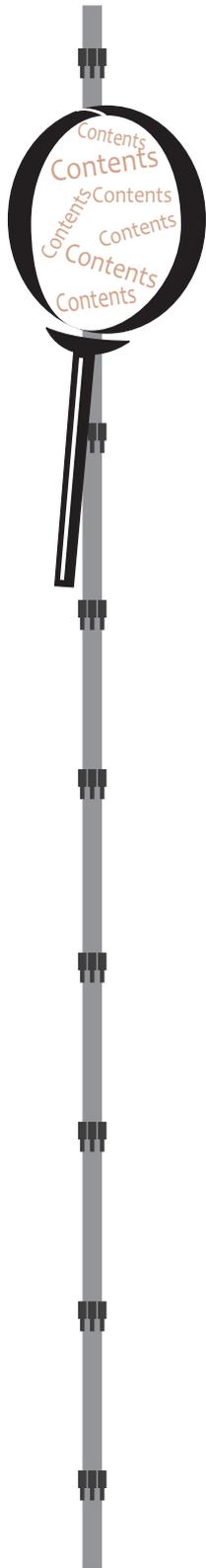


# Empowering villages - Enriching Lives



**Dilasa Janvikas Pratishthan**



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## Brief about organization

Dilasa Janvikas Pratishtan is a not for profit organization with a mission to uplift the status of the people from social, economic and environment point of view by implementing sustainable natural resource management and women empowerment. Presently, it is working in 5558 villages of Marathwada, Vidarbha, Konkan, North & West Maharashtra Regions with its head office in Aurangabad. Dilasa has established its area / project offices in Nashik, Akola, Osmanabad and Pune. Dilasa prominently working in water and livelihood sectors in 28 districts in Maharashtra. Dilasa has created a strong foundation in water management for a sustainable natural resource management. Dilasa's work in sustainable natural resource management was initiated with watershed development in 1995. Over the last 23 years, Dilasa has established a very strong base in water management. The organization has implemented watershed development projects over 5.65 lakh ha

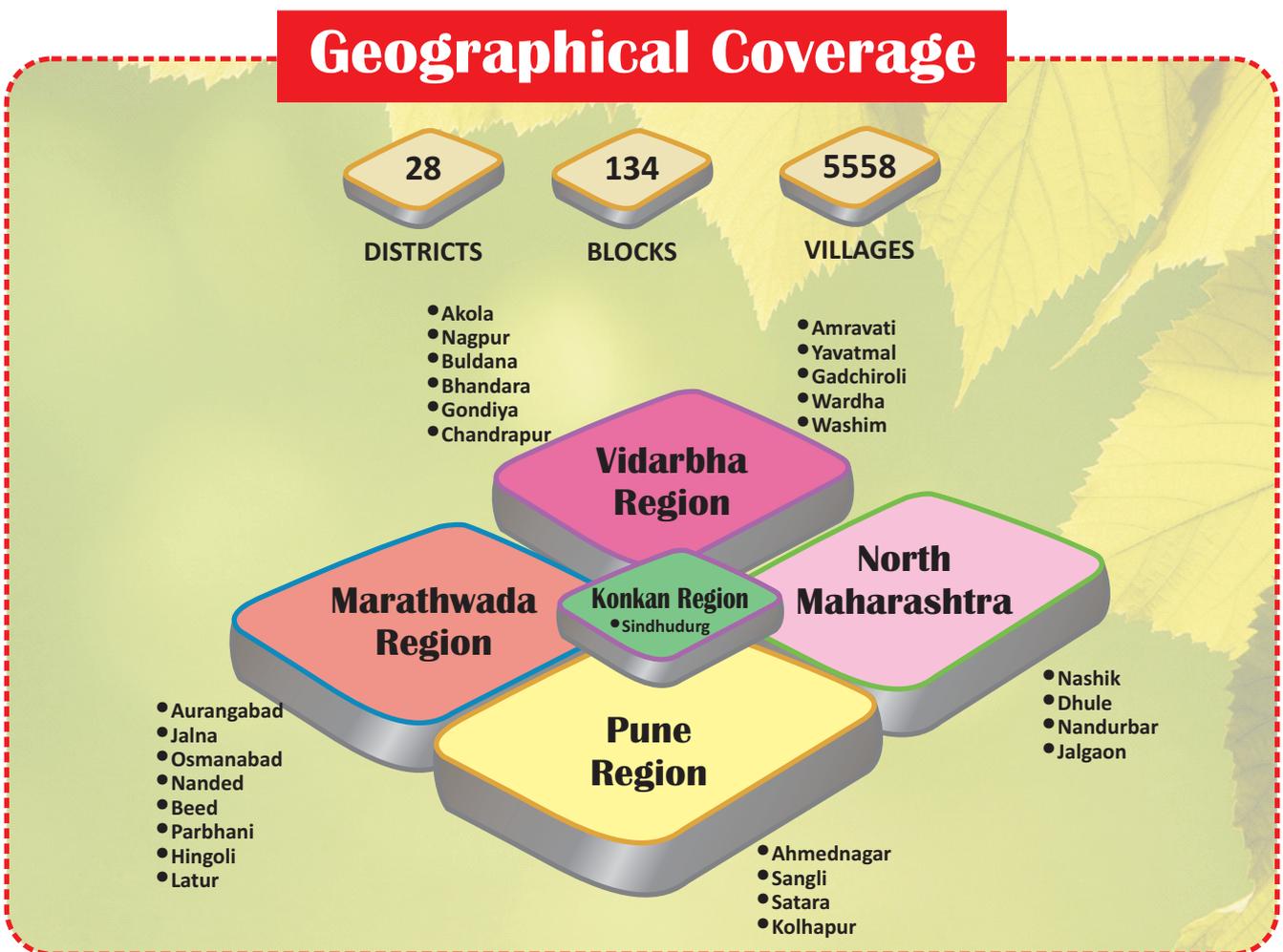
of land with ridge to valley approach. After the effective implementation, Dilasa played the role of Resource Support Organization (RSO) under Indo-German Watershed Development Project (IGWDP), RSO in NABARD Holistic Watershed Development Programme (NHWDP), RSO in Watershed Development Fund (WDF) of NABARD and completed all 64 projects with the partnership of different NGOs. Dilasa is working in a project mode in a sustainable manner in which watershed plus activities are also conducted to mitigate effects of drought on agriculture, specifically working with small, marginal farmers and landless families for their livelihood generation and try to link effectively agri-allied activities like goatery, poultry and dairy.



Dilasa has undertaken a mission to form 2000 farmers groups in Osmanabad, Beed, Nanded, Solapur, Latur, Sangli, Satara and Kolhapur districts. All the groups are based on crops like Soybean, Onion, Vegetables, Jawar, Pomegranate, Tur under Maharashtra Agriculture Competitive Programme (MACP). With its successful experience in forming Farmer Producer Organization (FPO) in Marathwada, Dilasa is acting as Producer Organization Promoting Institute (POPI) for NABARD.

### Corporate-Dilasa Partnerships

Dilasa have partnered with corporate's in mitigating drought in areas like Aurangabad, Beed, Osmanabad, Nanded etc., Our CSR partners include DHFL, Mahindra and Mahindra, Edelgive Foundation, ACC Cement, United Breweries, RBL Bank Ltd., L&T Financial Services, Oracle and many more. Corporate Organizations were successful in touching human lives and transforming suppressed potential into productivity.



# 2

## Project Background

Over 70 percent of the population in rural areas is engaged in agriculture. However due to continuous drought over the last four years especially in Marathwada region, agricultural productivity has been low. Improving agricultural productivity is necessary to meet the needs of people. Sustainable increase in production can be achieved by making sustainable use of natural resources. One of the major causes of low productivity is lack of irrigation facilities. Lack of water is not allowing villagers to change the cropping pattern and in turn increasing the migration rate and also drudgery on women. There are also many indirect effects associated with it.

Phulambri block of Aurangabad district is facing drought with erratic and very less amount of rainfall since 2011. There are no major projects of watershed development in Phulambri block. Central Government also identified GP - 8 (Godavari Purna) watershed of Phulambri block as high

priority watershed, which means immediate soil & water conservation measures are necessary to be undertaken. The soil health is degraded and organic carbon is in the range of only 0.1 to 0.3%. The hillocks and forest area in 5 villages in Phulambri block are without any green cover. Most of the families migrate in search of work for the period of about 6 to 7 months.



## Empowering Villages : Enriching Lives



Due to irregular rainfall in 5 villages the upper reaches of the area are totally desiccated with no vegetation. No green cover has intensified and added to the problem of excessive run-off and soil erosion. Deforestation is not only the major factor for reduction in uncertainty of rainfall but also soil loss due to loss of biomass. This results in low agriculture produce and inadequate livelihood provision for the villagers. The agri-allied activities such as livestock management are becoming impossible due to acute shortage of food and fodder. Such condition does not permit the farmers to plan their agricultural activities and it results in a poor harvest or total crop failure.

The rapidly degrading ecology of the 5 village's area can be restricted and reversed by the way of watershed development. The programme is planned with community and presented to DHFL inclusive of soil control erosion control and run-off control. The artificial recharge of wells and boost agricultural productivity will lead to enhancement of livelihood of people.

In order to address the above problems of rural

people especially in the drought prone areas of Phulambri, DHFL joined hands with Dilasa Janvikas Pratishthan. Programme focused on developing whole village in every aspect over the period of three years covering 5 villages and benefitting 7060 villagers.

Dilasa's vision and mission to empower villages saw the launch of the Holistic Watershed Development Programme at Babhulgaon on May 1, 2016. Babhulgaon is a representative village in the Phulambri block of Aurangabad district, which comprises 5 sanctioned villages. The divisional commissioner – **Dr. Umakant Dangat**; Vice President and Executive Assistant, CMD's Secretariat of DHFL – **Mr. S. Govindan**; Chief Operating officer of Samhita Social Ventures – **Mr. Purushottam Awasthi**; **Mr. Solomon J Manohar** of Samhita Social Ventures; **Ms. Siddhi Lad** of DHFL; **Dr. Anagha Patil**, President of Dilasa Janvikas Pratishthan; **Mr. Sanjeev Unhale**, Secretary of Dilasa Janvikas Pratishthan; **Ms. Vaishalee Khadilkar**, Vice President of Dilasa Janvikas Pratishthan

# 3

## Watershed Treatment Activities

Watershed management programme restores the ecological balance by harnessing, conserving and developing degraded natural resources such as soil, vegetative cover and water. The outcomes are prevention of soil run-off, regeneration of natural vegetation, rainwater harvesting and recharging of the ground water table. The watershed approach has conventionally aimed at treating degraded lands with the help of low cost and locally accessed

technologies such as in-situ soil and moisture conservation measures, afforestation etc. and through a participatory approach that seeks to secure close involvement of the user-communities. The broad objective is the promotion of the overall economic development and improvement of the socio-economic conditions of the resource poor sections of people inhabiting the programme areas.



## Continuous Contour Trench (CCT) and Water Absorption Trench (WAT)

Continuous contour trenches are best suited for moisture conservations in regions where rainfall is very less. Trenches are dug along the contour lines and run perpendicular to the flow of the water. Water flows down the top of the hill is retained by the trench and is infiltrating the soil below. Due to this water balance is enhanced and also fertile soil particles are not lost by water and wind erosion. It reduces soil erosion.

Whereas Water Absorption Trench is part of the

CCT lines however, the cross section of the pit is more and location of the trench is at the highest point of the ridgeline and the bottom of the hilly area. This is also known as cattle preventing trench or deep CCT. This is beneficial to break the velocity of run-off before it reaches the slope, encourage infiltration and trap the silt.

These works made on hillock, will be contributing to increase in ground water for the whole village. The technical supervisors took all care to preserve the small bushes and some forest plants available in the area during excavation by machine.



## Earthen Gully Plug

These structures are typical earthen structures in which 4 to 5 ha. Catchment area water can be stored. This is typically effective in undulating land. The earthen material is compacted in such a manner that it will act just as a stone. The excess water slowly gets flowed through the outlet of earthen gully plug. The stone pitching on upstream side is necessary to safeguard the earthen material.

## Gully Plugs

Gully plugs are stone based constructed small structures used to prevent soil erosion from rain & water floods. It traps soil that passes through it. These also help in reducing the speed of water flows through it. These are constructed across the gully to reduce the velocity of water. Series of gully plugs are constructed as in this case good soil conservation can be observed. It is one of the most economical structures as it is built only with the help of stones without any cement and concrete.



## Farm Bunding

As a part of soil erosion control measure, farm bunds are constructed on private farms of the small & marginal farmers. Bunds are built along the contour lines; thereby water runoff will be slowed down, which further leads to increased water infiltration and enhanced soil moisture. Bunds help reduce soil erosion and retain water during low



rainfall. They also improve ground water levels by increasing filtration. There are constructed with soil taken from the respective farms only. Slope plays a major role in the formation of bunds. This activity doesn't require much maintenance. Stone outlets are also constructed to let the excess water flow away. Along with this, grass seeding is also done to stabilize the bunds. Castor and Indian beans were sown to establish and maintain strong root system that penetrates and binds the soil. These can even withstand drought and long periods of water logging. Castor has soil binding properties and soil could also be collected behind the barriers. It also helps them to fetch additional income.

## Dry Land Horticulture

Growing of fruit crops is one of the many ways of crop diversification in dry lands. It not only provide higher income to farmers, but also more stable returns. Upon promoting dry land horticulture farming many farmers in these five villages are evincing keen interest in cultivating custard apple which is suitable to land capability & rainfall of the area. This type of farming involves low capital, maximum use of local raw materials and manpower resources. This is done to increase the profits of the farmers with less maintenance. Other varieties grown by the farmers under this are: Tamarind, Drumstick and Glyricedea

## Agro Horticulture

To promote sustainable cropping pattern in all the villages this activity has been included. Though it requires huge investment comparatively, it is compensated by higher net profits. This activity generates continuous flow of money. Pomegranate sowing has been done under this activity.

## Plantation

Plants are extremely important to humankind. They occupy an indelible space in our life. As per a report from The Center for International Forestry Research (CIFOR), scientists are trying to find ways to utilize forests to influence rainfall patterns in areas experiencing water shortages or severe drought. Forests have received a lot of attention for their role in storing carbon, thus helping mitigate climate

change, they could also help us to adapt to a changing climate and combat drought by influencing rainfall patterns.

Diversified plants in a row were planted on trenches as they keep biodiversity intact, generate good C-N cycle and develop the species that are not edible for grazing, in case the cattle move in the area. The process involves mixing of cow dung, V<sub>3</sub>G and coco peat together and adding it to the soil for growing active microorganisms in the soil, which in turn will enhance plant growth. Using Akira Miyawaki technique, some plants are used for cultivating dense forest in a span of almost 3 years.

**Varieties used:** Kaduneem, Banyan, Peepal, Bamboo, Kashid & Glyricedea.



## Loose Boulder Structure

It mainly consists of stones and gravels. The main aim of constructing loose boulder checks is to reduce the velocity of water flowing through the drainage line and to filter water from one direction to other. Construction of loose boulder structure provides the obstruction of high velocity run-off water than normal gully plug. It requires skilled labors and quarried stones.

**“Huge amount of water stored in nala bunds is directly benefitting us and wells are recharged and soil moisture is improved”**

## Cement Nalla Bund

The Cement Nala Bunds basically aims at capturing the run-off water in Nala and small seasonal rivers. The structure is environment friendly and doesn't aim to store 100% of the water on the upstream side but only a required quantity of water and the remaining flows through the nala which can be captured at various other locations and finally joins the oceans. These do not aim at providing additional water for irrigation but providing a sustainable irrigation solution by recharging the ground water and increasing the soil moisture content.

Rameshwar Jogdande, Chincholi





### Broader Impact

#### Desiltation of Percolation Tank

Existing water storage structures like percolation tanks were taken up under this programme. Soil that has been settled in the tanks has been removed. The silt material collected is of precious quality and through which existing farm nutrients especially NPK and organic carbon can be increased to large extent. Nearly 20 farmers surrounding have been benefited through this activity.

- ♦ Increase soil moisture
- ♦ Increase in ground water and thereby recharge of well
- ♦ Increase agricultural productivity by protective irrigation

# 4

## Livestock Development Activities

Rural families are fundamentally dependent on land, water and livestock for earning their livelihoods. Livestocks often play an important role especially in rainfed regions where crop production is uncertain. Among the livestock, cattle, buffaloes and goat play a significant role because of their contribution to plant and human nutrition. Dairy and goatery time and again remain the only hope for drought hit farmers and assure them of better sustainable livelihood. Veterinary care needs to be taken on priority as ill-health directly affects the economy especially in regions lacking basic veterinary facilities as well as knowledge. Thereby emphasis has been put on livestock for enhancement of rural livelihoods and planned to conduct village level animal health camps to ensure veterinary services at the doorstep of farmers. Inadequate supply of quality feed and fodder is considered as the primary cause of lower milk production. Huge cost is incurred and there is a fall

in fodder availability in drought hit areas. Accordingly fodder management and sustainable fodder demonstrations has been included in the program.

This chapter will cover the following things: Animal Health Camp, Travis Installation and Fodder Demonstrations.



## Animal Health Camp

Livestock development camp aimed at providing and improving animal health services and ensuring fodder security to raise the productivity. A two day animal health check up camp was held in all the five villages independently. The camps were organized with the help of local government veterinary doctor



and their staff. Dairy cattle, buffalo, sheep and goat were treated for different problems. The vaccines are given for foot and mouth diseases. This has helped not only in disseminating

information on general health and production issues, but also provided actual services to livestock owners who lacked in veterinary service facilities. General awareness was given to livestock owners on better animal health management practices and various fodders like azolla, a sustainable feed for livestock and fodder crops like napier grass which are considered to be important feed in feeding dairy cattle. Due to which ample fodder will be made available in the region.



Kadappa Shirsagar, Nandra

*“Immediate support from animal camp saved the lives of goats from PPR disease”*



## Installation of Travis

Travis, a permanent structure has been installed in all five villages for casting and control of large animals for the purposes of treatment, artificial insemination, vaccination etc. It is made up of MS pipes. It is safe for animals as well as the people

managing the same. It is a strongly built stall or cage for holding cattle, or other livestock safely while they are examined. It can be fully utilized during animal health camps, vaccination camps, deworming camps etc. It saves the time of veterinarian as well as animal owners.



“No more injuries in our village. Now it's safe to handle animals”

Gopinath Malode, Daregaon

## Fodder Demonstrations

Azolla, an aquatic floating fern is very rich in proteins, essential amino acids, vitamins, growth promoter intermediaries and minerals. It is easily digestible by the livestock.

### Bed Preparation:

A water body is made, preferably under the shade of the tree, with the help of the HDPE UV stabilized fabric sheet which is specially designed to culture

the azolla floating fern. Initially a pit of 2m \* 2m \* 0.2m is dug on which the fabric sheet that is resistant to the UV radiation in sunlight is positioned. It was also ensured that all the corners of the pit are at the same level so that a uniform water level can be maintained. It was then instructed to them that 10kgs of sand need to be kept, then water up to 4 inches need to be filled and then finally cow dung along super phosphate need to be mixed.



*“Azolla being the nutritional feed & ample availability of fodder on bunds helped in improving the quality & quantity of milk”*

Uttamrao Jogdande, Chincholi

# 5

## Human Development & Life Skill Activities

### Training of school children, school rally for water conservation

Protecting our nature's eco-system from further damage is crucial. Fresh, clean and potable water is a limited resource. Although most of our planet earth is covered with water, most of the water is seawater, which is saline and not fit for consumption by humans and other species living on the land, unless desalinated. Further, desalination is an expensive process especially for developing countries like India. In addition, natural calamities like frequent droughts limit the access to clean and potable water. Considering these unavoidable circumstances, everyone has the moral responsibility to conserve water for human survival during the tough times of drought. Keeping these facts in mind, necessary measures should be taken so as to conserve the most valuable and essential resource i.e. water.

One of the measures towards achieving this goal is construction of watershed structures to store water. However, this measure cannot take care of the water conservation by itself. Hence, it is necessary to create awareness about water conservation in everyone. Educating and training the younger generation on the importance of water conservation can achieve this. Taking a step towards this end and as a part of Holistic Watershed Development Programme in all the five villages, Dilasa have organized school rally as well as training programme on water conservation.



## Empowering Villages : Enriching Lives

School camps funded by DHFL have been organized in the school premises in which all the students as well as the teachers and other staff participated.

Dilasa team has visited the school one-week prior to the program to understand the students' interests and their understanding of water conservation so as to design and organize the camp accordingly. The team discussed with the teachers about the training camp, then decided the theme and planned activities according to the interests of the students. Though the overall infrastructure is satisfactory in the Z.P. Schools of all 5 villages, they still lack in few things like projector, library facilities and safe

drinking water.

Students were involved in rally to generate awareness among the locality residents about the problem of water wastage with the help of banners. Students participated in the rally and walked along the streets of villages locality with the slogans "Water is precious", "Save water, Secure the future", "Save water, Save life", "Save water, every drop counts" among others for about a distance of 1 km. The banners were held aloft by students focusing on "Water Conservation". Caps with the slogan "Save Water, Save Life" were distributed to all the students and others who participated in the rally.



## Learning Activity

As part of the learning activity, animation videos on water related topics were shown to students. Dilasa Team briefed them about water cycle, sanitation and importance of saving water. These videos conveyed the importance of water conservation and also clearly depicted the essential steps to be taken to maintain good health and longevity.

### Sanitation & hygiene video:

The emphasis of this video was toilets for proper sanitation wherever needed, educating people for its proper usage, then the usage of proper and clean drinking water and lastly about the washroom for

cleanliness of hands and hygiene. Further, the importance of hand hygiene using either soap or ash was explained. It was also explained that failing to follow this simple step before eating may cause diseases like diarrhea or even other fatal diseases like cholera etc.

### Message video:

Shows how an animal tries to stop running water from a tap conveying an important message, “if a monkey can save water why can't we?”. There is an urgency to conserve water on priority basis to save several lives and also to provide a sustainable livelihood.



## Empowering Villages : Enriching Lives

### Water Cycle Video:

Video clearly depicted the process of water formation right from the evaporation to the precipitation that occurs in the water bodies. This water cycle is responsible for the occurrence of rains on the earth. It also provided immense knowledge as it helped the students to understand in a lucid manner irrespective of their age difference.

Importance of 3 R's video – Reduce, Reuse & Recycle: Video have discoursed upon things like how to reduce pollution, usage of cloth or jute bags instead of plastic bags while shopping, how to reduce kitchen waste by converting them into vermin compost, how to reduce use of water & electricity, how to reuse old things etc., were taught to the students.

### Musical Chair

Dilasa Team organized musical chairs for the 1<sup>st</sup> and 2<sup>nd</sup> standard students during the training camp. This

event took place with a lot of enthusiasm and interest from the kids. The crowd applauded the winners by clapping.

### Painting Competition

The Dilasa team distributed drawing sheets &



colours for the competition. All of them actively participated. The colors filled by them on the white sheets were the colors of joy and they showcased their true creativity without any glitches in their actual working.



## Identifying the picture

Dilasa Team also conducted an activity on identifying the picture related to trees & sources of water. Pictures were shown to the students and they were asked to identify it. This activity was conducted for every student and individual attention was given. The overall participation and the performance of the kids were very good and

quite satisfactory. They were able to relate the events held and all the activities that were held to make them understand the conservation of water practically. These activities related to identification, triggered the interest of the students to a great extent and they showed enthusiasm by asking the organizer, 'what more is there to take part in'.

## Feedback

To the end of the camp students were provided with a moodometer sheet where all the programme activities were indicated. Camp received an overwhelming response from all the students as well as teachers. At the conclusion of the programme refreshments were arranged for all the students, teachers and other staff.



*We started the day with a rally. I especially liked painting competition out of all the events conducted today*

**Pratiksha Kailas Pradhan**



*We enjoyed watching students playing musical chairs. We have learnt many things today especially on how to reuse the used things*

**Vaibhav Fakirrao Malode**



*We enjoyed all the events conducted today i.e., rally, musical chairs, painting competition*

**Yashraj Sukhdeo Malode**



*Today's program was very good. We all have learnt many things which were necessary to be acknowledged*

**Sima Ajinath Malode**

Prize Distribution



Chief guest Mr. Ganesh Pathrikar, DHFL Area Manager during the school camp at Daregaon with the villagers



Chief guest Mr. Chetan Joshi, DHFL Branch Manager during the school camp at Waghola with the villagers



Chief guest Mr. Giripunjai, Dy. Conservation of Forest Officer and Mr. Karole, RFO during the school camp at Chincholi with the villagers



Chief guest Mr. Ghanbahadur, TAO and Mr. Kolte, SDAO during the school camp at Babhulgaon with the villagers

### Training of farmers on Bio-diversity

Biodiversity is directly connected to human life. On the event of *World biodiversity day – May 22, 2016* Dilasa organized a programme where speakers from various departments shared their knowledge. Today various species are disappearing with each passing day, which has had a negative impact on environment. Due to deforestation, birds have no place to live. So we need to put all our efforts to conserve birds, trees etc. Medicinal plant expert Mr. Milind Girdhari, birds and snakes expert Mr. Kishor Pathak and Aurangabad Forest officer Girhipunje also expressed their views. In Marathwada itself, there is a loss of about 1200 species of animals. In the world, 5000 different types of species have vanished. Biodiversity means maintenance of the natural nature chain. All animals are essential for the nature chain to sustain. Every snake is not dangerous to human life. As there is no food for them they come to villages. So we don't need to kill them, as they don't harm human beings.

### Training of adolescent girls on sanitation and hygiene

Adolescence is a transitional stage of physical and psychological development that generally occurs during teenage period. It is very necessary to educate the women on common issues regarding sanitation & hygiene. Attention is required towards girls during this stage.

In order to empower the adolescent girls and young women, Dilasa has invited Dr. Anagha Patil, President of Dilasa, Mrs. Vandana Gole & Mrs. Pradnya Deshpande. Program has been conducted in all the five villages. They have interacted with the girls upon various issues and educated on the topics: Menstrual Problems, Pregnancy issues, and necessary steps that needs to be taken during menstrual cycle etc., have been discussed. Question & Answer session was taken at the end of session. Program took place with good response from girls and women.



## Health Camp for men, women and children

Most developing countries are now challenged with the problem of blinding cataract besides a huge backlog. India has perhaps the largest blind and potentially blind population in the world. Although cataract cases can be cured by just a simple surgery, due to lack of awareness most of the people are ignoring. Eyes play a vital role in day-to-day activities. Health consequences of bad vision might lead to adverse impacts.

In the rural areas where health care facilities are primitive, blindness is more marked than in urban

areas. Because of their unawareness and poverty they continue to remain needlessly blind. Therefore eye check-up camps play a major step in this combat against needless blindness. These camps can bridge the gap between the rural masses and healthcare facilities by reaching out and restoring their vision economically. Under this program five eye checkup camps organized in collaboration with Ganapati Netralay, which is one of the renowned hospitals in Marathwada and people have so much faith upon their diagnostic capacities.



## Outreach Health Programme

**Registrations:** Dilasa team has recorded the patient details such as name, age, mobile number etc.

**Screening/Preliminary Vision Test:** Doctors of Ganapati Netralay have carried out a detail check-up asking patients in general about their eye problems. Followed by basic examination with the help of torch light for the eye check up was done. Clinical conditions was examined.

**Refraction:** Refraction was performed on patients who had refractive errors by using auto refractometer machine for reflecting eye's error. This process was followed by trial lens set and mirrors.

**Final Examination:** Doctors reviewed the patient records, made the diagnoses and then prescribed necessary medication, eye glass prescription, surgery or treatment.

**Counselling:** To the end of the checking process, eye specialists and refractionists have counselled the participants on eye care. Doctors have examined the patient regarding the problem in detail upon asking various related questions and then they have given treatment accordingly. Patients were counselled by the doctors upon the necessity of glasses and surgical operations as well.

**Optical Services:** Opticians were also part of the camp's team. Patients were advised to wear eye glasses. The patients who are interested have given ordered the optical.



“ Ten thousand rupees need to be spent for private hospitals. Camp conducted free of cost, very much grateful to DHFL ”

Viswanath  
Jogdande,  
Chincholi

## Water Source Strengthening

### Rain Water Harvesting Tank

It is a permanent water storage structure in the village for the community needs. This is ferro cement tank of 10,000 liter capacity. The tanks are fitted with PVC pipe for roof top water collection with filter arrangement. This structure is mostly used during village festivals to store more amount of water. This has a life of more than 75 years and is cost effective compared to conventional metal or plastic tanks.



### Impact

- ♦ Although the tank is expected to catch the rainfall, however in drought situation these tanks will serve the purpose of storing water as it is very difficult to fetch water.
- ♦ This also serve where electricity cut is for more than 10 hours
- ♦ Reduction in water borne diseases because of protection of water sources from contamination

“ Reduced the time spent on fetching drinking water during mela's, marriage ceremony, festivals and other religious functions ”

Punjaram Sable, Nandra

## Repair of KT Weir

KT (Kolhapur-Type) weir structures, popularly known as bridge cum barrage are old constructions used to rejuvenate the rivers. In almost 70 percent KT weirs, the gates are either missing or badly maintained. Thereby they don't serve the purpose of water storage. Under this programme, repair of KT weir which developed a leak took place. This

structure will benefit total land in the village and also helps in recharging the drinking water supply well. In order to be sustainable, 1m permanent wall has been constructed. Upon completion of work during the year 2016, drinking water supply well has become live because of the good monsoon and KT weir repair works at Daregaon dari.



# 7

## Post Watershed Activities

Micro irrigation today is a major concern regarding the water saving and proper utilization of other inputs popularly known as LIESA (Low external input and sustainable agriculture) technique. LIESA is the technique that is followed for the judicious use of inputs in agriculture with the major help of drip irrigation. It is vital to interact with all farmers after the implementation of the watershed activities to spread awareness of the benefits that would be reaped by the beneficiaries.

### Demonstration of drip, sprinkler & mulching

*Drip irrigation* is a form of irrigation that saves water and fertilizer by allowing water to *drip* slowly to the roots of many different plants, either onto the soil surface or directly onto the root zone, through a network of valves, pipes, tubing, and emitters.

*Sprinkler irrigation* is a method of applying irrigation water which is similar to natural rainfall.

Water is distributed through a system of pipes usually by pumping. It is then sprayed into the air through *sprinklers* so that it breaks up into small water drops which fall to the ground. Mulch is a layer of material applied to the surface of an area of soil. Its purpose is any or all of the following: to conserve moisture, to improve the fertility and health of the soil, to reduce weed growth.



## Approach Road Construction

There are kaccha roads in the villages that are puddle in the rainy season causing inconvenience to the villages. It directly affects the transportation facilities as well as the connectivity. Thereby this activity has been proposed to reduce this. Under this programme small approach road of on an average 4-5 km in Daregaon and Chincholi village has been done so that complete end to end solution for the farmers could be measured. Such small

approach roads were not covered through any government schemes. However, these roads are necessary for the livelihood of the farmers.

In Daregaon, this small intervention has connected 6 villages. It reduced the distance to market place and hospitals.

In Chincholi, it was very difficult for villagers to travel during rainy season. They couldn't market their commodities on time. This issue has been solved now.



# 8

## Other Initiatives

### Installation of Rain Gauge

To measure the amount of rainfall in the specific area, a rain gauge is installed in all 5 villages. It is useful to farmers for planting & harvesting purposes. This is basically a *measuring cylinder* which collects the rain and is placed inside the *cylindrical container*.

It is instructed to place under the open sky on level ground ensuring no obstructions such as trees as these will disrupt the measurements. It is also told to place it preferably on the top of the building. The farmers record the measurements everyday at 8 a.m. and maintain a register provided to them which is further used to measure the average rainfall in that specific area. In each village, one has been given to farmer and one at school.

### Soil Testing - Technical Convergence

Soil samples of different land classes were collected from all the 5 villages. Samples were submitted in

the soil testing lab. EC, OC, pH, N, P, K - six parameters were checked. Reports were given to the farmers and informed them about the treatments and recommended fertilizers.



### Distribution of net

Smoke from the traditional chulha during cooking is one of the major causes for ill health of rural women. In our demonstrations, we have given awareness to villagers about benefit of net and how to install in smokeless chulha. It helps in reducing ill health and also increases fuel efficiency.



Also in various meetings, importance of medicinal plants and micro irrigation systems were told to farmers.

Training was given to farmers in all villages related to “Drought Proofing Schemes”. Major focus was given on Crop Insurance Scheme. These programs were funded by “Caring Friends, Mumbai”.

### Distribution of Pulses

2016 being the international pulse year, the packets of Mahabeej were distributed to farmers. They were contributed by Caring Friends, Mumbai, which wanted to support the farmers for growing pulses and in turn increase their capability to contribute in the pulses production in the country as a whole.



### Vermi Composting Demonstration

Vermi composting, another beneficial activity for enriching the soil, uses earthworms to turn organic wastes into very high quality compost. This is probably the best way of composting kitchen waste. Adding small amounts of wet kitchen waste to a large compost pile in the garden everyday can disrupt the decomposition process so that the compost is never really done. But it works well with vermin composting.

### Awareness Meetings

- ♦ Micro Irrigation
- ♦ Medicinal and Aromatic plants
- ♦ Product of 'Ecotech Company'
- ♦ Crop Insurance



Due to heavy use of chemical fertilizer, farming land is becoming barren. The biomass is decreasing due to which water holding capacity of land also decreasing. To avoid farming land becoming barren, a product of ecotech has been promoted.



## Achievements at a glance

ACTIVITIES	ACHIEVEMENTS
CCT	183.09 ha.
WAT	5158 RM
GP	348 no.
EGP	76 no.
Plantation	35 ha.
Farm Bunding	626.6 ha.
Dry Land Horticulture	16.2 ha.
Agro Horticulture	3 ha.
Desiltation of existing percolation tanks	2 no.
Loose Boulder Structure	107 no.
Earthen Nalla Bund	4 no.
Cement Nalla Bund	2 no.
Demonstration of Drip, Sprinkler	24.8 ha.
Approach Road Construction	5.75 km
Installation of Travis	5 no.
Animal Health Camp	5 no.
Azolla, Dashradh & BNH Demonstrations	7 no.
Training of farmers on biodiversity and registers maintenance	5 no.
Training of School Children, School Rally for Water Conservation	5 no.
Training of Adolescent Girls on Sanitation & Hygiene	5 no.
KT Weir	1 no.
Construction of Roof Top Rain Water Harvesting Tank in village	1 no.
Health Camp for Men, Women and Children	5 no.

## Case Study of Beneficiary



Mr. Ajinath Jogdande

**Mr. Ajinath Jogdande** is a resident of Chincholi village, Phulambri block of Aurangabad district. Unlike other villagers, agriculture forms the major source of income for his family comprised of 8 members. He has 1 well in his land. Due to inadequate and poorly distributed rainfall, there is a fall in crop production. His other source of income is from livestock. He has 2 ox, 1 cow and a calf. He quoted that “Previously our bore wells have dried up for more than 4 months and we were completely dependent on tankers. Our cattle were on the brink of starvation due to inadequate fodder availability. It is then due to the interventions like cement Nala Bunds and fodder demonstrations have come up as a rescuer for farmers. The period of dried out bore wells have drastically reduced. The expenditure on fodder has also been reduced to 50 percent. Also, there is a rise in 15% of milk production” Now ajinath is happy and satisfied with his work and grateful to DHFL and Dilasa for the timely help and guidance received from them.



# **AGRICULTURE**

IS OUR WISEST PURSUIT,  
BECAUSE IT WILL IN THE END  
CONTRIBUTE MOST TO  
**REAL MORALS,  
GOOD MORALS,  
AND HAPPINESS.**



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