constructed to achieve 100 % treatment.

It is envisaged that Water table in the command area will significantly improve and ensure availability of drinking water in lean summer months of March to June for 750 inhabitants of the village. In case of check dams surface water can be used as life saving irrigation in the lean period between two rains, this will help not only in saving the crops but ensure the planned income from the crop.

## **3. Increase in Irrigation coverage:**

The irrigation facility is the life line of any farmer of any region; this enables to have more than one season of crops and ties the farmers with the farms round the year.

A Lift Irrigation scheme, two Group wells and existing individual wells will cover almost 100% land of the village under irrigation. This will prove a great stroke in transforming the scenario of agriculture of the village.



Improved water availability in agriculture land for greater part of the year will make multiple-cropping possible. Alongside reduction in soil erosion, the net cultivable area of farmlands will increase in the command area

As a direct impact of the project the whole cultivable land will be under two-three crops per year resulting the yield and income in two-three folds.

Before commencing the project the farmers of the village were hesitating in investing money and resource for construction of wells as they were not sure of availability of ground water, once the excavation of well started and good ground water observed the farmers motivated started constructions of wells on their own, during the year 2014-15 about 15 new wells are excavated by the farmers; thus the project support and peoples action will lead to bring 100% land under irrigation facilities. This will be a long lasting intervention to address the root cause of poverty in the area.



#### **4. Develop Model houses for improved kitchen environment; Better cattle care rearing and safe drinking water.**

The health, hygiene, safe drinking water and Sanitation are the basic issues affecting the living and health standards of the rural and tribal communities. The policy makers at government level constantly work on it, but because of lack of comprehensive and integrated approaches the impact of these works could not be observed. In e-3 project it was proposed to develop 10 model houses and equip with basic facilities in for reducing drudgery of women for fetching safe drinking water, better cooking environment and greater care of cattle by cattle sheds to save from hot and cold seasons. 10 families are enjoying the facilities with following benefits.

- The use of bio-gas helps in reducing carbon emission as well as protecting women engaged in cooking from diseases like pneumonia and tuberculosis.
- Reduce women work load of collecting fuel wood helps in



protecting deforestation.

- The cattle-shed helps daily cattle care in hot and cold seasons.
- Rooftop rain water tanks Conserve 1, 00,000 liter rainwater in the form of safe drinking water.
- Save women from drudgery for collecting drinking water during 3 summer months
- Reduce chances of water born diseases at family level.



### C. Community participation

The community participation was at the centre of the entire process right from project formulation to executions of the works. The Katarvant gram Vikas Mandli owned up the responsibilities of all type of construction works with community involvement processes. The Katarvant Mandli taken care of material management, quality of construction works and operation and maintenance of assets created. As per the strategic decision of Rotary Club of Baroda Metro, some large scale works like construction of lift irrigation scheme, group wells and land leveling were directly given to the professional contractors, after initial starting the contractors struggled to maintain the timeframe of implementation, the Mandli supported the contractors to complete the works. In case of land leveling the group of farmers came forward and took charge of the works and completed within the timeframe. In both the cases earlier there were severe conflicts with the targeted families but after Mandli took over the responsibility of works all settled and completed maintaining harmony among the people and working agencies.

The targeted families agreed to collect community contribution to create fund for development and asset management. As first phase of community contribution Rs.1.68 lakhs are collected for O&M funds.



#### D. Beyond e-3

- I. Shroffs Foundation Trust (SFT) works in the area since last one and half decade, recently completed remaining works of watershed area development project, the village Katarvant is one of the villages covered under Mahila Kisan Sashtikaran Program. Organization and capacity building of women farmers are the key focused areas of the project. SFT has established a farm school in the village and developed a women samaj shilpi to organize and train the women farmers on modern agriculture technologies focusing the natural farming practices. SFT trained more than 140 women/men farmers on the subjects of natural farming, also experimented Vermicompost, Farm Yard Manure, Bio fertilizer and Bio pesticide with more the 60 farmer families. These efforts will ultimately help the farmers to get optimum benefits of the E 3 project initiatives.
- II. The Samaj shilpi woman named Ms Leela K Rathwa is well trained and matured lady in the village, she emerged as skilled trainer, Enthusiastic agri entrepreneur and a strong woman leader in the village. She strongly supported SFT teams in each step of project implementation.
- III. Rotary Club of Baroda Metro conducted various activities during the year 2014-15, 120 children of Katarvant Primary school provided raincoats and woolen sweaters to protect their health in the extreme weather conditions. The medical team of RBM conducted awareness programs on maternal health and addictions to overcome the problems.



## E. Impact

Agriculture, Animal Husbandry and allied activities are the major sources of livelihood for the tribal community of the area; all these activities depend on successful monsoon and agriculture seasons. But as described above because of hilly hard rock restricts the availability of the ground water for irrigating second crop; the undulating farms result in severe soil erosion problems. The cumulative impact is uncertainty in the agriculture production and availability of fodder that poses serious threat of food and drinking water security to the small and marginal farmers.

Several efforts are made by government under national watershed area development program and other projects; all these efforts are planned and executed focusing administrative aspects in piecemeal approach; while the geographic condition need complete treatment of soil and water conservation to get optimum benefits of rainfall and agriculture land. Complete treatment plan executed in village Katarvant have started showing its impact, the hilly farms have become flat to grow paddy and vegetable crops, the wells have started providing life saving irrigation to Kharif crops and covering maximum land under Rabi season. The result shows that this is the long lasting solution of poverty.

The direct impact from project initiatives are as overall development and conservation of natural resources and justified use of these resources to address the root cause of poverty and gradually to bring the prosperity in the lives of targeted families; thus this effort has made path way for a journey from *poverty to prosperity*.

### Specific Impact:

#### 1. Prevention of Soil Erosion (By land-leveling, and earthen embankments of farms' peripheries)

Through the project initiatives, soil erosion rate have started reducing to @ 1 MT / Hector; hence 320 Metric Tons of soil erosion will be achieved over the command area of land covered for the treatment.

#### 2. Water Harvesting & Preservation (By constructing two check dams, 50+ stream/sub-stream plugs).

Harvesting rain water to preserve the same for the longer period in lean months by constructing Check Dams, Sub Stream Plugs, Bori Bund (Sand Filled bags barrier), Earthen Check Bandh (Earthen Water Storage), is the second major plank of activities/interventions covered under this project. The monsoon of 2015-16 was uncertain, there was long dry period after first round of rainfall, which created threat of crop failure; the farmers could be able to save their crops by the surface water stored in the check dams.

Water table in the command area will significantly improve after couple of good monsoon years; it will help in availability of drinking water in lean summer months of March to June for 750+ inhabitants of the village.

### **3. Increase in Irrigation & Arable Land:**

As stated above the Irrigation facilities created by a lift irrigation scheme and two group wells have covered 100% land (167 hectors) under irrigation; the farmers have started availing irrigation facilities right from the construction phase in summer crops. The farmers are now able to grow all three season's crops to multiply their income in many folds with increased crop intensity.

### **4. Improvement of environment by preventing burning of firewood in Ten Households plus cattle rearing to supplement income.**

Ten households are equipped with the basic amenities like fuel biogas, rooftop rain harvesting storage and cattle shed to reduce drudgery of women for fetching water, better cooking medium and greater care of cattle reared by those households. These are the demonstrations created to motivate the other households to adopt.

### **5. Training & Awareness**

Entire population of village Katarvant is sensitized with the holistic nature of various interventions and how impactful would they be to improve/harness local resources and bring about a qualitative transformation in their lives.

Apart from the direct impact on the agriculture, animal husbandry and living standards of the families; significant improvements are observed in maintaining social harmony, conflict resolutions, participatory approach in development works, and transparency in community level decision making process along with increased participation of women and deprived segments in the gram sabha.

Since last 15 months of the project period the key persons of the surrounding villages had started observing the process of development and initiatives undertaken at the village; slowly they started demanding such holistic nature of interventions in their villages with ensured support from the community.

### **F. Learning**

SFT as implementing agency faced lots of conflicts at community level initially which had slow down the implementation process and hence RBM was little worried to get the project targets implemented in the timeline; lots of community process conducted, resolved the problems and overcome the communication gaps and involved the Gram Vikas Mandli in the decision making and implementation processes; this has once again proved that without active participation of community the projects cannot be successfully implemented. The tri party partnership of SFT, RBM and Gram Vikas Mandli has provided us an opportunity to work together with maintaining harmony among each other.

## Financial closure

Sr No	Works	Planning		Achievements		
		Targets	Budget Rs	Physical	Expenses Rs.	Savings Rs.
<b>1</b>	<b>Trainings</b>					
A	Katarvant Gram Vikas Mandli	7	29080	2	9625	19455
B	User group (Group well & LI)	9	82820	3	15000	67820
C	Model house beneficiaries	2	8900	0	0	8900
D	Mason training	3	13100	2	0	13100
<b>2</b>	<b>Soil sampling</b>	75	7500	75	0	7500
<b>3</b>	<b>Well monitoring</b>	29	2000	20	1015	985
<b>4</b>	<b>Baseline Survey of families</b>	75	38750	75	1520	37230
<b>5</b>	<b>Data collection &amp; Travel</b>		100000		67680	32320
<b>6</b>	<b>Works implementation</b>					
A	Checkdam-1	1	277906	1	263938	13968
B	Checkdam-2	1	253548	1	246585	6963
C	Stream-plug	1	114531	1	109652	4879
D	Sub-stream plugs	50	151084	28	84000	67084
E	Group wells	2	909307	2	909095	212
F	Lift irrigation	1	2359160	1	2316452	42708
G	Earthen bund	1	52742	1	49435	3307
H	Bori bandh	1	5099	1	4971	128
J	Land levelling - Hectares	31	510561	31.7	492632	17929
K	Bio-gas plants	10	219083	10	202600	16483
L	Rooftop water Structures	10	567640	10	399080	168560
M	Cattle shed	10	320878	10	223737	97141
	<b>Total-Construction activities</b>		<b>6023689</b>		<b>5397017</b>	<b>626672</b>

### G. Inauguration and Lokarpan

The program was inaugurated on 21<sup>st</sup> June 2014; in presence of Senior members of Rotary club of Baroda Metro and Mr. Jenu Devan-IAS- Collector Chhota Udepur as chief guest; the event was organized under a tree shadow, the rain was not started yet heavy wind was passing with spreading farm dust; it was difficult to sit, Mr. Jenu Devan commented on the participant farmers, ***“Your farms are empty so dust is spreading with the wind”*** on the conclusion note we ensured him- *“This would be the last year for empty farms, from next year the land will be covered by green vegetation even in the summer season”*

The LOKARPAN ceremony of the program was organized on 3<sup>rd</sup> November 2015-in presence of senior members of Rotary Club of Baroda Metro and luckily Mr. Jenu Devan-IAS-Collector Chhota Udepur as chief guest to dedicate the project to the people of the village. Many of the senior members along with Mr. Jenu Devan observed that 100% agriculture land of the village was covered under Rabi season crops; thus the ***dust spreading was stopped!***



## H. Important Visitors

The E 3 project was very important for so many reasons, for SFT and RBM it was first project of its kind, it was challenging task to complete the project successfully within timeline; so the project was always under scanner of higher authorities of both SFT and RBM. Hence regular and frequent visits were made by senior members of both the organizations. During the month of September-2015 the visit of state governor was planned- the village Katarvant was suggested and selected unanimously by district collector and district development officer for visit of Governor, unfortunately the visit was cancelled, but it was impact of the noticeable works done in the village and district authorities took note of it.

Following dignitaries have visited the village.

1. Rtn. Hiroo Matsumoto (Kaiyo, Ashiya, Hyogo)
2. Rtn. Hasaan Toorabally (Ashiya, Hyogo) & team undertaking assessment study
3. RIP Dr Manoj Desai- Vadodara
4. Ms Shrutiben Shroff- Managing Trustee- Shroffs Foundation Trust
5. Shri Jenu Devan-IAS- Collector Chhota Udepur
6. Dr. Saurabh Pargi-IAS-District Development Officer- Chhota Udepur
7. Shri R.K.Sama-Trustee- Shroffs Foundation Trust
8. Shri Nitin Bhate – Then President Rotary Club of Baroda Metro
9. Dr. Agam Shrivastava- President Rotary Club of Baroda Metro
10. Shri Vikas Vaze- Chief Executive officer- Shroffs Foundation Trust
11. RTN Shri Sunil Vakil - Rotary Club of Baroda Metro
12. RTN Shri Chetan Somani - Rotary Club of Baroda Metro
13. RTN Shri Mitesh Bhatt - Rotary Club of Baroda Metro
14. RTN Shri Premal Smart- Rotary Club of Baroda Metro
15. RTN Shri Dr. Sharmishtha Desai - Rotary Club of Baroda Metro
16. RTN Pnkiben- Rotary Club of Baroda Metro
17. Ms Rashida Bhagat- Sr Editor- the Hindu group.



Photo

### **I. Way forward:**

The operation and maintenance of the assets created is an important and crucial task. The threat of failure is always there after successful completion of such projects; either the benefits are not distributed in socially justified way or some dominant families hijacked the assets. It is important to establish transparent and socially justified distribution system to avoid exploitation of deprived families and also to manage the maintenance requirements.

SFT has formed users groups for two group wells and a lift irrigation scheme. The terms and conditions are formed and documentation systems are started; SFT will handhold these users groups at least for two-three seasons to establish the systems.

The farmers have practice of flood irrigation which consumes more water; hence feasibility of micro irrigation is explored and started dialogue with the Gujarat Green Revolution Co. (GGRC) a state government enterprise.

The water consumption depend on type of crops grown with agriculture inputs, SFT have started guiding the farmers in selection and rotation of crops to minimize the water consumption. SFT also have motivated farmers to adopt sustainable agriculture practices with balance use of organic and inorganic agriculture inputs.