COASTAL SALINITY PREVENTION CELL

ANNUAL REPORT



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2022-23

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ABOUT US

Coastal Salinity Prevention Cell (CSPC) works in the coastal regions of Gujarat to evolve sustainable solutions for addressing the multifaceted challenges of salinity ingress. CSPC works as a multi-collaborative impact platform, bringing together CSOs, government agencies, and academic institutions to accelerate action by ensuring synergy of efforts. The organisation facilitates in knowledge management, large-scale development project implementation, and advocacy for effective policies on mitigation and adaptation of salinity.



VISION

Evolve sustainable approaches for prevention and mitigation of salinity ingress, whilst enhancing livelihood resilience of communities affected by s alinity in coastal villages of Gujarat.



PHILOSOPHY

To enable greater interaction and cross-learning between practitioners, researchers and policy makers to ensure that the unique and emerging problem of salinity is adequately understood allowing for design as well as implementation of effective programmes and policies to address the problems being faced by coastal communities.



APPROACH

CSPC has a multi-pronged approach to evolve sustainable solutions to effectively deal with multifaceted challenges of salinity ingress. The salient pillars of our approach to work include; knowledge creation on issues of salinity ingress, design of context-specific solutions through evidence- backed research, effective on ground implementation of programme, strengthen community Institutions to sustain the interventions, and liaison with government for policy advocacy on issues related to salinity mitigation.



Governing Board





Arun Pandhi
Chairperson



Burzis Taraporevala

Director



Chandrakant Kumbhani
Director



Apoorva Oza
Director



Sujit Kumar Gopinathan



Dr. Indira Khurana



Divyang Waghela

Director



V.S Gadhvi, IAS (Rtd.)

Director



Prof. Sukhpal Singh
Director



MESSAGE FROM CHAIRPERSON Arun Pandhi



The coastal regions of Gujarat have battled the phenomenon of salinity ingress crisis for decades. While there are varied reasons for the same, one of the problems lies in the practice of excess use of groundwater for various purposes. This has upset the region's hydrological balance and has caused seawater to encroach into freshwater aquifers. The increase in salinity ingress impacts an estimated 700,000 hectares of coastal land in Saurashtra & Kutch region, with agriculture crop yields plunging drastically in many areas, impacting the lives and livelihoods in over 2,500 odd coastal villages.

Invasive seawater is increasingly polluting the groundwater in these largely rural villages, compromising the health of residents, and sabotaging their current and future prospects. The geology of the region is a factor but the greater culpability lies elsewhere. Fuelled by reckless and rampant exploitation of water resources for agriculture and other industrial development, saline contamination of coastal Gujarat's groundwater has crept up to 15km inland and is creeping further in, thus highlighting the need to have a larger stakeholder-led approach to address the same.

To improve the coastal communities' quality of life, CSPC has been working on an integrated approach to address major concern areas in salinity-hit coastal regions of Gujarat, thereby trying to create a holistic and sustainable development model. The major programmatic interventions include Agriculture-based livelihoods, Water Security, Water Resource Management, Access to Safe and Clean Drinking Water, Menstrual Hygiene Management, and Grade Appropriate Learning levels under the Education program interventions. To increase the resilience of small and marginal farmers against salinity ingress, CSPC supports them by enhancing sustainable farming practices, soil health management, and integrated pest management practices.

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Addressing the emerging challenges surrounding the vital groundwater resources will need to go beyond the standalone efforts of water harvesting as the need of the hour is a paradigm shift toward looking at overall water security across all parameters. To tackle these issues, CSPC has undertaken the implementation of Community Managed Water Security through the Salinity Mitigation initiative in the project villages. During the year, with the team's efforts, CSPC has been able to bring 2,524 acres of land under support irrigation. During the year 22.42 McFt storage was created through which 63.50 crores litres of water was conserved and recharged.

Under the Jal Jeevan Mission Program, this year we have been able to provide FHTC to more than 3600 households in the project area and also extending capacity building training to the community level Pani Samiti's for the effective Operation and Management of the drinking water supply systems. Along with providing the FHTC, ensuring adequate drinking water disinfection is also of utmost importance. Considering the same, piloting an inline chlorinator was done in the project area. The prototype developed by the organization is expected to ensure appropriate water disinfection using chlorination. During the year 16 inline chlorinators were installed in the project area and the efficacy of the has also been showcased to the district authorities so that the same can be mainstreamed.

Further under the initiative of Behavioral Change for improved Menstrual Hygiene Management practices, this year CSPC reached out to over 3400 women and adolescent girls, making them aware of the safe hygienic practices to be followed during the natural phenomenon of menstruation.

Under its education initiative, CSPC has been supporting the interventions at various levels to bring about improvement in the learning levels of the children in the targeted 91 government primary schools of Dev Bhoomi Dwarka district. System Strengthening, by providing academic support through teacher training and enhancement of the school Libraries in the intervened Government schools were some of the key interventions. Developing subject-specific and grade-appropriate Teaching-Learning Materials for the school teachers, and enhancing community ownership through Capacity building of the School Management Committees were other components that were engaged with. During the year total of 5000 students benefited through the various program interventions. Across the villages, a total of 1803 SMC members were trained through 262 SMC trainings through which greater community participation was tried to be enlisted for backend support to the children as well as the schools to perform better.

The CSPC team has been working on an integrated approach for the upliftment of the coastal communities and has been able to build up partnerships with various stakeholders as part of its endeavor to strengthen the community's resilience to deal with the salinity ingress issues and enhance the quality of life. It is my pleasure to share the details of the activities carried out by the organization during the year 2022-23.

My heartful gratitude for your continuous support and for accompanying us during this journey.

INTERVENTIONS

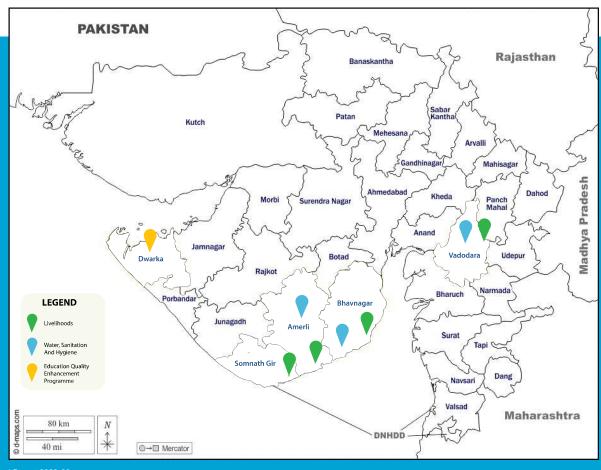
During the year, the Coastal Salinity Prevention Cell (CSPC) continued to intensively engage with the rural communities of coastal areas that have been adversely hit by the multi-faceted and often interlinked challenges of coastal salinity ingress. The operational strategy was achieved with the support of various funding and implementing partners of CSPC. CSPC also partnered with the state government and Corporate Social Responsibility (CSR) initiatives to focus on its interventions. CSPC also extended government-supported policies and programs to positively impact the communities.

Under the flagship program of the government of India-Jal Jeevan Mission ("Har Ghar Nal Se Jal by 2024"), CSPC extended support in building the capacities of the Pani Samitis in the operation and maintenance of the village water supply schemes. Along with providing water at the doorstep, CSPC also focuses on the quality of water. Hence, the inline chlorinator device was piloted this year in the project areas. During the year, CSPC has also facilitated the training of the Pani Samiti members as a National Level Key Resource Centre (KRC) under the National Jal Jeevan Mission Program. Further, under its unique initiative of Menstrual Hygiene Initiative, the CSPC reached out to women and girls by providing training on Menstrual Hygiene Management.

Salinity affects the agriculture and livestock needs of the community, hence there is a focus on introducing newer technology and innovations to address these concerns through efficient and effective methods. In the reporting period, CSPC introduced a pilot-of-use moisture meter through which water can be saved in irrigation, and use of cotton stalk shredders for the fastest, easiest, efficient way of chopping stalks/fodder, which in turn contributes to maintaining the environment.

During the year, CSPC undertook the implementation of Community Managed Water Security through the Salinity Mitigation initiative in the project areas. This new perspective emphasizes water conservation, minimizing wastage, and ensuring more equitable distribution through integrated water resources development and management.

The education program of CSPC emphasizes improving learning outcomes and increasing community and parental engagement in their children's education. CSPC engaged with School Management Committee (SMC) members to promote community-based activities and enhance their ownership in school functioning.



Livelihood







Gujarat's coastal regions have long been renowned for their agricultural productivity, but the escalating seawater intrusion poses a grave threat to the livelihoods of countless farmers and the overall food security of the state. The increasing salinity levels in the soil and groundwater are primarily driven by rising sea levels, excessive groundwater extraction, inadequate water management practices, and changing climate patterns.

The ingress of seawater has adversely affected agricultural productivity in the coastal areas. Saline soil and water have made vast tracts of arable land unsuitable for cultivation and have forced farmers to shift from traditional crops to more salt-tolerant varieties which significantly reduces the diversity of crops grown in the region. This monoculture approach poses risks to food security and makes agricultural systems

more vulnerable to pests, diseases, and climate fluctuations. Furthermore, the decline in agricultural productivity due to seawater ingress has severe economic implications. Farming communities are experiencing income losses, debt burdens, and an increased reliance on external aid for sustenance.

The acute seawater ingress in Gujarat's coastal areas is a clear manifestation of the impacts of climate change. It serves as a stark reminder of the urgent need to address climate-related challenges and develop adaptive strategies to safeguard the livelihoods of vulnerable communities.

Against this backdrop, CSPC thrives on designing its livelihood intervention strategy to address the challenges holistically posed by seawater ingress. The livelihood strategy not

only strives for innovative techniques but also keeps the traditional wisdom intact. The interventions are designed in a way that safeguards the livelihoods of coastal farmers and help them adapt to the changing environment.

The components of livelihood interventions are designed around community institutions to enhance their capacities and make them future-ready to manage the affairs of their respective villages.

Sustainable Agriculture

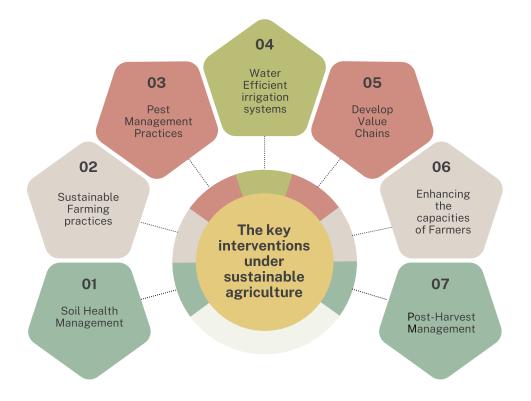
The lives and livelihoods of most rural Indians living in villages are dependent upon rain-fed agriculture. The major challenges faced are the following:

- Uncertain monsoon
- Increase in climate variability
- Returns are more uncertain than ever due to its resource-intensive nature
- Farmers in coastal areas have the additional challenge of increasing salinity ingress

CSPC has designed its agriculture interventions to address all the above challenges holistically. By combining innovative techniques and technology various initiatives are taken that safeguard the livelihoods of coastal farmers and help them adapt to the changing environment. Introducing salt-tolerant and saline-resistant crop varieties, employing water management practices that minimize the intrusion of seawater, and implementing soil remediation techniques are some of the key interventions that have played a pivotal role in restoring and enhancing productivity to the affected lands.

Moreover, promoting efficient and costeffective irrigation systems, and precision farming, has optimized water usage, reduced salinity, and minimized the impact of seawater intrusion on crops. Educating farmers about sustainable farming practices and providing them with the necessary training and resources was crucial in enabling them to adapt to the new emerging challenges.

In addition to this new pilots were initiated that can contribute to carbon sequestration, enhance biodiversity, improve soil health, and



foster resilient agricultural systems that are better equipped to withstand future climatic uncertainties.

CSPC is not only addressing the pressing issue at hand but also inculcating and demonstrating the best practices in the field which will pave the way for a more sustainable and prosperous future for the coastal communities of Gujarat.

Soil Health Management

Healthy soils are the foundation for high yields, high-quality crops, and long-term cropping potential. The healthier the soil more ability it possesses to sustain the ecology.

In Conventional Agricultural practices, lots of chemicals are used to enhance productivity, however, these inputs are known to disturb the soil ecology. The deteriorating soil health has significantly affected small and marginal farmers. As poor soil quality has led to low yields, and loss of biodiversity, and farming lands are slowly turning into infertile lands.

Thus, CSPC promotes soil and water testing as part of its regular interventions. During the year 1197 (1142 soil samples and 55 water samples)

samples were tested. The water samples were tested periodically to monitor the water levels and total dissolved salts (TDS) in the source of irrigation.

The data gathered from the measurements of these micro and macronutrients in the samples forms the basis for soil mapping. Based on the outcomes of soil mapping farmers are advised to undertake the application of castor cake and gypsum. This year 500 farmers adopted the application of castor cake whereas 97 farmers adopted the application of gypsum.

Furthermore, 977 farmers were engaged in composting activities. This was undertaken to ensure that farmers use the non-chemical alternatives in the early season of the cropping thus making the agriculture activity sustainable in the long run. This year also farmers continued to use vermi-bed technique which was introduced last year in the intervention areas. This technique is a very effective way of generating compost as it can be done in smaller areas; manure decomposes uniformly and at a faster rate.



Plastic Mulching

Another intervention that was demonstrated and is significant for soil health is mulching. It conserves the soil moisture, enhances the nutrient status of soil, control the erosion losses, suppress the weed in crop plants and at the same time removes the residual effects of pesticides, fertilizers. Thus, it improves the soil fertility and thereby leading to increase in economic value of crops.

Sustainable farming Practices

Climate change is causing new crises each day and accelerating the existing ones in vulnerable communities. To safeguard the interest of small and marginal farmers CSPC plays a key role in improving the livelihoods of farmers by boosting farming methods, crop diversification, and introducing innovative farming practices. All these measures help farmers to get maximum yield with minimal inputs. These interventions comprised of sowing salinity-resistant and high-

yield wheat and gram crop varieties, i.e., GW-499, GW-451, and GG5 respectively. Apart from this useful practices such as the detopping of cotton plants, and intercropping was adopted by 5569 Farmers. Furthermore, 367 farmers have been covered under horticulture and improved vegetable cultivation.

Overall various sustainable solutions have been adopted by more than 10,000 farmers, which helped them receive higher turnover alongside conserving water and quality of the soil.

Demonstrating a way of enhancing know how

Many Agriculture demonstrations are carried out during the year to showcase the benefits to the farmers so that in the coming year farmers adopt the new variety; weed and pest management practices. This helps farmers to achieve economic gains without harming the ecosystems.

-Solar Trap
- Mass trapping of pink bollworm
- Introducting new high yielding veriety (GG-5)







Promoting Water-Efficient Irrigation Systems

This is an arid region with a high evaporation rate and low rate of water percolation. Thus, judicious use of water is the key factor to combat salinity ingress. Due to the lack of water in the monsoon, the farmers depend on alternate sources of water for irrigation of farmland. CSPC intervenes here to promote efficient irrigation systems like drip, sprinkler, and laser and furrow irrigation. These interventions help the farmers to use less water to grow the same amount of crops; bring more area under irrigation with the same amount of water, and many times increase the possibility of farmers growing Rabi crops too.

This year 135 farmers adopted a microirrigation system (Drip and Sprinkler) covering 357.39 acres of land. Furthermore, 279 farmers adopted the cost-efficient irrigation technique called laser irrigation on 279 acres to irrigate small crops such as groundnut and onion.

Another significant water-conserving method, i.e., Alternate furrow irrigation was adopted by as many as 11,028 farmers. This method requires less equipment and pumping costs. In this method, either of the two adjacent furrows are alternately irrigated in consecutive watering. The water saved through this method is as high as 50%.

Strengthening Farmer Producer Organizations - Building Value Chains

Small producers do not have the volume individually (both inputs and produce) to get the benefit of economies of scale. Thus, farmer's collectives become crucial to optimize incomes from farming by use of the collective strength of farmers to gain bargaining power both at the supply and demand sides. These collectives help small and marginal farmers to procure agriculture inputs for much lower rates and at the same time enable them to sell the produce at a premium. Furthermore, at times these collectives also venture into profitable business ideas to generate additional incomes for the members of the collectives.

CSPC has been supporting two such FPOs one in Talaja and one in Rajula. promoted by CSPC added 678 new members. The annual turnover of the FPOs was Rs. 1,40,54,000. The cumulative profit garnered by the FPOs was Rs. 16,14,000.

The Dhatarvadi Farmer Producer Company at Rajula set up a mini oil mill for processing and value addition of groundnut crops. In the first year of operation, the Farmer Producer Company did a procurement of over 750 metric tonnes of groundnut from its member farmers. The



double-refined groundnut oil is being sold under the brand name "Sattvam". In Financial Year 2022-'23 the total turnover achieved through this new line of business slightly exceeded Rs. 60 lakhs. This has brought in a new ray of hope to the farmers of the region who can sell their produce at their doorsteps fetching better prices. The transaction cost has also reduced substantially since the farmers now don't need to take their produce to the local mandis and thereby saving time and money."



Unveiling the Advantages of Cotton Shredders: Transforming Efficiency and Sustainability of Cotton Harvesting....



Cotton as the predominant crop in rainfed regions of India, holds immense significance. While it yields versatile cotton fibers with numerous applications, it also generates a substantial amount of residue, primarily in the form of cotton stalks. Unfortunately, a considerable portion of this residue is traditionally burned on farms to clear fields for subsequent crop sowing. This practice not only contributes to environmental pollution but also releases harmful gases into the atmosphere. Moreover, the disposal of valuable plant material through burning

represents a missed opportunity for productive utilization. Extensive research has highlighted the potential benefits of incorporating crop residues in situ, emphasizing their ability to enhance soil fertility, boost crop productivity, and preserve the environment.

Some important benefits of Cotton Stalk Shredder are as follows:

- Fastest, easiest, and efficient way of chopping off stalks/fodder/twigs
- Improves soil aeration
- Cotton Stalks once crushed/chopped can be spread on the field and it acts as a mulch and helps in rain infiltration, improving organic matter and fertility upon decomposition thus soil structure can be improved. It boosts soil fertility and increases carbon sequestration
- The pink bollworm is the only major cotton insect that passes the winter in crop residue in the field in which it is developed. So, cotton stalk shredding is the best method that can provide a significant solution for the eradication of pink bollworm and thus passing it on to subsequent generations.

Against this backdrop, CSPC embarked on a strategic initiative by introducing cotton stalk shredders in the program area. The primary objective behind this initiative was to showcase the practicality and advantages of this technology in comparison to conventional methods for post-harvest management of cotton stalks.

The Intervention:

276 farmers used the Cotton Stalk
Shredder and covered 1245 acres.

Every farmer had a

saving of Rs. 750/acre.

The economics behind the intervention is as follows

The significance of the intervention can be understood through the words of Pareshbhai, who expressed that, "These machines are instrumental in incorporating biomass into the soil, leading to enhanced soil fertility.

This technique is not only time and labor-saving but also highly effective in managing pink bollworms. He earnestly hopes that other farmers will consider adopting this approach shortly"



Livestock plays an important role in the Indian economy. It contributes 16% to the income of small farm households. Livestock provides livelihood to two-thirds of rural communities. The farmers in India maintain a mixed farming system i.e. a combination of crop and livestock where the output of one enterprise becomes the input of another enterprise, this interdependence helps to realize the resource



efficiency at a household level. Livestock is a significant subsidiary income in rural households.

As per Gujarat Census data 70% of rural households in coastal Gujarat practice cattle rearing as a complementary livelihood. Thus, livestock Development forms a crucial program area and CSPC is making concentrated efforts to improve the productivity of milch cattle in the region through the promotion of correct breeding and feeding practices. Different interventions of the organization focus on establishing milch animal rearing as a viable economic activity among the small and marginal farmers.

According to a baseline survey conducted by CSPC, about 30% of animals in the program area have some sign of infertility. It is also found that cattle rearers need correct information on rearing, treatment of diseases, and fodder management. Apart from vaccinations cattle were treated for other illnesses as well and cattle rearers were supported by providing advisory and medicinal support.

CSPC also works to improve the reproductive health of cattle by promoting correct breeding and inter-calving practices. This year 422 animals were covered under normal artificial insemination and Sorted sex semen interventions.

The importance of proper feeding practices has emerged in the livestock spectrum. It is found that one of the most important reasons for low milk production among milch cattle is improper feed rationing. Also, excess intake of cotton seed cake was leading to infertility among the cattle. Thus, it became important to provide options for balanced feed through the promotion of green fodder, Azolla, and silage production. To date, 778 farmers have benefitted through the adoption of better feeding practices in the program area.

In the past few years, CSPC introduced Azolla cultivation through a fixed bed which occupied the space, and also farmers had to face adversaries of temperature and rains to prevent the produce. Learning from the past experiences of the farmers this year CSPC introduced the movable beds for Azolla cultivation with 84 farmers in the program area of Amreli, Bhavnagar, and Waghodiya.

Cultivating Azolla in movable beds

offers several advantages and increased flexibility compared to fixed cultivation methods.



Economically Viable options for Green Fodder: Hydroponics

Hydroponic fodder systems have gained popularity in livestock farming as they offer a controlled and efficient method of producing high-quality, nutrient-dense feed.

In a in a hydroponic fodder system for livestock, seeds such as barley, wheat, or other grasses are germinated and grown in a controlled environment. The seeds are typically spread evenly on a tray or a specialized growing medium, and water containing essential nutrients is circulated or sprayed onto the seeds. The seeds take root and grow into lush green sprouts, which are then harvested and fed to livestock as nutritious fodder.

Some of the significant advantages of using hydroponic fodder systems for livestock are as follows:

- Faster growth: Hydroponic systems provide an optimal environment for rapid plant growth. In just a few days, the seeds can grow into dense, nutrient-rich sprouts, providing a continuous supply of fresh fodder.
- Increased nutrition: Hydroponic fodder is highly nutritious for livestock. The sprouts are rich in essential vitamins, minerals, and enzymes, making them an excellent source of nutrients for animals.
- Water efficiency: Hydroponic systems use water more efficiently compared to traditional farming methods. The water used in the system is recirculated, reducing water consumption and waste.
- Space-saving: Hydroponic fodder systems require minimal space compared to traditional crop cultivation. They can be set up indoors or in small areas, making them suitable for urban or limited land environments.
- Year-round production: Hydroponics allows for year-round production of fodder, irrespective of seasonal variations. This ensures a consistent supply of nutritious feed for livestock throughout the year.

In this backdrop CSPC initiated the pilot of introducing hydroponics in Dhareshwer and Khari village.

This year CSPC introduced goatery with the farmers. Under the intervention this year was considered a zero year and 60 goats of improved breed were introduced in the program area. This pilot was undertaken with 20 HHs. Each farmer was provided with a set of 3 goats (2 matured Doe+ 1 matured Buck) in the breeding conditions.



Water Security





Water stress is a pressing global phenomenon that continues to worsen over time. India is no exception to this predicament. Groundwater has emerged as the preferred water source due to its easy availability and low capital cost. However, this heavy reliance on groundwater has resulted in over-extraction, leading to resource contamination

The coastal region of Gujarat, in particular, has been severely affected by erratic rainfall patterns and the absence of perennial rivers. As a consequence, there has been excessive withdrawal of groundwater, exacerbating the impacts of salinity ingress and deteriorating groundwater quality. The situation is further aggravated by the prevalent flood irrigation practices employed by farmers, which result in significant water wastage.

In this context, standalone efforts to conserve water and manage water resources are inadequate in addressing the emerging challenges surrounding this vital resource. The need of the hour is a paradigm shift toward water security. This new perspective emphasizes water conservation, minimizing wastage, and ensuring more equitable distribution through integrated water resources development and management.

To tackle these issues, CSPC has undertaken the implementation of Community Managed Water Security through the Salinity Mitigation initiative in the project areas. These regions are characterized by water scarcity, with 66% of villages in these areas facing salinity issues due to seawater ingress and groundwater quality deterioration. Additionally, these blocks are part of the ongoing Jal Jeevan Mission (JJM) interventions, where approximately 50% of water supply schemes rely on groundwater sources. Therefore, it is crucial to ensure source sustainability to provide regular, adequate, and reliable (i.e., 70 LPCD) water supply to rural communities. This initiative aims to introduce an

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integrated approach for water management interventions to achieve community-managed water security.

The main objectives of this initiative are as follows:

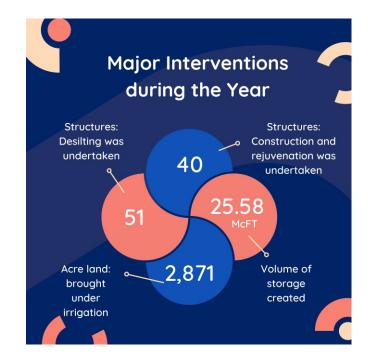
- Capacity building of communities to promote community-managed water security in villages.
- Promotion of a saturated approach to water harvesting and aquifer recharge.
- Encouragement of efficient water use through the adoption of appropriate technologies.
- Enhancement of groundwater table.

Under the community-managed water security initiative, the following activities were conducted during the year

The condition of Gujarat's coastal region is considerably worse off due to erratic rainfall patterns in recent years on one hand and the absence of perennial rivers in the region has led to excessive withdrawal of groundwater. This has led to a multiplier effect on the impacts of salinity ingress and deterioration in the quality of the groundwater. The situation further worsens due to the prevailing flood irrigation practices of the farmers which results in high water wastage.

CSPC works both on the supply and demand sides to reduce the demand of the scarce resource on one hand, while at the same time improving the recharge capacity of the aquifers for efficient water management.

Under the community-managed water security initiative, the key intervention areas are:



- Sensitization of the community through water security training
- Conducting exercises on water budgeting by undertaking geo-hydrological surveys with the community to develop water security plans
- Construction/repair of water harvesting and recharge structures
- Enhancing the Capacity of the community for water management

Thus, the prime objective of these interventions is to prevent and mitigate salinity ingress through the adoption of rainwater harvesting and watersaving practices. These practices in turn enable farmers to adopt different varieties of crops, innovative pest management techniques, and new technologies for effective water management.



Revolutionizing Farming: Moisture Meter unleashes water productivity



Bala Bhai, a resident of the Dharidi village, is the owner of an 8-acre plot of land. With a keen focus on cultivating onion crops, he has dedicated 3 acres of his land to this specific endeavor over the past three years. Historically, Bala Bhai adhered to a rigorous irrigation schedule, offering his onion crop 10 to 11 watering sessions. Regrettably, at the time of harvest, a disheartening 15-20% of the yield would succumb to the perils of rot.

However, this year, Bala Bhai's agricultural practices were revolutionized by the introduction of the Moisture meter, courtesy of the CSPC team. This ingenious device swiftly won Bala Bhai's favour, thanks to its user-friendly design and reliance on a color-coded mechanism. By harnessing the power of visual cues, where the verdant hue of green signified ample moisture and obviated the need for immediate irrigation, the cautious yellows hinted at an impending need for hydration within a few days, while the fiery reds fervently signaled the urgent requirement for immediate irrigation. Guided by this technological marvel, Bala Bhai strategically adjusted his irrigation cycles, effectively expanding the gap between each session. Consequently, he was able to curtail the number of watering sessions to a mere 8 for his onion crop this year

The benefits reaped by Bala Bhai from the utilization of the Moisture meter were twofold. On the one hand, he was able to substantially economize by conserving the costs associated with two irrigation cycles, all the while prudently preserving his well water reserves for future cultivation endeavors. On the other hand, the diligent implementation of this cutting-edge device resulted in a remarkable reduction in the rot-inflicted damage to his harvest, with a mere 5% of the yield falling victim to this unfortunate fate.

Impressed by the device's effectiveness, Bala Bhai enthusiastically disseminated knowledge about the Moisture meter to his fellow agrarian, who in turn embraced this technology and reaped the rewards it had to offer.

Improvement in Agriculture and Livelihood of Farmers following the Construction of the Barbatana Check Dam in Rajula Block

Introduction: Agriculture plays a pivotal role in the livelihoods of farmers residing in Rajula Taluka, located in the Amreli District of Gujarat. Situated along the coastal region of Gujarat, farmers in Rajula Taluka heavily rely on agriculture. However, farming in this area presents numerous challenges, primarily due to water scarcity. The region experiences minimal rainfall, which fails to meet the irrigation requirements. Consequently, farmers heavily depend on groundwater resources, which, unfortunately, leads to the intrusion of seawater, resulting in increased water salinity specifically in Rajula Taluka. As a result, farmers face several predicaments, including reduced farm income, livestock health issues, unemployment, distress migration, and limited contribution to their families.

To address these challenges and ensure sustainable agricultural practices, the construction of the Barbatana Check Dam proves essential in Rajula Taluka.

Background: Parshottambhai Bavbhai Hadiya, a 49-year-old farmer residing in Barbtana Village of Rajula Taluka, serves as an exemplary case. Parshottambhai, along with his four family members, cultivates 15 Bigha of land, mainly focusing on Cotton and Groundnut crops. Due to minimal rainfall in the past 2-3 years, Parshottambhai heavily relied on groundwater for irrigation purposes. However, this excessive extraction of groundwater resulted in inadequate water supply, with Parshottambhai only being able to access water for 2-3 hours, which proved insufficient for his crops. As a consequence, Parshottambhai incurred losses in his farming endeavors.

Intervention by CSPC: Under the Water Resource Management Project, the Community Services and Progress Center (CSPC) initiated the construction of a new check dam in Barbtana village, with active community participation.



Parshottambhai:
"I own 6 acres of land,
but due to
water scarcity,
I could only irrigate 3 acres.
However, now
I can irrigate
the entire 6 acres,
effectively doubling
my income."



Following the monsoon season, the check dam was filled with water, leading to an increase in the water level by approximately 5-6 meters in the wells of farmers residing in the catchment area. Parshottambhai is among the beneficiaries of this initiative.

As a result, Parshottambhai can now adequately irrigate his crops. With 30 years of farming experience, Parshottambhai previously faced these challenges annually. However, this year, he achieved higher yields in Groundnut production. Moreover, he plans to cultivate an additional crop during the Rabi season, which was previously not feasible. Furthermore, Parshottambhai has adopted the use of sprinkler irrigation on his farm to conserve water. The water crisis for irrigation has been worsening due to adverse climatic conditions. Nonetheless, Parshottambhai successfully grew an additional season's crop of onions, resulting in supplementary income.

Water Sanitation and Hygiene (WaSH):





Water Sanitation and Hygiene (WaSH) is a critical aspect of public health that encompasses access to clean water, proper sanitation facilities, and good hygiene practices. In India, WaSH remains a significant challenge due to its large population and diverse socio-economic conditions. India accounts for about 16% of the world's population but possesses only 4% of the global freshwater resources. Over the past few decades, the country has consistently drawn upon critical groundwater resources, which account for 40% of India's water supply. Today, it is undergoing the worst water crisis in history and is projected to touch critical water scarcity levels in the absence of any change for remedial measures.

Jal Jeevan Mission (JJM)

In terms of water supply, Gujarat has made efforts to improve access to clean drinking water. Over the past several years, CSPC has had a rich experience of working with rural communities on issues related to community-managed drinking water supply systems and implemented a large number of such schemes, especially in partnership with Water and Sanitation Management Organisation (WASMO) under the Coastal Area Development Program (CADP) and various other program partnerships. The partnership has developed synergies with the ongoing community-managed drinking water supply program.

Under the Jal Jeevan Mission Program, significant efforts are being made to ensure drinking water supply and source strengthening work across identified 103 villages of coastal areas of Bhavnagar and Amreli districts. Major objectives have been to:

- Provide seasonal security and conservation of water supplies with an integrated combination of pipe and local traditional water sources in 103 coastal villages;
- Strengthen linkages between users (Pani Samiti) and suppliers (water supply department) for effective management of water supply systems;

- Provide institutional facilitation support for community-level groups at the village and cluster levels;
- Demonstrate and establish an effective and sustainable community-managed implementation model of the drinking water supply scheme

During FY 22-23, various programmatic activities were conducted, including introductory meetings with the Pani Samitis, Participatory Rural Appraisal (PRA) activities with the community to assess the needs concerning drinking water infrastructural facilities, bank account opening of the Pani Samitis, technical survey for developing the village action plan (VAP), community contribution drives, women meetings and the school programs with the children.

The major Highlights of the activities carried out during FY 22-23 are as under:

- Formation of Pani Samitis has been completed in all 103 project villages
- A total of 404 Trainings were conducted



during the year for village-level Pani Samities covering 5194 Pani Samiti Members

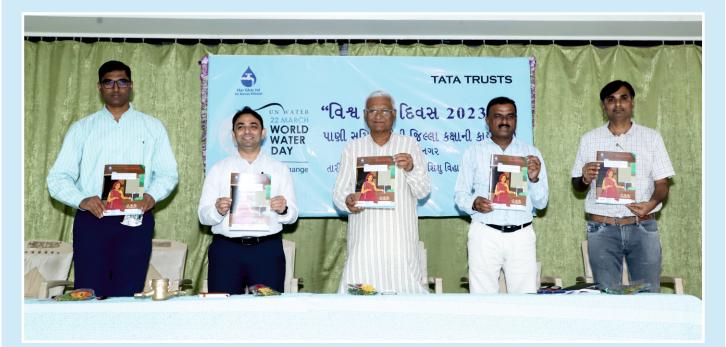
- Drinking Water Schemes completed in 34 villages covering FHTC of 4855 HHs
- Water Tariff Collection Mechanism has been ensured in 12 Project villages
- Installation of Inline chlorinators in 16 project villages.
- Piloting of IOT-based bulk water metering has been done in 5 project villages

The key emphasis was laid on training the Pani Samiti members on different aspects of water supply schemes. Under the JJM program, it is essential to handhold the leaders to ensure the smooth operation and maintenance of the water supply systems created in the villages. In this direction, throughout the year the training was conducted to build the capacity of the Pani Samiti members on the following aspects of the program:

Sr No.	Training	Amreli District	Bhavnagar	Total
1	Roles and Responsibilities of Pani Samiti members	83	51	134
2	Construction Supervision	47	21	68
3	Accounts Keeping	32	21	53
4	Operation and maintenance of Village Water Supply Scheme	22	54	76
5	Water Quality	37	88	125
6	Water Budgeting	4	3	7

A block-level O & M training was organized at Talaja for the Pani Samiti members of 12 program villages. 64 Pani Samiti members participated in the training.

March 22nd – Celebration of World Water Day at Bhavnagar and Amreli:



Two district-level celebrations of "World Water Day, 2023" were organized at Bhavnagar and Amreli in coordination with WASMO. A total of 285 participants from the project villages attended the celebrations in both districts.

These were the joint celebrations of CSPC and WASMO. The district officials of the Water and Sanitation Management Organization (WASMO) remained present in both districts. The focus of the celebration was to sensitize the community towards the economic use of water. In Bhavnagar, the distribution of MANIR was also done by WASMO to the Pani Samitis which is operating and maintaining the village water supply schemes effectively.

Under the Jal Jeevan Mission Program, considering the role of CSPC in building the capacity of the Pani Samiti members and the Pani Samiti as an institution, Tata Trusts has developed a campaign called "Samman Connection". On this occasion, the campaign was inaugurated in the presence of the community members. Further, the training module on "Operation and Maintenance of Village Water Supply Schemes" was inaugurated on this day.

During the event, WASMO and CSPC honored the Best Pani Samiti with the certificate and shield to recognize their good work in Water management at the village level.

Pilot on measuring the water usage by the community:

Internet of Things (IoT) based Water Metering process was adopted in 3 villages of Bhavnagar and Amreli to ensure the equal distribution of water. Under this pilot, the bulk water metering is being done at the main outlet pipe of the distribution, and some of the household-level metering is being done. The data of the water distributed and the water received at the household level is generated on the dashboard which is used to ensure necessary behavioral change and provide mandated LPCD to beneficiaries.

Piloting of Inline Chlorinator:

Under the Jal Jeevan Mission Program, enough focus is being given to water quality aspects. Given the existing issues of chlorination in rural water supply, the organization piloted a water disinfection system using the inline chlorination method in 16 rural drinking water schemes in Amreli and Bhavnagar districts.

This system does not require any electricity and uses an inline chlorine unit with a replaceable purification agent to ensure appropriate and continuous chlorine dosage; thus, obviating any need for manual intervention except for the replenishment of chlorination agent. Hence for operational ease, the organization



developed an innovative modified system or a prototype inline chlorinator using locally available components, which works on similar principles using a different form of purification agent (locally available chlorine powder or chlorine tablet). This system can be easily installed by a local plumber and operated and maintained by trained Pani Samiti members.

Technical aspects of the Unit

The prototype inline chlorinator is made of PVC outer body. The inside CPU unit is also made of PVC with perforated holes for dispensing chlorination agents. Chlorine powder or tablet is used as a chlorination agent. It works without any power requirement. The unit is connected to the main raw water supply line/distribution line. A bypass arrangement is made on the water supply pipe and an assembly of a bypass valve, and dosing system with chlorination agent is installed on this bypass. The water flows by gravity through the bypass line or in a pressurized bypass line through the system, entering through the inlet of the chlorination unit. The dosage of chlorination is adjusted by

controlling of valve and allowing flow rate. The valve adjustment is done by trial and error to get an accurate dosage. The valves once adjusted are seldom required to be changed for a site unless there is a marked change in raw water parameters-viz flow rate and water quality.

WaSH activities in Waghodiya Cluster:

Under the WaSH program in the Waghodiya cluster, efforts were put in to promote the construction of the toilets and the soak pits. Various types of awareness activities were conducted by the field team. During the year, we were able to facilitate the construction of 97 individual household toilets (IHHT) 152 individual soak pits, and 7 community soak pits.

Menstrual Hygiene Management Initiative





There is a lack of proper awareness among adolescent girls and women in India regarding menstrual hygiene. In the baseline study It was found that the majority of women lack a sound understanding of menstruation and continue to follow myths and beliefs, It is a known fact that menstruation is believed as 'unclean' or 'dirty' among many communities. This results in low self-esteem among adolescent girls, affecting their ability to make decisions, communicate, and negotiate for their needs, thus perpetuating the idea of gender inequality at a very young age.

CSPC aims to create a friendly environment for adolescent girls and women to enable them to manage their menstruation hygienically.

The main focus area of the program is the following:

 Educate and create awareness of menstrual hygiene

- Create an enabling environment for adolescent girls and women, where they can comfortably initiate dialogue and discussion around the topic of menstruation among their peers, family members, and others
- Provide information on various menstrual hygiene products available so that informed choices can be made
- Increase awareness on the safe disposal of menstrual hygiene products

These interventions provide a platform for women and girls to share their concerns and exchange information which helps to promote healthy hygienic practices and at the same time helps to break myths around menstruation.

Training helps adolescent girls to break the silence that surrounds menstruation. This is achieved by imparting appropriate knowledge, providing informed choices, and enabling them to talk freely thereby facilitating behavior change.

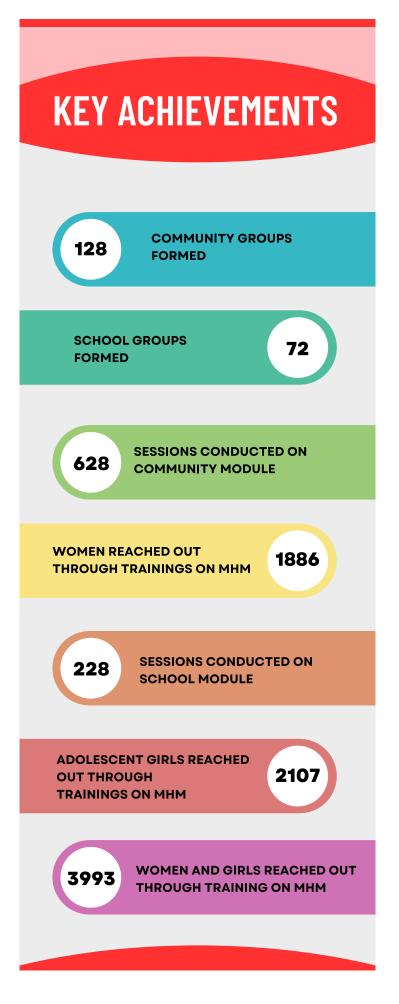
CSPC has been implementing a dedicated Menstrual Hygiene Management program since 2018 with the aim to change the perceptions and behavior associated with menstruation along with disseminating information about the range of products available, their use, and safe disposal.

CSPC follows a dual approach to reach out to adolescent girls and women simultaneously. This program is implemented through the four structured modules developed by the organization. The field facilitators conduct these modules over a period of two months. The facilitators reach out to the adolescent girls through regular training conducted in the school for grades 6 to 12. The women in the community are organized into small groups consisting of 15 to 20 members and the field facilitators conduct all 4 community modules with these groups over a two-month period.

The four MHM modules conducted in the school and community focus on the following:

- Puberty and Menstruation: Biological process of menstruation, the period cycle
- Pre-menstrual Syndromes and Products: PMS, associated discomforts, domestic cure and product options
- Myths and Taboos: Myth busting, the origin of taboo practices and their nonrelevance today
- Games and Discussions: Revision of modules 1 to 3, menstrual hygiene practices through various games.

During the year the program was implemented in the Talaja and Waghodia taluka of Bhavnagar and Vadodara districts respectively.



World Menstrual Hygiene Day

Menstrual Hygiene Day is an annual global awareness day observed on May 28th, dedicated to emphasizing the significance of proper menstrual hygiene management (MHM) worldwide. This day serves as a pivotal platform, uniting various stakeholders to amplify the voices of women and girls. Its primary goal is to break the taboo surrounding menstrual hygiene management.



This Year the celebration was done in partnership with the district ICDS-Bhavnagar. The celebration was done with 300 AWWs of Bhavnagar. The content of the four modules on menstrual hygiene management was discussed with the AWWs. The BCC tools of the program including an apron, Period Wheel, Puberty Chart, Pocket Chart, Coin Game, Snake and Ladder game, and the different menstrual products were displayed in the event. The district officials including the program Officer-ICDS, the District Women and Child Officer, the District Officer (Girls Education), and the Principal (District Institute of Education and Training-DIET) remained present during the event.

Education





Education is a fundamental asset for individuals, providing them with the means to explore the world through their knowledge. It serves as the primary catalyst for empowering individuals to overcome challenges. The early childhood stage, spanning approximately 6-8 years, is widely acknowledged as the most crucial period for lifelong human development, characterized by rapid growth and development (ECE NCERT, 2006). Positive communication and early connections with parents/relatives hold paramount importance in facilitating the positive development of children. Similarly, the availability of suitable infrastructure and childfriendly learning opportunities significantly contribute to a child's development. Early childhood is a highly intensive phase in human life, during which fundamental skills such as motor, verbal, cognitive, and social abilities are formed (Almond and Currie, 2010; Curie & Vogl, 2014; Heckman, 2006). The experiences children have during this period can have long-lasting effects on their overall well-being in adulthood.

In today's society, young children require the utmost care and nurturing to ensure their growth into productive citizens of their respective countries. Primary education, being the most essential and basic right of every child in India, not only enhances their awareness but also provides numerous learning opportunities. However, primary education in India faces various challenges, including outdated teaching methods, inadequate teacher training, resource scarcity, and community indifference, among others. Furthermore, marginalized communities often experience hindrances in their children's education due to limited livelihood opportunities, health burdens, and other socioeconomic factors. The outbreak of the COVID-19 pandemic in the past two years has further exacerbated these challenges, significantly reducing opportunities for marginalized children.

To address these issues, education interventions were initiated by CSPC in the Okhamandal block

of the Devbhoomi Dwarka district in Gujarat. The program aims to nurture children by providing equitable access to quality education. In the post-pandemic scenario, CSPC has designed interventions at various levels to bring about a positive impact on primary education. This includes bridging the gap between dropout children and schools, improving learning levels by adhering to quality parameters and employing innovative teaching methods. To achieve these objectives, CSPC follows a multipronged strategy, which includes:

• Academic Support to Teachers:

- Capacity building of teachers in Foundational Literacy and Numeracy.
- Establishment of a Resource Centre.

• Community Engagement:

- Activating School Management Committees (SMCs).
- Enabling parenting skills.

Implementing this multipronged strategy in the program area, education interventions primarily focus on teacher professional development, strengthening community engagement through SMC capacity building, and creating an enabling learning environment for children through library setups and the promotion of positive parenting approaches.

Volunteer Classes:

In August 2021, CSPC designed and established volunteer classes amid the pandemic. During the first quarter, 70 volunteers conducted remedial classes, benefitting a total of 1,300 students. Volunteer classes were subsequently closed from 15th July onwards, with students transitioning back to regular schools upon reopening. It was observed that after resuming school, students who had attended volunteer classes responded enthusiastically in their respective classes, actively participating in school activities compared to their peers.

Notably, no dropouts were recorded among the students from volunteer classes, and their regular attendance significantly increased.

Enrolment is the key to Continuity:

CSPC joined hands with TCSRD for the enrolment drive undertaken in various schools across the Okhamandal block. CSPC supported the organization in preparation and distribution of enrolment kits. All staff members participated in all the programmes organized at different schools by Okhamandal Education Department. 1416 students were enrolled in grade 1 during this drive including 732 girls and 684 boys respectively.

Teacher Training:

To equip teachers with alternative and innovative teaching methods, a training and innovation program was conducted over several days for 45 teachers in Okhamandal Taluka at the resource center. The workshop addressed the challenges faced in imparting learning, showcasing different educational resources that could facilitate the teaching of mathematics and language lessons more effectively. Additionally, CSPC staff conducted classroom observations, assessing various parameters such as lesson planning, classroom environment, and management. Based on these observations, short videos were created to enhance teachers' skills in instructional practices.

Creation of Teaching Learning Materials (TLM):

Teaching Learning Material is the best tool to make the children understand through activity. In the previous year, teachers were introduced to best practices for TLM creation, and this year, the school teachers themselves developed various TLMs under the guidance and support of the CSPC team. These TLMs are regularly used in classrooms, enhancing students' learning



experiences in language and mathematics by making concepts more practical, real, and enjoyable. Moreover, this year CSPC provided Teaching Learning Material (TLM) kits, including items such as thermometers, scales, spring balances, number balances, and decimal kits, to all 91 schools. Teachers received one-on-one training and ongoing support in utilizing the TLMs effectively.

Enhancing Community Ownership:

The program emphasizes improving learning outcomes and increasing community and parental engagement in their children's education. CSPC engaged with School Management Committee (SMC) members to promote community-based activities and enhance their ownership in school functioning. Throughout the year, 262 SMC meetings were organized, with 1,803 members actively participating. These meetings focused on various aspects of school excellence, infrastructure, student enrolment, regular attendance, quality education, and maintaining a clean and safe environment. SMC members took various initiatives to strengthen school functioning and ensure quality education, including facilitating the enrolment of drop-out children, supporting parents in the enrolment process, advocating for repairs of old and dilapidated buildings, improving water and sanitation facilities, and participating in the maintenance and improvement of school property. SMC members also provided support to parents during unit tests.

Parent Engagement:

During the initial phase of the program, it was identified through community and socioeconomic surveys that parents play a crucial role in children's school attendance and academic performance. Post-pandemic, when schools reopened, it was observed that many children were irregular in attendance, relying on junk food instead of home-cooked meals, and coming to school in untidy clothes or without uniforms. These factors significantly impacted students' learning processes. To address these gaps, CSPC developed a series of parenting videos and modules to raise awareness about effective parenting practices. Nine videos called "Samvad Kunj" were developed, focusing on supporting parents, planning for school, completing homework, and interacting with children. CSPC actively engaged with the parents of irregular students, struggling





learners, and those at risk of dropping out through parenting visits and workshops. During the year, 4,012 parenting visits and 109 workshops were conducted, providing guidance and support to parents in supporting their children's day-to-day lives.

Library Setup in Government Schools:

To enhance the learning process, both speaking and reading skills are crucial. School libraries play a vital role in fostering strong cognitive development. Reading to young children through story time or storytelling in libraries has proven to improve cognitive processes such as thinking, understanding, remembering,

problem-solving, and decision-making. Libraries also provide space for children to learn and share. CSPC initiated the establishment of reading corners in schools to help children overcome reading and writing difficulties. Alongside setting up these corners, CSPC provided books to all 91 schools in Okhamandal Taluka, ensuring that library activities became a regular part of school schedules once a week for all grade levels. This year, the final set of books was distributed to all schools, totaling 53 books from Pratham and Tulika publishers. Currently, 53 schools allocate one hour for library periods in their regular timetables. Additionally, book classification has been completed in 65 schools, enabling the issuance of books to students for reading at home. To ensure proper maintenance, book hospitals were set up in 54 schools, teaching children how to repair damaged books and instilling a sense of responsibility. In total, students have read 31,813 books within the schools, with 15,460 books issued for students to take home and read.

Taking this initiative further, 11 model libraries have been established in all clusters of Okhamandal Taluka.

Impact Assessment: Key Findings:

The Endline assessments revealed improvements in grade levels across grades 2 to 6. Approximately 67.9% of students demonstrated grade-appropriate Gujarati language skills, while 74.2% displayed grade-appropriate math skills. Baseline assessments indicated that only about 40% of children had attained grade-appropriate skills. Other key findings include a significant number of teachers utilizing TLMs during classroom teaching, increased awareness among community members regarding their role in SMCs, and enhanced engagement of women SMC members. The parenting videos received positive feedback from parents, with many adopting the suggested practices after discussions with CSPC facilitators. The voluntary class initiative has resulted in 150 trained volunteers in the community, impacting the learning process of around 3,000 children. However, the Teacher Resource Centre (TRC) set up in Dwarka Taluka is currently underutilized by CRCs and teachers, failing to meet the planned objectives.

Mainstreaming the Margins: Empowering Children in Vulnerable Circumstances

An innovative initiative was launched to address the educational needs of children facing challenging circumstances such as child labor, street begging, and scavenging for survival. The majority of these children belong to the Devipujak community, which is classified as an Other Backward Caste (OBC). These children come from families trapped in extreme poverty, leaving parents with limited time and resources to devote to parenting their children effectively.

Although government-enforced enrolment drives have successfully enrolled these children in schools, their attendance remains erratic, and they often find themselves aimlessly wandering their communities or engaged in laborious and begging activities.

To tackle this pressing issue, CSPC and TCSRD collaborated on a small-scale pilot program

aimed at motivating children from this marginalized community to attend school regularly by cultivating a genuine passion for learning. Departing from traditional rote learning methods, the pilot program fostered engaging and enjoyable learning experiences through activities focused on language, mathematics, and various library-related pursuits, including arts and crafts. By adopting a play-based approach to education, children's learning was enhanced, and their innate curiosity and thirst for knowledge were nurtured.

This ground-breaking initiative played a pivotal role in preventing children from dropping out of school. Additionally, the program's urban classes provided these children with an opportunity to rekindle their love for learning new concepts, subsequently motivating many of them to become regular attendees in mainstream schools.

Taking ownership of developing a better world for the children

In most educational institutions, School Management Committee (SMC) members had a tenure of at least two years, and the School Development Plan (SDP) was prepared solely by the Headmasters (Hms), without active participation from the SMC members. The SMC members had no involvement in the planning and evaluation of crucial school processes such as Mid-Day Meal (MDM) implementation, classroom teaching quality, learning outcomes, infrastructure development, and the school's overall Gunotsav ranking. Many of the existing SMCs serve merely as nominal entities, as the members are unaware of the rights of children under the Right to Education Act 2009, the specific responsibilities mandated by the act, and the roles they are expected to fulfill as SMC members.

As an initial step, the Community School Planning Committee (CSPC) facilitated the restructuring of the SMC. Subsequently, workshops were meticulously designed and conducted for the SMC members to enlighten them about the provisions of the Right to Education Act 2009, the functions and responsibilities assigned to SMCs by the act, and the specific roles they were expected to fulfill as SMC members. These workshops played a pivotal role in galvanizing the SMC members, particularly women, and making them conscious of their indispensable contributions to the overall functioning of the school. Consequently, numerous proactive SMC members emerged.

As a result, several positive outcomes have been achieved:

• Women members of the SMC from Rabari, Vagher, and other local communities have taken proactive leadership roles in disseminating awareness within their communities regarding girls' education and ensuring regular attendance of children in schools.

- SMCs now convene regular meetings, with all members actively engaging in the formulation and implementation of the school development plan.
- The SMC of Chopagi played a pivotal role in mobilizing community support when their school was forced to close due to safety concerns regarding the school building. The children and teachers from this school were subsequently transferred to nearby schools in Arambhada village. The SMC presented its case before the local MLA and the education department, advocating for the release of funds to reconstruct and repair the school building. Thanks to their unwavering efforts, funds were scheduled to be disbursed in the next academic year for the construction of a new school building.
- Several SMCs have undertaken various initiatives, such as:
 - 1. Modifying the timings of the Mid-Day Meal program
 - 2. Implementing measures to regulate school attendance
 - 3. Organizing local transportation for students who reside far from the school
 - 4. Constructing an access road to the school
 - 5. Enhancing enrollment rates
 - 6. Volunteering to maintain a school-based kitchen garden
 - 7. Addressing issues related to water and sanitation
 - 8. Ensuring that teachers do not leave the classroom unattended
 - 9. Conducting regular checks to maintain the quality of the Mid Day Meal program





One of the key insights gleaned from the community and socio-economic surveys conducted during the project's initial phase was the significant role parents play in their children's school attendance and academic performance. After the reopening of schools post-pandemic, it was observed that several children exhibited irregular attendance, consumed unhealthy junk food instead of nutritious home-cooked meals, and attended school with untidy or without proper uniforms.

Against this backdrop, the CSPC team developed a series of nine video modules focusing on effective parenting practices, referred to as "Samvad Kunj." The primary objective of these modules was to enhance parental engagement and positively influence children's active participation in the school's learning processes.

The CSPC team identified students in each school who exhibited irregular attendance, encountered learning difficulties, or were at risk of dropping out. Subsequently, all parents of these identified students underwent counseling sessions and were provided access to the parenting modules for guidance.

Several positive outcomes resulted from these targeted home visits and counseling sessions, including Improved school attendance among students

- Active engagement of students in the learning processes
- Parents adopting the practice of providing home-cooked meals to their children
- Students cultivating a habit of saving money
- Reduced engagement of children in gambling and substance abuse activities

CSPC TEAM

Sujit Kumar Gopinathan

Anirudh Jadav

Consultant

Anurag Chaturvedi

Area Manager Rajula Arvind Parmar

Team Leader, WaSH

Ashwin Singhad

Cluster Coordinator Livelihood Bhikhabhai Gajera

Cluster Coordinator-

Bhupendra Kumar Jani

Sr Program Manager WRM Chhagan Vaghela

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Jayesh Maru

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Manoj Mori

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Rina D'souza

Consultant

Samarpan Hanspara

Technical Officer-WRM

Shantilal Parmar

Technical Officer-WRM **Uday Gaikwad**

Sr. Program Manager

Vaibhav Dadhaniya

Technical Officer-Livelihood **Vinay Pandey**

Consultant

Yogesh Dodiya

Field Coordinator

DEVELOPMENT PARTNERS

Funding Support

TATA TRUSTS

























Knowledge Partners

- CSSRI (Central Soil Salinity Research Institute)
- Krishi Vigyan Kendra
- Gujarat Ecology Commission

- Junagadh Agricultural University
- Anand Agriculture University

Financial Report



Coastal Salinity Prevention Cell Balance Sheet as at March 31, 2023

Rs.	in	('000)	
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****				Rs. In (1000)
	Particulars	Note No.	As at March 31, 2023	As at March 31, 2022
		NO.		
, ,	EQUITY AND LIABILITIES			
	Equity			
1		_		
	(a) Share Capital	3	600	600
	(b) Reserves and Surplus	4	4,457	3,392
			5,057	3,992
2 1	Non Current Liabilities			
	(a) Other Long Term Liabilities	5	1,936	2,114
3 (Current liabilities			
	(a) Trade Payables			
	(A) Total outstanding dues of Micro Enterprise and Small Enterprise			*
	(B) Total outstanding dues of creditors other than Micro and And	6	2,607	1,321
	Small Enterprise	"	2,007	1,321
	(1000) (1000) (1000) (1000) (1000) (1000)			
	(b) Other current liabilities	7	6,740	34,906
	(c) Short Term Provision	8	50	55
			9,397	36,282
	TOTAL EQUIY AND LIABILITIES		16,390	42,388
11 /	ASSETS			
	Non Current Assets			
1	(a) Property, Plant and Equipment and Intangible assets			
	(i) Property, Plant and Equipment	9	1,941	2,122
	(b) Other Non- Current Assets	10	828	680
	(b) Other Non-Current Assets	10	2,769	2,802
			2,703	2,602
2 0	Current Assets			
	(a) Short Term Loans and advances			
	(a) Cash and Bank Balances	11	13,546	39,500
	(b) Other Current Assets	12	75	86
			13,621	39,586
	TOTAL ASSETS		16,390	42,388

See accompanying notes forming part of the financial statements

1-24

In terms of our report attached. For Deloitte Haskins & Sells LLP

Chartered Accountants

Firm Registration Number:117366W/W-100018

Joe Pretto

Partner

Membership No- 77491

For and on behalf of the Board of Directo

Arun Pandhi Chairman

DIN 02244978

Divyang Waghela Director

DIN 07586626

Sujit Kumar Gopinathan **Chief Executive Officer**

Place: Mumbai

Place: Ahmedabad

Date:





Financial Report



Coastal Salinity Prevention Cell Income and Expenditure Account for the year ended March 31, 2023

Particulars	Note No.	For the year ended March 31, 2023	For the year ended March 31, 2022
INCOME			
(a) Grant income or Donations	13	105,511	69,742
(b) Other income	14	2,856	1,218
Total income		108,367	70,960
EXPENSES			
(a) Grant and Programme Expenses	15	90,266	59,054
(b) Employee Benefit Expenses	16	12,511	7,456
(c) Other Expenses	17	4,523	4,321
(d) Depreciation	9	3	5
Total expenses		107,303	70,836
Excess of Income over Expenditure for the year		1,064	124
	iNCOME (a) Grant income or Donations (b) Other income Total income EXPENSES (a) Grant and Programme Expenses (b) Employee Benefit Expenses (c) Other Expenses (d) Depreciation Total expenses	INCOME (a) Grant income or Donations (b) Other income 14 Total income EXPENSES (a) Grant and Programme Expenses (b) Employee Benefit Expenses (c) Other Expenses 17 (d) Depreciation 9 Total expenses	INCOME (a) Grant income or Donations (b) Other income Total income EXPENSES (a) Grant and Programme Expenses (b) Employee Benefit Expenses (c) Other Expenses (d) Depreciation Total expenses Note No. 2023 105,511 12,856 108,367 108,367 109,266 119 12,511 13 105,511 14 108,367 15 90,266 12,511 17 18,523 19 3 107,303

See accompanying notes forming part of the financial statements

1-24

In terms of our report attached. For Deloitte Haskins & Sells LLP

Chartered Accountants

Firm Begistration Number:117366W/W-100018

Joe Pretto

Partner

Membership No - 77491

For and on behalf of the Board of Directors

Arun Pandhi Chairman

DIN 02244978

Divyang Waghela Director DIN 07586626

Sujit Kumar Gopinathan **Chief Executive Officer**

Place: Mumbai Place: Ahmedabad Date:

ACCOUNTANTS



Media Coverage



ભેજ્ માપણી યંત્રનો ઉપયોગ કરીને પાકને પિયત આપેવાથી પાણીની બચત સહિતનાં અનેક ફાયદા

ન્કૂતનું તેવે. ને માનાનો આતાભાઈ વાંચ આમ : મોટા રીગનીયાળા ઉંમર : ૨૩ વર્ષ કુલ જમીન :૮ વીધા મોટર : ૭ એસ પી પાસનો એસં: બોર પાસીનો અવસે : ૨૦૦ લીટર- ૧૧ સેકન્ડ,૧ મિતીટ-૧૦૮૦ અને ૧ કલાક -૬૪૮૦૦ એક વીધા પિયત નો સમય :૩ હતા ક

ુંબળ પાસ્તુ : ૨.૫ વીધા ભોળાભાઈ આતાભાઈ વાધની ગામ મોટા રીગનીયાળા કુલ ૮ વીધા જમીન છે, અને આ વર્ષ ૨૦૨૧ -૨૨ માં ૨.૫ વીધા માં સી એસ પી સી સંસ્થાના માહિતી અને માર્ગદર્શન નીચે



Rad	क्षेत्र मापाणी मंत्र ब्रास	ક્ષેષ્ટ્ર માપાણી ગંત્ર વિના
Dread sizes		10

पियतनी संज्या	6	45
ियत ३०३३ वीचा हीड	0+3+3-5	12+3+35
ફુલ પાણી વપસસ વીધા દીઠ	\$3+5¥600-13¥6500	35+5100-533500
વીજળી વપસંશ સુનિટ વીધે	23 -4-134	35-4-100
સમય ની બયત વીચે	3 દિવસ	
પાણીની લગત લીધે લીટર	1463 800	
વીજળી ચુનિટ બચત વીધે	3rt	
હત્યદન હીયે	3-80 145	3-80 103

CSPC સેલ તળાજા દ્વારા જિલ્લા કક્ષાનો સેમિનાર 'જળ એ જ જીવન 'ને સાકાર 22 ગામોની પાણી સમિતિ કટિબદ્ધ

તળાજા બ્યુરો | 25 માર્ચ

કોસ્ટલ સેલીનીટી પ્રિવેન્શન સેલ (સી. એસ.પી.સી.) તળાજા દ્વારા વાસ્મોના સહયોગથી વિશ્વ જળ દિવસ નિમિત્તે તાજેતરમાં શિશુવિહાર ખાતે જિલ્લા કક્ષાનો સેમિનાર યોજવામાં આવ્યો. જેમાં તળાજા તથા મહુવા તાલુકાના 22 ગામોની પાણી સમિતિઓએ ઉત્સાહપૂર્વક ભાગ લીધેલ હતો.

ટાટા વોટરમિશનના દિવ્યાંગભાઈ લોકભારતી સણોસરાના વાઘેલા. અરુણભાઈ દવે, ચીની સંસ્થા દાહોદના અમિતભાઈ વાજપાઈની ઉપસ્થિતિમાં આ કાર્યક્રમમાં "જળ એજ જીવન" ના સૂત્રને સાકાર કરવા, મનુષ્ય જીવનમાં પાણીનું મહત્વ તથા જાળવણી અને પાણીની ગુણવત્તા બાબતે વિસ્તૃત ચર્ચા કરવામાં આવેલ તેમજ હાલમાં પૃથ્વી પર આવનાર જળ સંકટ વિશે ગંભીરતા પૂર્વક વિચાર વિમર્શ કર્યા બાદ



સેમિનારમાં 22 ગામોની પાણી સમિતીના સભ્યો ઉપસ્થિત રહ્યા હતા.

આ સેમિનારના અંતમાં 'જળ બચાવો જીવન બચાવો ' એ ઉદ્દેશ્યને સાર્થક કરવા માટે પાણી બચાવવા માટે તથા પાણીની જાળવણી બાબતે તમામ સભ્યો દ્વારા સંકલ્પ લેવામાં આવ્યા હતા.

કાર્યક્રમમાં આવેલ વિવિધ ગામોના પાણી સમિતિનાં સભ્યો દ્વારા તેમના અનુભવો અને મંતવ્યો શેર કરવામાં આવેલ ત્યારબાદ સંસ્થા દ્વારા ઓનલાઈન કલોરીનેટર યુનિટ ડેમો બતાવામાં આવેલ તથા સંસ્થા દ્વારા વોટર મીટર ફીટ કરવામાં આવેલ જેની ટેકનિકલ સમજણ આપવામાં આવેલ અને તેમના ફાયદા વિશે ગામ લોકોને માહિતગાર કર્યા હતા.

તળાજાના ૩૭૦ ધરતીપુત્રોએ જમીનની ફળદ્રુપતા અંગે ટેનનિકલ માહિતી મેળવી

સી.એસ.પી.સી સંસ્થા દ્વારા પ્રવાસનુ આયોજન કરાયુ

ખેતી સાથે પશુપાલન, દૂધ ઉત્પાદન અંગે જાણકારી અપાઈ

તાલુકાના ૧૦૨ ગામોમાં ખેતી, જળ સંરક્ષણ, પશુપાલન, મહિલાઓ માટે આરોગ્ય લક્ષી પ્રવૃતી થાય છે. ખેતીની વિશેષ માહિતી અંતર્ગત પોચામ ઓફ્સિર ગૌતમભાઈ સોલંકીના માર્ગદર્શન હેઠળ વિવિધ ગામમા પ્રવાસ કરાવવામાં આવ્યો હતો. આ પ્રવાસમાં કરાવવાના આ ... બોરડા, દાઠા, શેળાવદર, પસ્વી, ભૂંગર, બોડકી, મંગેળા, ગાધેસર, ઝાઝમેર, તલ્લી, વાટલિયા, નવા-જૂના રાજપરા, રેલીયા, મધુવન, પીઠલપુર, બોરડી, પ્રતાપરા વગેરે ગામોના ૩૭૦ ખેડૂતોએ

ભાગ લીધો હતો. દરમિયાન ખેતરમા લેઝર, ડ્રીપ જેવી આધુનિક પિયત પદ્ધતિનો ઉપયોગ કરીને ખેડૂતો પાણીની બચત કરી વધારે પાક લઈ શકે. દિવસે દિવસે જમીનની



વર્મિકંપોસ્ટ, વર્મીવોશ, FYM એનરિચમેંટ ફાયદાઓ અને જમીન સકાચણી કરાવીને ભલામણ મુજબ ખાતરનો ઉપયોગ કરવો વગેરેની ટેકનિકલ માહિતી આપવામાં આવી

... ખેતીની સાથે ખેડૂતો માટે પશુપાલન આપવામાં આવી હતી.

કળદ્રુપતા ઘટી રહી છે તેને જાળવવા માટે જરૂરી છે. ઉનાળામાં પશુનું દૂધ ઉત્પાદન વર્મિકંપોસ્ટ, વર્મીવોશ, FYM ઘટી જતું હોઈ છે. આ સમયગાળા દરમિયાન પશુનું દૂધ ઉત્પાદન જળવાય રહે તે માટે પશુને વધારે પોષ્ટીક આહાર મળી રહે તેના માટે નવી જાત નેપિયર ઘાસ-૧૦, અજોલા વગેરેની ટેકનિકલ માહિતી હસમુખભાઇ વેગડ દ્વારા

જળ સંરક્ષણની ગ્રામ્ય સ્તરીય કાર્ય શિબિર રાજુલા તાલુકાનાં મોટા રિંગણીયાલા ગામમાં યોજાઇ

યુગાંતર રાજુલા, CSPC એવમ HDFC પ્રવિકર્ HDFC પરિવર્તન -HDFCબેકની CSR કાર્યક્રમ HDFCએકની CSR કારપ્રક્રમ અંતર્ગત રાજુલા તાલુકાના મોટા રિઝાલીયલા ગામમાં તા. 03.03.૨0૨૩ નારો જ સી.એ સ.પી.સી. કારા "જળ સંરકાલ" ની આમ્ય સ્તરીય કાર્ય કિંગલું સ્ત્રો અંત્રે સાથે પ્રત્યો કાર્યક લેવાના મામેપસુપાલન, ખેતી, યરવપરાશ વગેરમાં પાલી તું મલત તેની સામે ગામમાં રસ્સાદનું પાલી આવે છે. તેમા આપ્રાયા રસ્સાદનું પાલી આવે છે. તેમા આપ્રાયા રસ્સાદનું પાલી આવે છે. તેમા આપ્રાયા તેમા સામે તેમજ પાલીનું આવક સામે જાવક નો ખેડૂત ભાઈઓ એ હિસાબ કિતાબ કરવો જોઈએ ખેડૂત ભાઈઓને ખેતીના પાકોમાં પાલી ટપક, લેજર પૈયત તેમજ એક વિસ્તૃત



પાટલે પિયત પદ્ધતિ અપનાવે તેમજ જે જે પાકોમાં પાણીની ઓછી જરૂરિયાત જણાય તેવા પાકો નું વાવેતર કરવું વગેરે બાબતો વીસેની આવી.આપણા જીવનમાં પાણીનું મહત્વ,તેમજશામાટેલોકોએપાણી બચાવવાની જરૂર છે વગેરે વિશેની માહિતી સંસ્થાના કન્સલ્ટન મયંક જોશી દારા ખેડૂત ભાઈઓ અને આ કાર્યક્રમ ને સફળ બનાવેલ ચર્ચા કરવામાં

આપ્યો. સંસ્થાના ક્લસ્ટર મેનેજર અનુરાગ ચતુર્વેદીના માર્ગદર્શન હેઠળ,અને તેમજ ગામનાલોકોસાથે રહીને સંસ્થાના પ્રતિનિધિઓ જયેશ માહુ,શાંતિલાલ પરમાર ભીષાભાઈ ગજેરા ,ઇક્લાલભાઈ સનિલભાઈ. સુનિલભાઈ, બિપીનભાઈ ,ભલાભાઈ, નરેશભાઈ, પારુલ બેન અને કુવિશા બેન તેમજ



રાજુલા તાલુકાના કુંડલીયાળા ગામે કપાસની અસરકારક ખેતી પદ્ધતિ /ક્લસ્ટર લેવલ વર્કશોપ શિબિર યોજાઈ....

प्रतिनिधि-धर्मेश महेता

રાજલાના કંડલીયાળા ગામે CSPC अवम HDFC Aleada HDFCall CSR કાર્યક્રમ અંતર્ગત સી.એસ.પી.સી. સંસ્થા દ્વારા असरहारह हपासनी जेती डलस्टर लेवल वर्डशोपनी ગામ્ય સ્તરીય કાર્ય શિબિર યોજાઈ હતી. આ કાર્યક્રમમાં જુનાગઢ એગ્રીકાલ્સર युनिवर्सीटी मांथी डपास . संशोधन हेन्द्रना निप्त અધિકારી ડો.ધડુક દ્વારા કપાસની ખેતી પદ્ધતિમાં विविध टेडनोसोश्र अने



યુનિવર્સીટી દ્વારા કરવામાં માહિતી આપી હતી. જેમાં વ્યવસ્થાપન, રોગ-જીવાતનું आवेत अने युद्दा युद्दा जियारखनी पर्संहगी,पियत नियंत्रख हर्च रीते हर्स्यु तेमक् अफतरा विश्वेनी विरुद्दा व्यवस्थापन, जातर जेडूतनो हुत्सन अवी गुवाजी

व्यवस्थापन, पनतुंनासङ हवा अने रसायशिङ ખાતરનાં કાર્યક્ષમ ઉપાયો भेडूत भाईओने जेतीन પાકોમાં પાણી બચાવી શકાર તેવી પદ્ધતિ ,દ્વીપ ,ટપક ,લેજર ਪਿੰਬਰ ਰੇਮਾ ਐਂਤ ਪਾਣਰੇ ਪਿੰਬਰ पद्धति अपनावे वगेरे બાબતોની ચર્ચાઓ કરવામા આવી હતી. આ શિબિટમાં બહોળી સંખ્યામાં રાજુલા તાલુકાના આસપાસના ગામના ખેડૂતો, કુંડાલીયાળા गाभना ดแก่วฟ มโคตเวฟ พอบัว ગાગાભાઈ ઠડીયા સઠીત સભ્યો ઉપસ્થિત રહ્યા હતા....

રાજુલા તાલુકાનાં ગામોમાં CSPC એવમ HDFC પરિવર્તન HDFC પરિવર્તન HDFC ભેન્કના CSR પર્લમ્ત મહાર્યકાર્ય કરાયુંકારા સહયોગથી સૌએસપીલી સંસ્થા હાય પ્રવામાં આવેલા છે. આ પ્રવૃત્તિમાં પેતી વિકાસની વિવિધ પ્રવૃત્તિ હાય પરવામાં આવેલ છે. આ પ્રવૃત્તિમાં પેતી વિકાસની પૃતૃત્તિ પરવામાં આવેલ છે. આ પ્રવૃત્તિમાં પેતી વિકાસની પૃતૃત્તિ પરેવામાં આવેલા છે. આ પ્રવૃત્તિમાં પેતી વિકાસની પૃતૃત્તિ પ્રવેશામાં અભિગમ અપનાલી શકે તે હેતુંથી એ ભિગમ હત્યા કરેલા અભિગમ હતાલા કરેલા હતાના હતાના હતાના સ્ત્રાના સ્ત્રાન સ્ત્રાન સ્ત્રાન સ્ત્રાન સ્ત્રાના સ્ત્રાન સ્ત્રાના સ્ત્રાન સ્ત્રાન સ્ત્ર

સીએસપીસી સંસ્થા દ્વારા રાજુલા તાલુકાના ખેડૂતોએ સદગુરુ ફાઉન્ડેશન દાહોદ પ્રેરણા પ્રવાસ કર્યો







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CSPC

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