

Project Closure Report

Period: June 2019 to March 2023

Project Title: Bajaj Water Conservation Project













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1. Rationale of the project:

Project area is suffered from the drought, erratic & less rainfall. Rainfed agriculture is the prime source of livelihoods in absence of adequate irrigation facilities. Considering the situation in situ soil moisture conservation is very much essential to control crop failure in dry spells. Arrangements and sources for availing at least one or two protective irrigations will sustain kharif crops and control loss of farmers. Considering the situation and problems, it is proposed to implement Bajaj Water Conservation Project in Khari watershed cluster.

Average rainfall of the project area is about 565 mm. As per the present land use pattern about 91% of the area is under cultivation mainly rainfed cropping. Cotton is the majorly grown kharif crop. Cropping intensity in project area during current year is about 70% only due to inadequate rainfall. During the current year rainfall occurred is 395 mm, which is about 70% of average rainfall. Presently all villages have been declared as drought villages by Government of Maharashtra. Total runoff generated in the project area is 12383 TCM which is about 48% of total precipitation. Groundwater levels are depleted and are around 23.5 m below GL. About 34% wells are dried currently in December 2018. Total length of drainages in the project area is about 56 km. Detailed water budgeting have been prepared and based on which the activities of water conservations have been planned.

Need of taking up the project:

Project area is suffered from the drought, erratic & less rainfall. Rainfed agriculture is the prime source of livelihoods in absence of adequate irrigation facilities. Considering the situation in situ soil moisture conservation is very much essential to control crop failure in dry spells. Arrangements and sources for availing at least one or two protective irrigation will sustain kharif crops and control loss of farmers.

Considering the following problems, it is proposed to take up the implementation of water conservation project.

- Water scarcity for drinking and agriculture purpose is the major problem in project villages during summer season and are dependent on tanker supply. Water scarcity arises in the project area mainly due to inadequate rainfall and lack of control on groundwater extraction.
- Lack of protective irrigation and micro irrigation: there is no proper infrastructure to store water for the purpose of irrigation because of which it becomes difficult to take second crop in the year. In absence of adequate micro irrigation facilities, traditional practice of flood irrigation exists in the area that consumes large quantity of water for irrigation.
- **Rainfed and single cropping:** Villagers are mostly dependent on single cropping season i.e. Kharif in absence of adequate measures of irrigation. Cotton is the majorly grown kharif crop in project area.

- Less agriculture production: for the want of in situ moisture conservation, arrangement for protective irrigation and improved farm production practices, agriculture production levels are quite less. Vegetative cover and biomass was quite less in the project area. Mostly the agriculture field remained covered in Kharif season that too dependent on mercy of rainfall. Soils in majority of the area are having high depth. However, due to lack of bunds issues of moisture retention prevails and which also affects for crop growth during dry spells. With the changing climatic conditions, dry spells are getting increased and rainy days are decreasing whereas the events of high intensity rains are also on increasing trend.
- Lack of fodder availability: mostly the fodder needs getting fulfilled through crop residues presently. Fodder production will get increased based on water availability which will be useful for dairy business.
- Exploitation of groundwater: There are about 784 groundwater sources including 557 wells & 227 bore wells. Apart from known sources, there are number of bore wells exists in the project area. These sources are being used for irrigation purpose beyond their capacities.
- Issues of operation and maintenance of the existing water harvesting structures: is also exists and which restricts the benefits. Restoration of these structures by taking up necessary repairs and desilting also requires.

Livelihoods in project area: The area is predominantly agriculture in nature and about 90 to 95 % of the population depends on land for their livelihoods. Most of the lands are cropped in rain-fed conditions. Amongst the cultivable land of 94% land is unirrigated dependent on rainfall. Some of the households from the project villages migrates for sugarcane cutting. During the current year, its percentage is quite more than previous years since lack of adequate rainfall. Other off farm activities like carpentry, saloon, tailoring etc. are the sources of livelihoods for landless families mainly.

Integrated approach in watershed development based on ridge to valley approach and appropriate water management practices to manage the demands are very much evident to overcome these problems. Considering the needs and requirements, the project area has been identified for taking up the Bajaj Water Conservation Project. Location of the project area is also in the vicinity of the plant of company located in Waluj MIDC.

The major issues associated with this area before project are;

- Low rainfall
- Inadequate measures for runoff conservation, soil erosion
- Scarcity of drinking water
- Lack of irrigation facilities and lack of awareness about improved agriculture.

• Lack of Agri allied livelihood activities.

2. Overall Summary:

Marathwada Gramin Vikas Sanstha (MGVS) has successfully implemented the Bajaj Water Conservation Project (BWCP) in 7 villages from Vaijapur block of Aurangabad district in Maharashtra state. The project has been implemented during the period of June 2019 to March 2023.

MGVS has proposed implementation of Bajaj Water Conservation Project in the seven watershed villages of Vaijapur and Kannad taluka to achieve following objectives.

2.1 Highlights / outcome of the period of Jun'19 - March'23.

- Institution Building/ Training and Capacity Building: -
- In 132 training program 241 Self Help Groups were involved. In which 1802 members were present of which 65 were male & 1737 females were present.
- 115 WUGs formation along with trainings were conducted during the project period.
 Total 1797 (Male -1654 & Female -143) water user group members were participated.
- Total 58 VDC trainings have been conducted for all Village Development Community members.
- Total 54 trainings have been arranged in all 7 villages.
- Total 95 days of training inputs were delivered to the Jalmitra during the 13 training of project period.
- Total 31 exposure visits were conducted during the project in which 505 (VDC, SHG, UG) members were participated.
- In 28 rallies around 1367 children participated, along with them 1000's of villagers with them, among this 1367, there were 718 boys were present and 649 girls were present.
- 18 events for Celebration of special day in 7 village in which more than 1061 (741 Men & 320 Women) members were present.
- 7 training for project team has been conducted during period for enhancement in their skills.
- o 3 Training of project stakeholders involving external agency has been completed.
- Altogether 1.17 crore amount of community contribution has been collected from WUG members at VDC level for implementation of water resource development works.
- Area Treatment and Vegetative Measures: -
 - Total 14175 kg of Grass seeding of stylo hemata grass has been carried out on the guide bunds of Nall Deepening and Widening works completed under BWCP.

• Water Resource Development

- Total 41 sites of Nala Deepening and widening, 4 percolation tank deepening, 15 constructions of new Cement Nala Bunds, 3 constructions of new Core Wall Gabion structures, 155 construction of Recharge shafts & 3 Renovation of KT Weir were completed during the project period of June 2019 to March 2023.
- Total 2964.92 TCM water storage capacity has been created in the water bodies.
- Total 20.22 kms of river/stream has been rejuvenated.
- The projected water demand of all project villages for year 2023 was 5697 TCM. The available runoff water from the entire catchment area is 11151 TCM. The runoff harvested with the help of existing water harvesting structures and the interventions carried out under BWCP is 6247 TCM. Approximately 57% of total available runoff was harvested due the watershed interventions
- Averagely 11 to 12 m water level has increased drastically after desilting of the water bodies. This has impacted over more than 1 km of radius of the water bodies in the project area.
- Efficient Water Use (Micro Irrigation System): -
 - Altogether 130 Ha (130 Farmer) covered under Drip irrigation and 59 ha (59 farmer) covered under Sprinkler irrigation from the project funds during the reporting period to enhance micro irrigation.
 - Rabi crops increased over 2914.13 of land.
- Agricultural Productivity Enhancement: -
 - Total 367 Amritjal training were conducted covering different UG of all villages.
 Total 606 farmers got benefitted by the Amritjal demonstration. Also more than 90 farmers have started preparation and use of Amrutjal from all villages.
 - Total 115 Vermicompost training in the quarter and around 737 farmers got benefitted & trained through this demonstration and farmers have initiated use of organic fertilizers.
 - Under Agriculture Productivity Development 1 Male & Female SHG's of Khaparkheda, Khamgaon, Sasegaon, Rohila have been helped with 4 Community Thresher Unit.
 - Under Orchard Development program 14460 plants were given to 109 farmers with 50% contribution.
- Livelihood Enhancement: -
 - \circ $\;$ The promotion & strengthening of 94 SHGs has been carried under the project.
 - Total 24 livelihood enhancement activities have been started out of 24 total units there is having 10 Dairy Unit, 3 Poultry unit, 7 Goatry units, 1 Stitching Machine Unit, 3 Kirana and General Store has been impended on the basis of revolving fund throughout cluster villages.

 Total 24 livelihood enhancement activities of Rs. 4.35 lacks have been started through the revolving fund. Till now Rs. 2.15 Lacks revolving fund has been received by SHG/VDC and through that RF new 3 new activities has been started.

2.2 The progress made against each of the project objective is given below. **Objectives:**

- 1. To strengthen and sustain the drinking water sources in the project villages benefitting for the project households and livestock.
 - > The drinking water security for all the households in 7 project villages is achieved through water resource development & ground water management.
- 2. To promote and capacitated community-based organisation like VDC, WUG and SHGs for effective implementation of project activities and take up post project management interventions.
 - Enhanced the capacity of CBOs (VDC, WUG, SHGs) through trainings and completed the execution of different WRD works. Also enhanced the capacity for post project management through concurrent ongoing capacity development.
- **3.** To conserve the runoff through restoration of water harvesting capacities of existing water conservation structures and construction new structures in series.
 - Restoration & new construction of water harvesting structures has been done in the project villages and all together 2964.92 TCM water storage capacity has been created.
- 4. To increase the ground water level benefitting for increasing protective and seasonal irrigation potential.
 - Through implementation of WRD works ground water level has been increased by averagely 8.00 Meter. Due to availability of water the cultivable area under protective & seasonal irrigation through improved on-farm water use efficiency through precision irrigation is increased.
- 5. To promote water management practices for efficient use through capacity building of user community as well as through promotion of micro irrigation.
 - Under water use efficiency, all the WUG members capacity building has been done training programs and altogether 130 Drip irrigation and 59 Sprinkler irrigation promotion has been done. Total 2914.13 ha promotion of micro irrigation is done to enhance micro irrigation.

- 6. To increase farmer's awareness level on improved agriculture practices especially focusing low external input sustainable agriculture techniques.
 - To promote use of bio fertilizers and enhance organic farming demonstration of Amritjal, vermicompost, Orchard development has been done with capacity building of beneficiaries through training. The risk of the extreme climate events is reduced through promotion of climate resilient agriculture practices. The risk is reduced for the farmers involved in the WUG trainings.
- 7. To enhance income level of project households through enhanced access for on farm water and diversified livelihoods sources for resource poor families.
 - Implemented WRD works for access of on farm water & provided training to farmers/WUG members on water management practices, including irrigation scheduling, proper use of water resources, and water conservation techniques. Also identified alternative sources of income and supported activities like Dairy Unit, Poultry unit, Goatry units, Stitching Machine Unit, Kirana and General Store has been implemented for enhance the income of beneficiaries (HHs).

3. Progress made against each of the project Component:

The different project interventions were planned and implemented to achieve the outcomes for above mentioned project objectives. The details of the activities carried out under Bajaj Water Conservation project during the reporting period are given below.

3.1 Institution Building/ Training and Capacity Building:

• Trainings of SHGs:

Analysis of existing SHGs was done for ensuring the functioning status. Information about women enrollment in SHGs for each household was taken through household survey. Consultation meetings with those women which were not involved in any SHGs were conducted for formation of new SHGs. Total 132 trainings have been conducted in all villages. Male/Female Self-help groups were given training on different opportunities in modern business and enterprises in business world. Also, basic training on SHG formation, Characteristics and Functions of SHG covering meeting minutes, record keeping & explained functions like savings, lending and repayment of loan etc. also linkage of SHG to bank. We also covered Book keeping sessions in detailed and on demand by SHG member we organized separate sessions of record book keeping using sample sheets formats. (Meeting minutes book pro-forma, Loan ledger pro-forma, Receipts and payments statement, Cash book, General Ledger, Monthly report etc).

In 132 training program 241 Self Help Groups were involved. In which 1802 members were present of which 65 were male & 1737 females were present.

Impact: Livelihood development Program has increased women's involvement in the BWCP program. SHG members knows the importance of saving in accounts, SHG members now knows the methods to maintain records and books, SHG members are involved in livelihood program, They know basics and principles of Self Help Groups.



• Trainings of Water User Groups (WUGs):

Community orientation, IEC, institution building and capacity building efforts have been enabled for taking water user group trainings in all 7 project villages. In all 115 WUG trainings were conducted during the project period. Total 1797 (Male -1654 & Female -143) water user group members were participated in the training programs during the project period. Two days of training inputs were delivered to each water user group during the project period. During the training programs, MGVS team provided the information on concept of water budgeting, completed work and planned work under BWCP, role and responsibility of WUG members, contribution strategy, surface and ground water management aspects, ground water governance, micro irrigation practices etc.



• Training of VDC:

Village Development committees (VDC's) were formed in BWC Project area with the objective of completing all work in the project area. Total 58 trainings have been arranged in all 7 villages and training on roles and responsibilities, Roles of VDC in implementation of Project, Implementation of Micro irrigation and Livelihood program in villages and selection criteria of beneficiaries for Bajaj water Conservation Project (BWCP). Also, Strategies was discussed to be implementing further watershed project and collect community contribution. During all this 58 training days, 63 VDC members participated in the program.

Impact: Active participation of VDC members along with increased, literacy about the technical aspects increased in members, The Village Development Committee shown active participation in BWCP, Also the Community contribution collection became easy when VDC headed the village project. Maintenance and Repairs will be done by WUG & VDC members in the upcoming period. VDC involvement in maintenance repairs, Orchard, SHG, RFMC management has been increased and there were active changes in Livelihood and WRD work implementation.

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• Trainings of GP:

Gram Panchayat members are also involved in the Bajaj Water Conservation Project. Therefore, training of GP members is involved in the project. Gram Panchayat members are ruling members of the village also they are ruling members of the village. Their involvement in the program can lift the project work on other heights. People's participations can be brought up by involvement of these GP members. Total 54 trainings have been arranged in all 7 villages and Training on various topics such as Aspects of Project, Water Budgeting, Technical and Social measure of WRD work, Community contribution and its importance, Need of Community based Organizations etc. Roles and responsibilities, Roles of VDC in implementation of Project, Implementation of Micro irrigation and Livelihood program in villages and selection criteria of beneficiaries for Bajaj water Conservation Project (BWCP). Also, Strategies was discussed to be implementing further watershed project and collect community contribution. During all this 54 training days, 53 members participated in the program.

Impact: GP members involvement in local CBO formation, Livelihood, Micro irrigation implementation has been increased. GP members are now more interested in implementing the Government, Private Schemes. The GP members confidence, positive approach has been increased.



• Trainings of Jalmitra:

Total 95 days of Jalmitras was organized throughout the project period in which all the 7 Jalmitras were participated. Total 95 days of training inputs were delivered to the Jalmitra during the 13 training of project period. The training contents were aligned with seasonality calendar and appropriate time of the work execution.



• Exposure visits:

Total 31 exposure visits were conducted during the project in which 505 (VDC, SHG, UG) members were participated.

Exposure visits enable farmers from different regions to interact with and learn from each other, allowing them to view practical examples of successful integration of sustainable practices in farming communities like their own. They are integral to sensitizing the farmer to GREEN's message of sustainable agriculture. The reason behind arranging this exposure visit is to make awareness on organic farming, make village green. The use of chemical fertilizers is increasing day by day and most of the farmers dependent on urea and harmful sprays. The food security is degrading and therefore the farm products demand is less. As well as the soil health has been degraded. Therefore, the production of fruits and vegetables is not increasing. Therefore, to make the soil healthy and increase the farm production. Exposure visit was arranged for VDC/GP members in Maliwadgaon of Gangapur taluka at Mr Gore's farm. They had setup of Vermicomposting, Amrutjal and have sample farms of Pomegranate which is totally organic. He has variance in cropping pattern like Jamun, Drumstick, Apple, Hadga flower, Onion, Pomegranate etc. Farmers were motivated to think better and make good changes in their villages and farms. Also in 2019 Exposure visit was arranged in Maliwadgaon for site seeing of WRD work. Also the in Aug 2020 Farmers were taken to Hatnoor to Modern farm of the farmer Mr. Santosh Jadhav. Farmer Santosh has been awarded by Govt of Maharashtra for his developed farm. In 2019 the farmers all visited to Dongaon in which the bajaj has already implemented the project. After the observation of BWCP in Dongaon the VDC got motivated to implement the newly started BWCP in their own village. VDC members from all the 7 villages visited Dongaon, at the same time JBGVS members came to guide the villagers.

The Exposure visit was arranged in the SSP, Osmanabad regarding the livelihood development VDC members, SHG members were present for the training.

- Got eye opening session on Organic farming and success stories on usage of organic fertilizer.
- Saw detailed impact & setup of organic fertilizer.
- Site Seeing of WRD work people started implementing the project in the project area.
- Site seeing of the developed farm of Mr Santosh Jadhav, Farmers were motivated to implement the same techniques in their own farm.



 <u>Water focused rally, film show, motivational event, etc</u>.:- Water focused rally has been arranged in every village of the project area; Water literacy campaign has been arranged. To involve children's in the program and to make the awareness among children's drawing, essay, rangoli competition has been arranged in schools and in prizes were distributed among the children.

Also, in 2020-21 A awareness rally programs were arranged in the village and therefore we arranged a poster making competition and rallies in the village, children's made posters with different slogans giving awareness messages on water conservation, Environmental messages, The rally started with the green flag in presence of local dignitaries. In 28 rallies around 1367 children participated, along with them 1000's of villagers with them, among this 1367, there were 718 boys were present and 649 girls were present.

Also, During this the IEC Van was arranges in this, During this the IEC VAN was developed and redesigned with different learning programs. A Film show was arranged in each village in the day time or in the dark time. Many motivational lectures for motivating entrepreneurship in the women was arranges in the film show. The IEC Mobile Film van was set in the colony where all villagers watched the film show as shown in the pictures below.

- Children became aware of Bajaj Water Conservation Project.
- School Children's joined the campaigned against environmental issues actively.
- Active participation in each activity of the project happened.
- Due to Film Show more farming related lectures, moderns' techniques in farming, Farmers Producer Company education, SHG Expertise lect was available in one place in the form of video van.
- The Long 1 Hour Film show is the good experience to the women's and farmers,





<u>Water literacy campaigns with posters/display boards/leaflets/stickers/wall</u> paintings/slogans:-

Water literacy campaign has been done in the project area and during these different activities like Display boards, wall paintings, pamplets, leaflets has been printed and distributed. Also, different training material and banners has been printed. With the help of this awareness program on environmental issues has been done. Also, environmentally friendly slogans were painted on walls in the village area.

Below are the sample of the banners, posters, wall paintings etc. In all the 7 village the drainage line treatment map was drawn in the project area.

The Budget of the village wise BWCP program is painted it the village. To make the environmental awareness the Environmental Friendly Slogans were printed in all the villages. Total 127 Slogans were painted in all the 7 villages. The 4500 pamphlets based on organic fertilizer making were printed and distributed in the village areas during the awareness campaign. Also, the Display flex were fixed every village spreading the awareness of importance, usage, and benefits of vermicompost.

- Villagers are now aware of basic use, importance of organic fertilizer as well as more than 50% of the farmers of the project area know the procedure of making Amrutjal, Vermicompost.
- The Slogans keeps the mind of people updated regarding the importance of Environmental issues.
- Villagers know the drainage line map of the village as well as knows the the treatment line completed under BWCP.
- The printing of village wise Budget in the village has made the clarity of the project in the villagers.



 <u>Celebration of Special day:-</u> Under Special Day Program different programs like "Shetkarimelava, Guest Lecture, Van Mahotsav" was arranged in 7 villages. On this occasion experts lecture was arranged on modern farming and techniques and topics like Challenges and Opportunities in market, Organic farming, Farmers Group and Farmers Producers Company.

Opportunities for SHG are in farming. VDC and MGVS team member combine organized the event. Also, in rainy season Van mahotsav was celebrated in each village during which 250 forest plants like neem, banyan people and other useful were planted in 7 villages. During this in Kanadgaon Deputy Collector was invited for the event during this he guided all the villagers in the program.

The moto behind celebrating special day program is to bring people together, and making this project public movement. Peoples from village area needs motivation and needs a push to bring a change. Therefore, to bring people together guest lecturer were invited. Therefore, to bring people together Special Day Celebration is being done in every village. In 2019-22 we celebrated 18 events in 7 village in which more than 1061 (741 Men & 320 Women) members were present.

Impact& Experience:

- Farmers got exposure to new teachings of modern farming.
- Got detailed knowledge in Organic agriculture.
- Villagers collectively planted 250 plants and took oath of its survival.
- On the occasion of Women's Day, Special motivational speakers for Women's in village were invited.

Mr. Uday Deolaonkar guided in detailed to farmers on Challenges and Opportunities in market, Organic farming, Farmers Group and Farmers Producers Company.



Capacity-building is the process o

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developing an organization's strength and sustainability. More than just important, it is essential for your non-profit's health and longevity. Capacity-building will enable project staff to focus on BWCP project mission—not simply on survival. With capacity-building, they will maintain focus and determine the best ways to deliver their vision and mission. They will create and maintain strong foundations for projects, measure internal effectiveness and external impact, and plan and cultivate strategic relationships. Consider this grid from the Centre for Public Skills Training to assess where to target capacity-building efforts. To bring the above changes MGVS arranged capacity building training for staff members. Sometime MGVS invited guest lecturer or technical expert in WRD work. Also, in Sept 22 MGVS arranged staff and capacity building training in Agriculture Development Trust Krushi Vindhyan Kendra, Baramati. Till date MGVS arranged 7 small training programs till Nov 2022



• Training of stakeholders involving external agency:

Bajaj Water Conservation Project stake holder involves Women SHD, VDC, GP, WUG, Jalmitra's. Educating stake holder will help better implementation of project as well as the project sustainability, therefore stake holders were taken to the ADT KVK Baramati for training purpose.



• IEC Sign boards:

As we have completed WRD works till today. We have fixed signboards in all 7 villages which contains all technical and financial information regarding sites completed till Dec 2021. This will create awareness regarding the work done under BWCP project and the villagers and UG member will be aware about the project costing. That will create more transparency in the implementation of project. Drone shoot has been completed before and after completion of WRD work.

In Every Village 1 Village wise board has been placed, and on every site 1 Display board has been places describing the details of the site. Where in every village Pre and Post Drone Shooting of the site has been covered in the village. The Pict of the boards and the drone shoot is as below. In total around 35 Display boards have been placed in the village area.

Impact& Experience:

- Due to Display boards the site details can be seen on the site.
- More partial work can be seen.
- Due to Drone shoot the details pre and post track of the site has been covered. So the transformation is very partial.





• Community Contribution:

Altogether 1.17 crore amount of community contribution has been collected from WUG members at VDC level for implementation of water resource development works.

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3.2 Area Treatment and Vegetative Measures:

• Field bund:

Strategically at program level, it has been decided to execute area treatments especially activity of farm bunding through convergence with Government schemes (Jalyukta shivar Abhiyan) instead of funds under BWCP. Due to this, no any area treatment works were implemented under BWCP but work has been done under Jalyukatshivar Abhiyan in all the project villages.

Grass seeding:

Total 14175 kg of Grass seeding of Stylo hemata grass has been carried out on the guide bunds of Nall Deepening and Widening works completed under BWCP.

3.3 Water Resource Development:

• <u>Water Resource Development:</u>

Total 41 sites of Nala Deepening and widening, 4 percolation tank deepening, 15 constructions of new Cement Nala Bunds, 3 constructions of new Core Wall Gabion structures were completed during the project period.

Also 155 construction of Recharge shafts & 3 Renovation of KT Weir has been completed under BWCP project during the project period of June 2019 to March 2023.

Impact:

- Created storage of 2964.92 TCM water storage in the water bodies
- Will bring around 2914.13 hectares of land under irrigation.
- Has recovered 20.22 kms of river/stream and rejuvenated.
- More than 350 farmers carry the fertile silt in their farms.
- Due to fertile land and water availability many farmers have opted for cash crops.
- Has increased the percolation rate of water 4 times due to direct recharge.
- Has increased the recharge upto 3.5 4 Kms from the recharge shaft area.



The village and structure wise details are presented in the below table.

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N o.	Name of Village	MDW	NCNB	РТ	RCNB	CWG	RENB	DW	RKT	RS	No of Works	No of WUG	No of WUG Member	No of Beneficiaries(HH)
1	Manur	0	1	1	0	0	0	0	0	21	23	4	127	350
2	Rupwadi (Sasegaon)	0	2	1	0	1	0	0	1	39	44	8	240	350
3	Khaparkh eda	0	3	0	0	2	0	0	1	37	43	8	119	136
4	Kanadgao n	11	3	0	0	0	0	0	0	31	45	11	114	181
5	Khamgao n	0	2	0	0	0	0	0	0	7	9	3	89	105
6	Rohila (Kh.)	0	2	0	0	0	0	0	1	8	11	6	154	120
7	Nipani	0	2	1	0	0	0	0	0	10	13	4	88	110
G	rant Total	11	15	3	0	3	0	0	3	153	188	44	931	1352

As per above table in all 1352 farmers (farming households) were benefited for the water resource development works.



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Water Budget:

Water Budget was prepared for all the 7 project villages considering the population, livestock & agriculture uses for the first year 2019. We have calculated the projections of water requirement for the year 2023 and accordingly prepared the intervention plan to address the required water requirement. The projected water demand of all project villages for year 2023 was 5697 TCM. The available runoff water from the entire catchment area is 11151 TCM. The runoff harvested with the help of existing water harvesting structures and the interventions carried out under BWCP is 6247 TCM. Approximately 57% of total available runoff was harvested due the watershed interventions. The details of the entire water budget are presented in the below table.

Particulars	Total
Runoff Calculations	
Total geographical area of village,ha	4543.38
Woodlands and forest area, ha	0.00
Runoff coefficient	2.10
Grass lands, ha	400.40
Runoff coefficient	2.10
Agriculture lands, ha (census2011)	4142.98
Runoff coefficient	3.50
Rainfall, mm	3955.00
Total rainwater,TCM- expected normal	25670.10
Evapotranspiration losses, TCM	2551.56
Available rainwater, TCM	23118.53
Weighted Runoff coefficient	3.38
Available runoff water, TCM	11151.79
Existing Demand for 2019	
Households	1832.00
Human population	8931.00
Demand for human beings TCM	130.39
Large Livestock population	2426.00
Goat/Sheep population	2011.00
Water demand of large animals @ 80 lpcd	70.84
Water demand of small ruminants @ 10 lpcd	7.34
Water demand for livestoco 2017, TCM	78.18
Kharif-water demand for protective irrigation-2017, TCM (10%)	2900.09
Rabi-water demand for irrigation-2017, TCM (existing area)	550.00
Current water demand 2019, TCM	3658.66
PROJECTIONS for 2023	
Households	1923.60
Human population	9377.55
Demand for human beings TCM	136.91
Large Livestoco population	2547.30
Goat/Sheep population	2111.55
Water demand of large animals @ 80 lpcd	74.38

Bajaj Water Conservation Project - WATER BUDGET

Particulars	Total
Water demand of small ruminants @ 10 lpcd	7.71
Water demand for livestock 2021, TCM	82.09
Kharif-water demand for protective irrigation-2023, TCM (10%)	2900.09
Rabi-water demand for irrigation-2021, TCM (proposed area)	2578.75
Projected water demand 2023, TCM	5697.83
EXISTING STRUCTURES & CAPACITY	
FP,Nos	76.00
FP,TCM	478.80
ENB,Nos	8.00
ENB, TCM	138.08
PT, Nos	3.00
PT, TCM	513.77
Existing CNB sites, Nos	11.00
ECNB sites, TCM	474.30
Khandak	0.00
Khandak sites, TCM (triple fiffling)	0.00
KT, Nos	0.00
KT, TCM	0.00
CWG sites, Nos	0.00
CWG, TCM (triple fiffling)	0.00
Water conserved through area treatment, TCM	1677.91
Existing structures, Nos	98.00
Existing capacity, TCM	3282.86
Projected water demand 2021, TCM	5697.83
Existing capacity, TCM	3282.86
PROPOSED STRUCTURES	
Proposed CWG sites, Nos	3.00
Total capacity of CWG sites, TCM	12.32
Proposed RCNB sites, Nos	0.00
Total capacity of RCNB sites, TCM	0.00
Proposed Farm Ponds, Nos	0.00
Proposed Farm Pond Capacity, TCM	0.00
Proposed NCNB sites, Nos	15.00
Total capacity of NCNB sites, TCM	407.58
Proposed NDW sites, Nos	42.00
Total capacity of NDW sites, TCM	2123.45
Proposed PT desiltation sites, Nos	3.00
Total capacity of PT, TCM	174.21
RENB sites	0.00
Capacity of RENB sites, TCM	0.00
Proposed Recharge Shaft, Nos	155.00
Proposed Recharge Shaft Capacity, TCM (single filling)	192.30
Proposed RKT sites, Nos	3.00
Total capacity of RKT sites, TCM (triple filling)	55.11
יטנמי נמשמנונץ טי ההי זוכז, יכועו (נווטוב ווווווב)	33.11

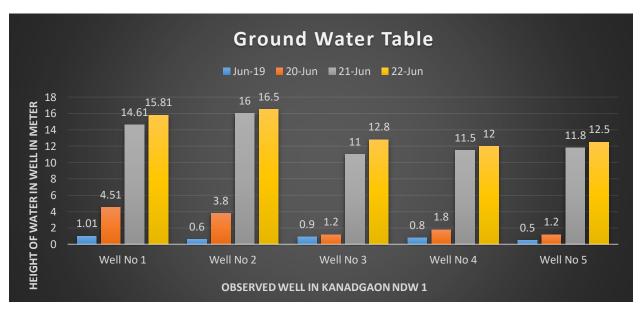
Particulars	Total
Total capacity of WR sites, TCM (triple filling)	0.00
Water conserved through area treatment, TCM	0.00
New proposed structures, Nos	221.00
New proposed structures capacity, TCM	2964.98
Existing+proposed, TCM	6247.83
Domestic demand	136.91
Livestock demand	82.09
Surplus water, TCM	6028.83
Water required for protective irrigation in Kharif season, TCM	2900.09
Proposed area under protective irrigation during Kharif season, ha	1450.04
Area under protective irrigation facilities in Kharif, %	35%
Irrigation water available during rabi, TCM	3128.75
Proposed area under irrigation during rabi season, ha	625.75
Irrigation potential in rabi season, %	15%
Current area under irrigation during rabi season, ha	110.00
Current area under irrigation during rabi season, %	3%
Additional area under irrigation during rabi season, ha	515.75
Additional area under irrigation during rabi season, %	12%
Agriculture lands, ha (census2011)	4142.98
Kharif cropped area, ha	0.00
Rabi cropped area, ha	0.00
Summer cropped area, ha	0.00
Existing cropping intensity, %	0%
Proposed cropping intensity,%	119%
Available runoff water, TCM	11151.79
Current water demand 2019, TCM	3658.66
Current water demand 2017, % of available runoff	33%
Existing capacity(Assumed 50% because of drought), TCM	1641.43
Existing capacity, % of current water demand	45%
Current deficit, TCM	2017.23
Projected water demand 2021, TCM	5697.83
Projected deficit, TCM	4056.40
Existing+proposed, TCM	6247.83
Existing + proposed capacity, %	57%
Available runoff-domestic & livestock demand, TCM	10932.79
Runoff leaving, TCM	4684.95
Runoff leaving, %	42%

Well Monitoring – Impact WRD works:

Project team have identified specific well for monthly monitoring and track, monthly well inventory in being conducted by MGVS -BWCP technical team and data has been interned. Well Inventory will help in tracking ground water table across all completed and proposed work. Well inventory is only medium of tracking ground water table.

Village Name	Total Number of Well Covered in Well Inventory on monthly basis
Khaparkheda	23
Manur	24
Nipani	22
Kanadgaon	31
Khamgaon	22
Rohila	17
Rupwadi/Sasegaon	32
Total	171

Result: Ground water table has been increased drastically in all the WRD done under Bajaj Water Conservation Project (BWCP). But the impact of ground water can be measured by well inventory from the graph below it is seen that S1W1 of Kanadgaon has 1.01 m of water level in June 2019 where as in June 2022 the water level has been increased to 12.5 m. Well water level has increased drastically after desilting of the water bodies. This has impacted over more than 1 km of radius of the water bodies in the project area.



Depth of water level in Kanadgaon NDW 1 wells.





3.4 Efficient Water Use:

• Under Water use efficiency, altogether 130 Ha (130 Farmer) covered under Drip irrigation and 59 ha (59 farmer) covered under Sprinkler irrigation from the project funds during the reporting period to enhance micro irrigation.

Impact& Experience:

- Rabi crops increased over 2914.13 of land.
- Farmers are saving time of late-night water filling to farms.
- It has impacted over farmers health, financial life.
- Micro irrigation has increased the financial income by 20 %.

3.5 Agricultural Productivity Enhancement: Demonstration of Bio pesticides:

A) Amrutjal demonstration:

To promote use of bio fertilizers and enhance organic farming Amritjal demonstration in all villages has been conducted, total 367 Amritjal training were conducted covering different UG of all villages. Correct method of uses, benefits and preparation procedure of amritjal was given by MGVS to WUG members of villages. Total 606 farmers got benefitted by the Amritjal demonstration. Also, more than 90 farmers have started preparation and use of Amrutjal from all villages.

- Most of the farmers from Khaparkheda has started using dosage of Amrutjal over Ginger, Drumstick plant.
- Usage of Amrutjal has helped the water holding capacity of the soil in the user area.
- The yellowness in leaves due to excess water logging decreased due to usage of Amrutjal.



B. Vermicompost Demonstration:

Vermicompost demonstration using HDPE tank and using brick tank method in the cluster area has been conducted. Demonstration was arranged and setting up of vermicompost unit for in technically correct method was done by MGVS team member. Benefits, Uses, Preparation method of vermicompost was explained in the training arranged after demonstration. Total 115 Vermicompost training in the quarter and around 737 farmers got benefitted & trained through this demonstration and farmers have initiated use of organic fertilizers. 737 Members have been demonstrated and been part of this training program.

- The Farmers have been started the usage of vermicompost to vegetables for houses.
- Many units have been used and again refilled again this indicated the sustainability.





C) Community Thresher Unit:

For Productivity Enhancement 4 SHGs has started Community Thresher Unit from Sasegaon, Khaparkheda, Rohila, Khamgaon. This community threshing unit will be run by SHG member/WUG/Registered Farmers group and make extra income for the group. After the scrutiny from the MGVS team member we have selected 4 SHG from Rupwadi/Sasegaon Khaparkheda, Rohila, Khamgaon and support men and women SHG's members with the Thresher unit. The SHG members have collectively contributed for the community contribution and with the help from BWCP share have opened a new venture by which they will make an extra income for the group.

Impact& Experience:

- Women's have started secondary income to their group.
- Son of one SHG member has got daily wages when he goes with the machine.



D. Orchard Development

Many farmers and women's have totally dependent on rainfed crops and women's are totally dependent on farm produce or market vegetables for nutrients. This results in lower incomes no lifestyle development due to financial independency. Also, rural people's health lack in nutritional values. Therefore, we included the orchards in every farmer's house for the production of fruits, we decided to give benefits to farmers on fruits plants with 50% contribution as per the people's demand. Total 14460 horticulture plants were planted during the project period.

- Women's will have better nutritional intake due to availability of fruits at home.
- Few Women's and families will be able to make additional income through selling of fruits.



3.6 Livelihood Enhancement:

• Promotion & strengthening of SHGs:

- Analysis of existing SHGs was done for ensuring the functioning status. Information about women enrollment in SHGs for each household was taken through household survey. Consultation meetings with those women who were not involved in any SHGs were conducted for formation of new SHGs. The promotion & strengthening of 94 SHGs has been carried under the project.
- Under Livelihood development many SHG has been linked with the project, Many SHG's have started savings maintain records under the guidance of social team of BWCP and Umeed. Many women have started participating in BWCP Livelihood program and now they have applied for various venture startups like Dairy unit, Goatry unit Stitching machine etc. Total 24 livelihood enhancement activities have been started out of 24 total units there is having 10 Dairy Unit, 3 Poultry unit, 7 Goatry units, 1 Stitching Machine Unit, 3 Kirana and General Store has been impended on the basis of revolving fund throughout cluster villages.
 - Status of Revolving fund: Total 24 livelihood enhancement activities of Rs. 4.35 lacks have been started through the revolving fund. Till now Rs. 2.15 Lacks revolving fund has been received by SHG/VDC and through that RF new 3 new activities has been started.





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4. Results achieved

Deliverables (as per MOU)	Target	Achievement
Outcome 1: Project households got the d	rinking water se	curity through source strengthening
measures.		
 More than 90% of 1832 HH project households got access for drinking water at village level. 	1648 HH	All project 1832 HH (100%) got access for drinking water at village level.
 Drinking water availability period is increased at least by two to three months in tanker fed four villages. 	10 months	Drinking water availability has been done for all 12 months for 100% HH (1832) and livestock in the project villages
Outcome 2: Capacitated Community Base	d Organisation	s actively participated in project
interventions and taken up post project n	nanagement act	tivities.
 In all 7 villages VDCs have been formed and strengthened. About 70% (44 of 63) members are regularly involved in affairs of VDCs. 	44 VDC members	About 45 members from 7 VDCs are regularly involved in affairs of VDCs.
 Total of 91 women SHGs have been strengthened of which about 73% (67 of 91) functioning and taking care of their livelihood's interventions. 	67 SHGs	94 SHG's have been strengthened out of which 61 have been functioning and participating in livelihood activities.
 Altogether 41 vibrant WUGs have been formed consisting of about 852 members handling operation and maintenance of their water bodies and taking up effective crop water management. 	41 WUG	Total 44 Water User Groups has been formed with 931 members.
 About 25% (216 of 852 WUG farmers) of WUG members adopting micro irrigation system mainly drip and sprinklers through assistance under project. 	216 WUG members	Total 439 WUG members has started drip and sprinklers irrigation and area under micro irrigation is increased by 439 ha.

Deliverables (as per MOU)	Target	Achievement
 About 90% of the beneficiary farmers have contributed their share and also participated in execution of activities. 	766 beneficiaries	Total 1737 beneficiaries has contributed their share for execution of project activities.
Outcome 3: Enhanced access for protect enhancement activities enabled increasing		
 About 22 water bodies developed in project villages of which 19 are new structures and 3 have been restored. 	22 water bodies developed.	Total 21 water bodies developed. 15 NCNB, 3 NCWG & 3 Restoration works (KT wire)
 Water conservation works under the project and soil conservation (through Govt. schemes) works executed enabled for harvesting of 2964.92 TCM runoff. 	2964.92 TCM	Altogether 2964.92 TCM water harvesting capacity has been created through implementation of WRD works in project village.
 Groundwater levels increased by 1 to 1.5 m. 	1 to 1.5 m.	Ground Water level has been increased by 8 meters.
 Protective irrigation i.e. one or two critical irrigations provided to 1450 ha area in kharif season which is about 35% of cultivable area. Protective irrigation gives the life to standing crops during dry spells. 	1450 ha	Total 2914.13 Hectares of area brought under irrigation. Which is 64.14% of total area of project villages.
 Area under seasonal irrigation is reached up to 794 ha during rabbi season which is about 19% of cultivable area. In other terms area under rabbi irrigation is increased by 15% (147 ha is current irrigated area). 	794 ha	Area under seasonal irrigation is reached up 1981.72 Hectare. i.e Rabi season is 47.83 %. Rabi crops increased over 44.28 %
 Area under micro irrigation increased by around 167 ha. 	167 ha.	Area under micro irrigation has increased about 439 ha.
 About 9.64 lakhs cum of silt/excavated stuff will be removed from desilting & NDW works. 	9.64 lakhs cum of silt/excavated	Total 9.64 lakhs cum of silt/excavated

Deliverables (as per MOU)	Target	Achievement
About 40% (about 5 lakhs cum) the desilted productive silt has been spread over on 240 ha agriculture land which leads to enhancing productivity.	240 ha agriculture land	Around 385600 Cum of silt have been spread over 228 Ha agriculture land which leads to enhancing productivity.
Agriculture productivity increased by 15% of the current levels through enhanced access to irrigation and adoption of organic agriculture practices.	Agriculture productivity increased by 15%	Agriculture productivity increased by 20%.
About 58% (500 of 852) WUG farmers adopted bio pesticides and bio fertilisers and reduced cost of crop cultivation.	500 WUG	1091 farmers have got benefitted from demonstration of Organic fertilizer making. Whereas 487 demonstrations of Amrut Jal and Vermicompost has been prepared.
Increase in agriculture income level about Rs.30,000/- through enhanced production and support of horticulture activities.	Rs.30,000/-	Increased agriculture income by 40000/- yearly per acre.
Dutcome 4: Income level of resource poo sources.	r households in	creased through diversified livelihoods
About 80% (51 of 64 assisted HH's) assisted households successfully run their enterprises and repaid 50% of revolving funds.	51 HHs	Total 24 livelihood enhancement activities of Rs. 4.35 lacks have been started through the revolving fund. Till now Rs. 2.15 Lacks revolving fund has been received by SHG/VDC and through that RF new 3 new activities has been started.
Animal husbandry-based and off farm livelihoods have been succeeded and	Rs.20,000/-	Total Rs.20,000/- annual income has been increase through

5. Challenges Encountered

The following social, technical and Agricultural challenges were encountered during the implementation of BWCP from Dec 2017 to Sept 2022.

Challenges faced	Strategy applied to overcome challenges
Delayed in Contribution.	Took corner meetings of WUG & motivate them about importance of project. As due to more rain cotton crops have completely damaged therefore farmer have lost their income by 50 %.
Internal conflicts.	Decisions taking process kept open for all. Facilitation done by MGVS team members.
Due to COVID-19 Pandemic Meetings & Trainings are post ponded.	Community Mobilizer conducted one to one meeting and avoided large gatherings and kept safe dist.
Damages of old structure	As due to heavy flood some old structures and NDW works damaged and so these issues were solved by community mobilisation and UG meeting.
Unwillingness to use bio pesticides	Arranged demonstration on Bio pesticides by experts & MGVS Team member.
On Site Conflicts in WRD Work	Held on site meetings of UG members and solved conflicts.
Delayed decision by M&E team	The decision related the micro irrigation and Livelihood Program has left the project on back lag.
Time giving	Villagers in the village has changed their mind set due to sufficient rain in last two year. The people don't thing for long term and so changed the preference of implementation of project. And therefore doesn't give sufficient time to activities.

6. Management Issues

Following are the management issues faced during the project period.

• Setting the team especially newly joined staff took time in the initial phase.

- Frequent changes in project implementation approach and strategies hampers in maintaining project tempo.
- Process of pre-survey and post surveys of water conservation works consumes more time than supervision.
- Appointment of local skilled Jalmitras was quite challenging since having better wage opportunities in MIDC areas.
- Lack of timely achievement created stress for managing the overall budget of project.

7. Leveraging of Funds:

Coordination and communication with Government line departments was done for the execution of soil water conservation works through convergence. As per the available information from concerned government field staff and village level functionaries, works executed through scheme convergence are enlisted as below.

• One new Cement Nala Bund constructed by ZP Department in Kanadgaon village.

Details of works executed through scheme convergence are enlisted below.

Sr. No	Village	Type of Work	Gut no.	Total Work Done through Convergence (Rs.)	Water Storage Capacity (TCM)	Work Done through
1	Kanadgaon	NCNB-3	112,113	67,35,540	59.94	Zilha Parishad, Kannda
		Total		67,35,540	59.94	

8. Annexure I: Case Study

Attached as Annexure I (Kandgaon I & Manur II).

9. Annexure II:

9.1 Physical summary of Achievements

Sr No	Activities/Indicators (as per signed MOU)	Unit of measurement	Plan (June 2019 - March 2023	Achi (June 2019 - March 2023			
A)	Institution Building/ Training and Capacity Building						
1	Training of SHG members	No.	94	132			
2	Training of UG members	No.	117	115			
3	Training of VDC members	No.	48	58			
4	Training of GP members	No.	107	54			
5	Training of Jalmitra	No.	84	95			
6	Livelihood trainings	No.		2			
7	Exposure visits	No.	25	31			
8	Water focused rally, film show, motivational event, etc.	No.	21	28			
9	Water literacy campaigns with posters/display boards/leaflets/stickers/wall paintings/slogans	No.	29	37			
10	Celebration of special day	No.	17	18			
11	Capacity building of team members	No.	9	7			
12	Training of stakeholders involving external agency	No.	2	3			
13	IEC (booklets/clips/signboard/video shooting)	No.	79	98			
14	Honorarium of Jalmitra	No. of Jalmitra	325	248			
	Total (A)		957	926			
B)	Area Treatment and Vegetative Measures						
1	Grass seeding (Stylo hamata)	Kg	10884	14175			
2	Plantations	No of Plants	136	0			
	Total (B)		11,020	14,175			
C)	Water Resource Development		-				
1	Nala deepening & widening	No of sites	44	41			
2	Deepening of existing percolation tank	No of sites	3	4			
3	Construction of CNB	No of sites	18	15			
4	Core Wall Gabion (CWG)	No of sites	3	3			
5	Recharge Shaft	No of sites	197	155			
6	Geological Survey	No of survey	1	1			
7	Repairing of KT	No of sites	4	3			
	Total (C')		270	222			
D)	Efficient Water Use (Micro Irrigation System)	1		1			
1	Drip irrigation system	ha	130	130			

Sr No	Activities/Indicators (as per signed MOU)	Unit of measurement	Plan (June 2019 - March 2023	Achi (June 2019 - March 2023
2	Sprinkler irrigation system	ha	37	59
	Total (D)		166	189
E)	Agricultural Productivity Enhancement			
1	Amrit jal	No.	377	367
2	Vermicompost	No.	123	115
3	Orchard development	No of Plants	10,148	14460
4	Community Threshing Unit	No.	6	4
	Total (E')		10,654	14,946
F)	Livelihood Enhancement			
1	Promotion / strengthening of SHG	No.	95	28
2	Dairy units (2 cows)	No. of Cow	15	10
3	Goatry units (five goat)	No. of Goat	22	7
4	Salun Unit	No.	2	0
5	Stitching Machine Unit	No	8	1
6	Electric Moter Rewinding	No.	1	0
7	Kirana and General Store	No	4	3
8	Poultry units	No.	12	3
	Total (F)		159	52

9.2Financial summary

Total Budget Approved for BWCP	13,62,43,474.00	
Total Amount received from Bajaj Auto Limited		
Add: Bank Interest		
Total Amount		
Total Expenditure from June 2019 to March 2023		
Amount Balance with MGVS		
Need to return to Bajaj CSR		

All amount in Rs

10. Photo Gallery: -



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