



# 2019-20

## ANNUAL REPORT



**CSPC**

AN INITIATIVE OF TATA TRUSTS, AKRSP(I) AND ACF





A group of women and a child are shown in traditional Indian attire. The women are wearing colorful saris and headscarves. A young child in an orange hoodie is in the foreground, looking down. The background is a plain, light-colored wall.

## ABOUT US

Coastal Salinity Prevention Cell (CSPC) works in the coastal regions to evolve sustainable solutions for addressing the multifaceted challenges of salinity ingress.

CSPC works as a multi-collaborative impact platform by forging linkages between CSOs, government and academic institutions to catalyse efforts by ensuring synergy of efforts.

The organisation facilitates knowledge management, implementation of large-scale development projects and undertakes policy advocacy for effective policies on mitigation and adaptation of salinity.



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“Active on-ground synergies multiply efforts thereby maximizing impact.”

Ingress of salinity inland has affected more than 2000 villages of Coastal Gujarat and climate change events coupled with anthropological development activities are intensifying the problem.

Coastal Salinity Prevention Cell (CSPC) is committed to improve the lives and livelihood of coastal communities of Gujarat since 2005.

The agriculture programme of the organisation reaches out to over 40,000 farmers. In 2019, various innovative interventions such as installation of water and moisture meters to schedule irrigation, promotion of high yielding groundnut variety (GG32), laser irrigation, green mulching and plastic mulching were implemented across program locations.

The animal husbandry programme of the organisation is focussed upon promotion of correct feeding and breeding practices. Azolla was promoted on a large scale during the year as an alternate feed to reduce the concentration and prevalence of the detrimental cotton seed cake.

Fracturing-led recharge strategy emerged as effective method to increase capacity of aquifers and thereby increase water availability to communities.

The education programme entered in its second phase which will be focussed upon capacity building of teachers and headmasters and developing a strong community connect to provide children with an enabling environment to gain knowledge.

#### **APOORVA OZA**

Chairman  
Coastal Salinity Prevention Cell

## **MESSAGE** **FROM THE CHAIRMAN**





## **VISION**

Evolve sustainable approaches for prevention and mitigation of salinity ingress, whilst enhancing livelihood resilience of communities affected by salinity 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 programs and policies to address the problems being faced by coastal communities.



## **APPROACH**

CSPC has a multipronged approach to evolve sustainable solutions to effectively deal with multifaceted challenges of salinity ingress. The salient pillars for 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 programmes, strengthen community Institutions to sustain the interventions, and liaising with government for policy advocacy on sea water intrusion.



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# PARTNERS IN DEVELOPMENT

## FUNDING PARTNERS

Tata Trusts

Better Cotton Initiative

Gujarat Ecology  
Commission

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NABARD

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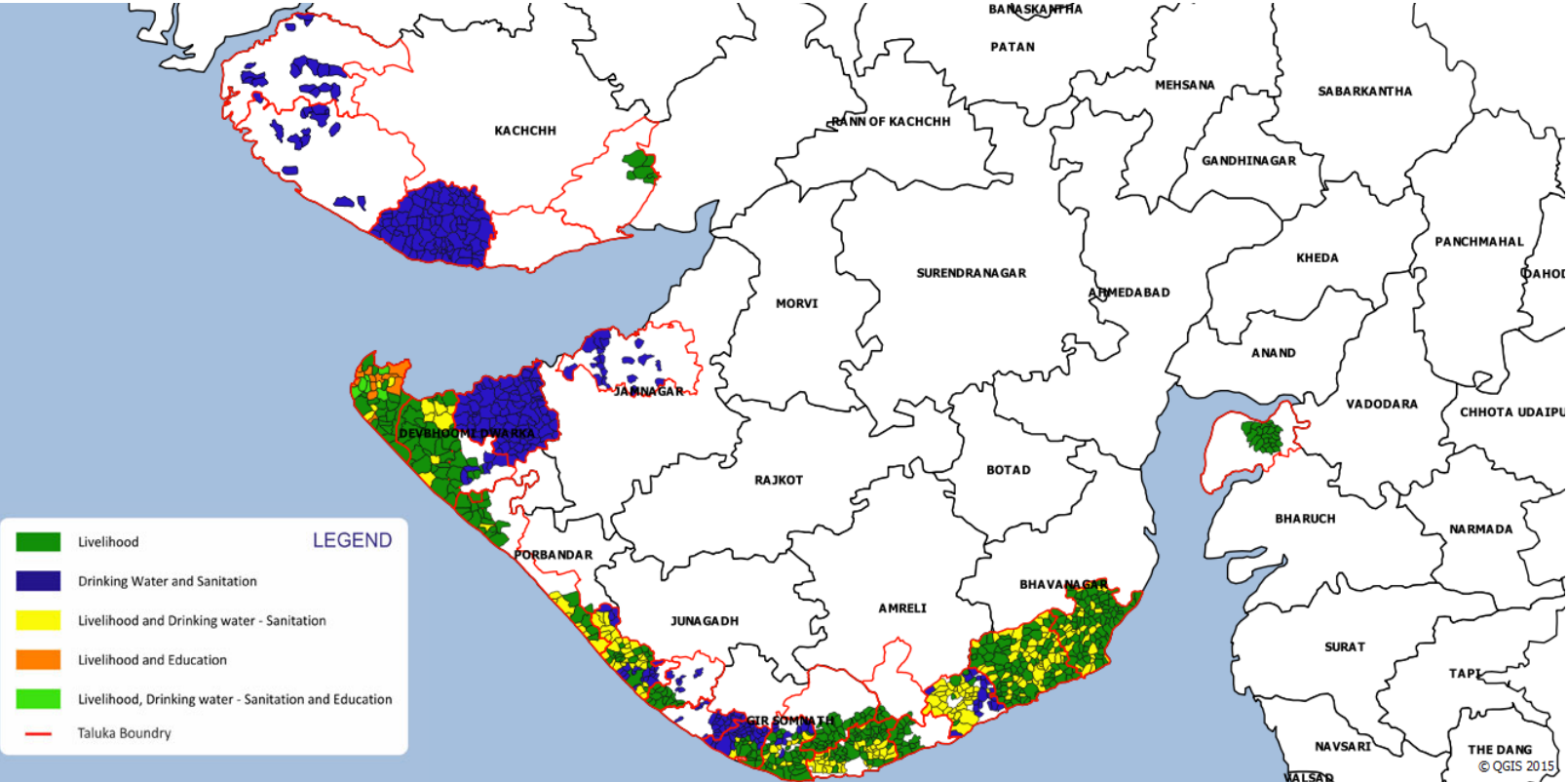
Shikshan ane Samaj  
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Arid Communities and  
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Tata Chemicals Society for  
Rural Development

Triveni Kalyan Foundation

## GEOGRAPHY AND REACH



1,26,000  
households



1064 villages



09 districts



# OUR PROGRAMMES

## SUSTAINABLE AGRICULTURE PRACTICES



40K Farmers  
10 FPOs  
10-20% productivity increased

## WATER RESOURCE MANAGEMENT



36 Farm ponds  
05 Recharge structure  
1859 Hectares microirrigation  
436 Moisture meters installed

## DAIRY DEVELOPMENT



2660 Cattle Rearers  
1193 Azola ponds  
49 Silage units

## WATER, SANITATION AND HYGIENE



15K females through MHM  
24K Children through school hygiene

## EDUCATION



97 Government primary schools of Devbhumi Dwarka district



# SUSTAINABLE AGRICULTURE

The farming communities living in coastal Gujarat operate in an uncertain and vulnerable environment affected by shortage of water, increasing salinity and climate change impact.

CSPC strives hard to address these issues by promoting sustainable agriculture approaches such as drought and salinity resilient crops, micro irrigation systems, soil health management and disease and pest management, etc.

**40K**  
**FARMERS**  
**REACHED**





The lives and livelihood of most rural Indians living in villages are dependent upon Rainfed Agriculture. The returns from agriculture today are more uncertain than ever due to its resource intensive nature, uncertain monsoon dependent harvests and increasing climate variability.

According to Global Climate Risk Index 2020 compiled by Germanwatch, India has been ranked as the 5th most vulnerable country to climate change. Most of the damage in the recent years has been related to the frequent flood and droughts which engulf more than half the nation during the monsoons.

Practicing agriculture in Coastal Gujarat is fraught with even more difficulties. The region falls under arid and dry ecological zone and is bereft of any large perennial water bodies. The length of the growing season is also less, between 90-120 days (The number of days when the moisture level is half the required level). This is a direct consequence of high evapotranspiration rate due to proximity to the sea. The region receives low to medium rainfall and has historically been water stressed.

Most farmers rely on groundwater sources to meet their irrigation needs. Over the last few decades this has led to overexploitation of the groundwater resources, thereby making the land and water resources susceptible to saline water seepage. Increasing salinity over the last 30-40 years has affected agricultural productivity drastically. Increased frequency of extreme weather events due to climate change are further threatening agricultural-based livelihood in an already difficult ago-ecological zone which is affected by salinity.

Groundnut and cotton are the most prominent crops of the region, however, recent years have seen exponential growth of area under the cotton crop. Cotton is a resource-intensive crop and requires high chemical fertilizer and pesticide usage along with high water demand.

Onion and Wheat are grown during Rabi season. Another feature of agriculture in the region is mono-cropping system which makes the farmer prone to high risk of loss in case of crop failure. The limited presence of university supported institutions inhibits the dissemination of crucial technical knowledge at village level.

Given the current scenario, the efforts of CSPC are aimed at enhancing productivity, reducing input costs, building salinity resilience, bringing water efficiency, soil health management, and promoting integrated pest management through development of capacities of farmers.

## **ENHANCING PRODUCTIVITY**

### **DETOPPING IN COTTON CROP**

When the crop of cotton is 75-80 days old, detopping is done of the main stem to promote branching and to increase the number of cotton balls per plant. This practise was promoted with 8900 farmers of the programme area. The resultant increase in production was to the tune of 10% based on preliminary findings.

### **TRANSPLANTING COTTON:**

Farmers were encouraged to prepare nursery of cotton seedlings with the help of different input material. The seedlings were then transplanted into the field.

The initial pilot was undertaken with a small number of farmers on 5 acres of land. The production increased by upto 15% using the transplantation approach.

### INTERCROPPING WITH PULSES

To diversify income and to reduce risks associated with monocropping, intercropping of pulses has been promoted in cotton and groundnut crops. This technique reduces moisture losses through evaporation, reduces pest infestation and increases overall income from farm. 8035 farmers of the programme areas adopted intercropping during the year.

### PROMOTION OF GG32 VARIETY IN GROUNDNUT

During the year, a new variety of groundnut GG-32 was promoted in programme areas as the common variants used had seen infestation of collar rot, wilt and root rot in recent years.

GG-32 provided better tolerance to wilt and was less expensive than other variants. It also provided farmers with increased fodder yield to the tune of 20%. 27 farmers of the programme area planted GG-32 variety of Groundnut and received better results.

### PROMOTION OF HORTICULTURE

During the year, 697 acres of farm land owned by 620 cultivators was planted with 50,554 horticulture plants. Various interventions include; High density plantation; 100sq.mt. of land was planted with papaya, watermelon and bittergourd; Trellis and Telephonic system of vegetable production to increase yield and reduce pest incidence; and Demonstration of green peas cultivation.

Kitchen gardens were extensively promoted to bring a self-sufficiency in vegetable consumption and balancing

## FROM THE FIELD

### ACTION-ORIENTED RESEARCH

The use of scientific research to improve yields is an important mandate for CSPC. The organisation partnered with institutions such as ICRISAT (International Crops Research Institute for Semi-Arid Tropics) to introduce latest inputs and practices to benefit farmers. CSPC introduced a new variety, namely, the GG32, which has 20% higher oil content. The acceptance for this variety has been high among farmers as it also produces more biomass which supports Animal Husbandry activities. ICRISAT has also provided CSPC with two new varieties GGJ4 and GGJ5 for trial, which improve the shelf life of groundnut. Generally, it takes 10-15 years for a seed variant to come into mass circulation after all the testing and government clearances. This intervention of CSPC will significantly reduce the time lag in transmission of new innovative products.





nutrition needs of the household. 2862 households undertook Kitchen gardens in the reporting year.

### **SOLAR WIRE FENCING**

A key concern of a portion of the programme area is the crop losses due to attack of wild animals. To overcome this, solar wire fencing was promoted at a large scale during the year. 1175 hectares of farm area was brought under solar wire fencing.

### **WATER USE EFFICIENCY**

Various innovative practices were promoted during the year to optimize irrigation water usage. Along with drip and sprinkler irrigation systems; farmers were encouraged to adopt alternate furrow irrigation, laser irrigation, moisture meters, etc.

### **ALTERNATE FURROW IRRIGATION**

Either of the two adjacent furrows are alternately irrigated in consecutive watering. The water saving using this method is as high as 50%. 8004 cultivators of the programme areas adopted alternate furrow irrigation.

### **MOISTURE METER FOR SCHEDULING IRRIGATION**

These devices calculate the need of irrigation by measuring the moisture content and allow the cultivator to decide the appropriate time to irrigate the field. 436 farmers installed moisture meters in their farms during the year.

### **LASER IRRIGATION WITH RAISED BED:**

During the year, farmers were encouraged to use laser irrigation systems with raised farm beds to allow for efficiency in water use. 1524 farmers adopted micro irrigation techniques and 59 farmers adopted laser irrigation.

## **FROM THE FIELD**

### **LASER IRRIGATION, A CHEAPER DRIP**

A number of studies have shown a significant reduction in water use with the adoption of Micro irrigation systems such as Drip and sprinklers. The government promotes the use of same through subsidies to farmers. However, even after subsidy, a farmer has to contribute upto Rs 40,000 per hectare to avail the government subsidy. Many a time, onetime payment of this amount becomes cumbersome for small and marginal farmers.

Laser irrigation, is basically a pipe-based water distribution system, in which precision holes have been drilled and the water is ejected from these holes. This system is a significant water saver and the cost of the system is about 25% of the farmer contribution in drip. Significant gains have been recorded in bulb and those crops in which plant height is below three feet. Though, this system does not have the same life span as drip system, the low cost of the product, makes it immensely popular among the cash-scarce small and marginal farmers.





## SOIL HEALTH MANAGEMENT

Management of soil health is integral to productivity enhancement. Conventional agriculture infuses various chemical inputs to boost productivity, however, these inputs are also known to disturb the soil ecology.

CSPC endeavours to rejuvenate the disturbed soil ecosystem based upon principles of natural ecosystems. This is done by promotion of farm yard manure, biopesticides, regular soil testing, gypsum application, green manuring and mulching, etc.

## GYPSUM APPLICATION

Gypsum is an element which improves soil structure organically. It reduces erosion by increasing permeability. It is also known to minimise soil salinity thus bearing a crucial importance for coastal Gujarat cultivators.

298 farmers adopted gypsum application during the year.



## FARM YARD MANURE

One of the oldest methods of nourishing crops and replenishing soil nutrients; Farm Yard Manure (FYM) is the decomposed mixture of cow dung, urine of animals along with left over material from roughages or fodder fed to the cattle. It is one of the components of Integrated Nutrient Management.

4148 farmers in the programme areas developed FYM with the support of CSPC during the year. Along with in-field preparation, the organisation also provided 45,660 bags of prepared FYM to cultivators for direct use in the fields.

## GREEN MANURING AND MULCHING

Under green manuring and mulching techniques, the top soil is covered with roughly cut up green leaves to provide for moisture retention and reduce water requirement. During the year, 409 farmers adopted green manuring and mulching techniques.

### FROM THE FIELD

#### MULCH, THE FODDER FOR CROPS

Kirit Sinh Jadeja from Khakharda village in Devbhoomi Dwarka district has been practising agriculture on his 25 bigha land since the last one decade. In the past 5 years, his horticulture crop of watermelon and muskmelon had been subject to frequent pest and insect attacks, reducing his yield to less than 25%. He was willing to implement a different technique and undertook a demonstration of plastic mulching on his 0.98 acre land for watermelon and muskmelon crops. The major observations of the trail were; larger leaf and fruit size in mulched plot, fewer irrigations and fewer weeding required in the mulched plot. The mulched plot of musk melon yielded 20 quintal of produce as compared to 14 quintals of the unmulched plot.

In cotton, this operation was undertaken roughly 40-45 days after sowing completed. The green mulch used to cover the soil was taken by cutting up leaves of the intercropped pulses.

## PLASTIC MULCHING

Plastic sheets are used in a similar way to green mulching, to suppress weeds, conserve water by inhibiting evaporation and to check erosion.

During the reporting year, plastic mulch demonstration was undertaken in watermelon and muskmelon crops. The response has been positive from the pilot plots as the farmers save production cost.

Intervention and control plots were cultivated side by side to allow the farmer to self-assess the value addition if any from plastic mulching. The leaf and fruit size was large in case of the plot with plastic mulching and the soil condition was also better.





## **SOIL TESTING**

Soil testing is a regular exercise done before each farming season to understand the need of fertilizers. 1412 soil samples were tested during the year.

## **VERMIWASH**

Vermiwash is the drained water from the units of vermicompost. It is the water that passes through the vermiculture, which results in washing of the live and dead earthworms, soil microorganisms and decomposed organic matter. It is rich in dissolved nutrients. It improves nutrient status of both macro and micro nutrients of the soil.

During the year, 39 farmers used vermiwash in their fields by transferring the vermiwash drained from the vermicompost units through the medium of pipes.

## **DISEASE AND PEST MANAGEMENT**

### **WHITE GRUB MANAGEMENT**

White grub, a pest affecting the groundnut crop has accounted for 40-60% of crop losses in recent years. To effectively manage the white grub infestation, an application of Imidacloprid and Methoxy benzene Anisole was promoted. A 15 ml dose dissolved in 15 litres of water was sprayed upon the crop at an interval of 7 days. This intervention reduced the infestation by 99% and was effective in dealing with the white grub menace. 31 farmers in the programme areas implemented the mentioned solution to gain positive results.

### **LIQUID MANURING**

Application of dissolved liquid manure such as a concoction of cow urine and dung along with other pest repellent

plants (neem) known popularly as Jivamrit or Amrti pani was promoted in programme areas as an organic pest repellent. 1372 farmers of the programme areas used liquid manuring to reduce the amount of pesticides used.

## **BIO PESTICIDES**

CSPC has been relentlessly pushing for application of bio-pesticides not only as a means to reduce input cost but also to eliminate the excess chemicals sprayed on crops.

Application of Neem oil and beauveria is promoted by dissolution with water. This mixture is said to keep the insects at bay. Yellow sticky traps, which in simpler words are glue tags, are attached to poles affixed at regular intervals in the field. The insects stick to these traps and are unable to harm the crops. During the reporting year, 10,735 farmers from the programme area used at least one of the bio-pest control mechanisms explained above.

## **BUILDING AGRICULTURE VALUE CHAINS**

Farmers collectives are crucial in order to optimise incomes from farming by use of the collective strength of farmers to gain bargaining power both at the supply and demand sides of the agricultural spectrum. Collective input procurement and collective selling ensure that farmers procure inputs at lower rates than the market rates, on the one hand and on the other, sell the produce at a premium.

During the year, the 10 FPOs promoted by CSPC and partner organisations added 1220 members and collected a share capital of Rs.6,93466. The annual turnover of the FPOs was Rs.89,38,004.

The Sorath FPO promoted by a partner organisation, was provided support to establish 5 agro input centres.

JAPCO FPO prepared Trichoderma and managed sales of Beauveria bassiana. AVIRAT FPO initiated 9 entrepreneurship models and also developed a processing unit.

Mangrol Magfali Producer Company Limited (MMPCL) purchased groundnut of 51 beneficiaries at a premium price of Rs.45.5 per kg or Rs 1.25 per kg premium over market rate. MMPCL also supported farmer members under the Pradhan Mantri Fasal Bima Yojana to provide a safety net towards unexpected crop losses.

Baradi Kisan Producer Company Limited (BKPCCL) of Bhatia arranged an exposure visit for the 8 board of directors to provide outlook and ideas to increase yields and profits of members.

A new FPO was promoted in Talaja with a mandate to promote organic fertilizers and biopesticides and reduce the usage of chemical inputs in agricultural fields.

## **PROMOTING CLIMATE-RESILIENT AGRICULTURE**

A large amount of work undertaken under the Sustainable agriculture vertical of the organisation is aimed at development of climate resilience of coastal farmers.

Intercropping, promotion of vegetable and pulse crops along with the primary cotton or groundnut has been promoted on a large scale. Demonstrations of high yielding and salt tolerant varieties is undertaken by the organisation.

Green Manuring and mulching, plastic mulching, use of farm yard manure, vermiwash, bio-pesticides such as neem oil were adopted by farmers of the programme area at a large scale.

The impetus of the organisation is upon organically improving the soil health and gradual reduction of chemical-based inputs.

To promote judicious use of scarce water resources; water meters, moisture meters, micro irrigation systems, mulching were promoted. Interventions to rejuvenate and recharge water resources include construction of well-recharge structure, percolation tanks, farm ponds, fracturing led recharge of water bodies.



# WATER RESOURCE MANAGEMENT

**Efficient Water resource management is crucial to strengthening food production systems and to ensure water availability in the near future.**

**CSPC strives hard to reduce water demand on the one hand while on the other augments water supply.**

**The slew of activities undertaken include construction of check dams and water harvesting structures, farm ponds, well recharge, installation of moisture meters on beneficiary farms, and promotion of drip, sprinkler and laser irrigation systems.**



**10K  
FARMERS  
REACHED**

The world is facing a contrarian situation where on the one hand increasing climate variability is causing frequent floods while on the other, water scarcity is becoming a common phenomenon. India is fast running out of water due to over-extraction, pollution and the changing climate.

Rivers across the world are under immense anthropological pressure. Availability of fresh surface water resources in adequate quantity for food production has become a distant dream for most agricultural economies.

In India, groundwater emerged as the preferred source of water due to easy availability and low capital cost. According to an estimate by Jamilia Millia Islamia University of 2009, groundwater accounted as the chief water source for 80% of rural and 50% urban Indians. The high dependence on groundwater has led to over extraction of the resource. A direct result of this is contamination of the precious resource. According to a 2018 study published in the Journal of Environmental Science and Technology Letters; aquifers of 16 Indian states are contaminated.

The condition of coastal regions is considerably worse as they are at a higher risk to climate change events such as floods, high-intensity rains and cyclones. The communities living along the coast of Gujarat live in persistent water scarcity. The area falls under arid and dry ecological zone. The scanty rainfall received results in sub optimal recharge of groundwater resources. The lack of large freshwater resources makes matters worse.

This leads to dependence upon groundwater resources to meet irrigation and consumption needs. The unregulated extraction of groundwater means that the withdrawal rate is much more than the recharge capacity thus disturbing the hydrological balance between fresh water and sea water resources.

The indiscriminate usage of groundwater resources has resulted in intrusion of sea water into groundwater aquifers. As per Salinity Ingress Prevention Cell (SIPC), Government of Gujarat, Salinity ingress has increased at the rate of 0.5-1 km per year in Coastal Gujarat, which has turned 12% of the state's land saline and affected 1500 coastal villages.

The intrusion of sea water has adversely affected the livelihood and health outcomes of the communities of Coastal Gujarat.

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

On the supply side, water harvesting structures such as check dams, farm ponds, well recharge and percolation tanks are built. An innovative intervention undertaken in the recent years intended to increase the recharge capacity of the area is fracturing/blasting of the hard rock aquifers.

On the demand side, numerous interventions are undertaken at farm level such as installation of drip, sprinkler, laser



irrigation systems, promotion of drought resilient crops, installation of water meters and moisture meters to scientifically assess and estimate the irrigation quantum.

The major highlights of the work undertaken during the year are below:

- 13 farm ponds were constructed in Rajula and Jafarabad block
- Deepening of 11 check dams was undertaken in programme areas.
- 2 check dams were repaired which benefitted 55 farmers.
- Recharge capacity of 2 farm wells increased in programme areas.
- Fracturing-led recharge strategy increased recharge potential of Mota Ghana and Juni Chhapri villages.

## IN FOCUS

### FRACTURING-LED RECHARGE STRATEGY

Saurashtra is dependent on monsoon for agriculture, making dug wells the main source of irrigation. However, the capacity of aquifers is limited and the number of rain days have been reducing for the past few years. Aquifers have limited capacity hence the rainwater overflows from the check dams and enters the sea. Due to excess withdrawal for irrigation purposes, the aquifers get empty soon. Fracturing led recharge strategy is a technique to mitigate these source-sink gaps.

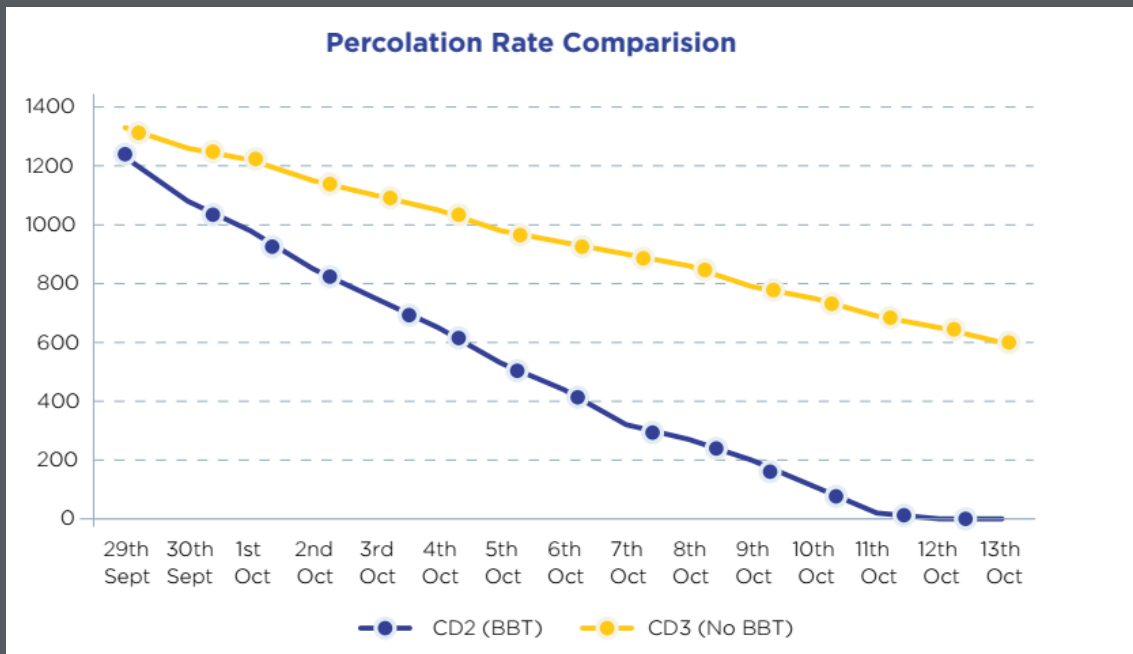
The technique required a detailed study of aquifers through secondary and primary data analysis. Rock structures are determined through remote sensing tools and validated through ground studies by subject matter experts in geology. Findings highlight the potential recharge areas benefiting the maximum number of farmers.

For the purpose, Navli river watershed of Talaja Taluka was identified benefiting 12 villages. A survey was carried out across 122 wells in 12 villages followed by tests for the interdependence of wells. The inferences from these tests were then used by geologists on the field by finding variation in resistivity of rocks.

Boring was done at 66 identified locations with potential recharge zones in Mota Ghana village of Talaja. Navli river originates from the village and augmenting aquifer capacity of this village would be beneficial for downstream villages as well. The village has multiple check dams due to which it becomes a recharge hot-spot of the region. Also, there is no canal water supply and most of the wells dry up after the Kharif season.

The bores are done in sets of 6 and explosives are filled at intervals inside the bore. The bores filled with sand and electric detonators are exploded. Fractures are thus created, after the blasting inside the basalt aquifers. During the monsoon season, a study was conducted to measure the outcome of the intervention. Daily monitoring of control and experiment check dams of the same village was done for 15 days to check the percolation rate. Bore blasting was done in check dam no. 2 (experimental CD) and not done in check dam no. 3 (Control CD).

## FRACTURING-LED RECHARGE STRATEGY: FINDINGS



The graph above clearly shows that the check dam in which bore blasting was done dried in thirteen days and the control check dam was still holding 700 mm water. Hence it can be concluded that the aquifer water holding capacity has increased after the intervention. The same was discussed with farmers after the monsoon and the farmers said that the water level in the wells is much higher compared to the last two years. The farmers thought that this year they will be able to harvest additional crops after Kharif as water was sufficient.



# ANIMAL HUSBANDRY

A photograph of several brown cows in a rural setting. Some cows are standing, while others are lying down. A large, thick tree trunk is prominent in the center. The background shows more trees and a clear sky. The ground is dry and dusty.

Animal husbandry has been a traditional livelihood activity for Coastal Gujarat and has remained a salient pillar of the rural production system. A recent problem that this livelihood has been facing is excessive use of cotton seed cake in the diet of cattle which has led to muscle deposition in reproductive organs of the cattle.

This has impacted productivity and incomes. CSPC is making concentrated efforts to promote correct feeding and breeding practices in its programme areas.

**2660  
CATTLE  
REARERS  
REACHED**



Animal husbandry has been a salient pillar of rural production systems since ancient times. A key aspect of milch cattle rearing which makes it lucrative is the liquidity it offers as opposed to agriculture which is mostly credit driven and offers returns during harvest season which are also uncertain. The daily expenses of rural households are mostly met out of the income from the sale of milk.

Cattle rearing plays a vital part in Gujarat's rural economy. Milk production contributes 22% to the state's agricultural Gross Domestic Product (GDP) and is one of the largest sectors supporting livelihood in the state.

As per Gujarat census data, out of 102 lakhs households in the state, 42.6 lakhs were engaged in Dairy and Animal husbandry sectors. 70% of rural households in coastal Gujarat practice cattle rearing as a complementary livelihood.

Enhancement of milch cattle productivity is thus directly proportional to improved quality of life of rural households. CSPC has been working with small and marginal farmers in coastal Gujarat to improve their quality of life through strengthening of livelihood options.

Animal Husbandry forms a crucial programme area of the CSPC and the organisation is making concentrated efforts to improve productivity of milch cattle in the region through promotion of correct breeding and feeding practices, back end linkages and good management practices.

## **PROMOTION OF BETTER BREEDING PRACTICES**

Groundnut and Cotton have been primary crops of the region, however, the area under cotton farming has increased disproportionately vis a vis the groundnut crop, since the past two decades due to higher salt tolerance capacity of the crop.

Due to higher area of under cotton production, cotton seed cake has emerged as an important option for cattle fodder. The high protein content in cotton seed has been linked to higher milk yields in cattle, particularly cows. (Rahman, et al., 2013).

Over the years, the changing cropping pattern and the resultant increase in milk yield due to consumption of cotton seed cake, has led to inclusion of high amount of cotton seed cake in the daily feed of cattle.

An unwelcome result of this is detrimental muscle deposition in the reproductive organs of milch cattle, which has adversely affected reproductivity of the bovine population. As per an internal study undertaken by the organisation, as much as 30% of the total milch cattle population of the region suffer from infertility.

In order to improve the reproductive health of cattle, the organisation undertook infertility camps and worked in a campaign mode to promote correct breeding and intercalving practices.



## INFERTILITY CAMPS

Infertility camps were held at village level in the programme area and were specially targeted to treat the infertility problem increasingly being faced by the bovine population of the area. While the camps were successful in identifying and treating infertility in quite a few cases, they were not able to cater to all the infertility cases in the village.

As the camps were held in the village, only the farmers whose cattle were in close proximity could bring their cattle to the camp for treatment. Most farmers, however, rear their cattle on their farms which are a good distance from the village.

This led to difficulties of commute. In order to tackle this, the organisation has decided to address the farm cases of infertility through a home-visit in return of a minimal fee.

### FROM THE FIELD

#### SUCCESSFULLY CONCEIVED

The infertility camp held at Isora village of Talaja block improved the fortunes of Govindbhai by reviving the fertility of his buffalo. His buffalo had undergone 3 unsuccessful inseminations within 6 months, an issue which been a source of constant worry and expenditure for Govind bhai. He brought his buffalo to the camp held in his village on 2nd December 2019 for treatment. The veterinary officer diagnosed mineral deficiency and imbalance of reproductive hormones as culprits for constant reproductive failures. The animal underwent hormonal therapy at the camp and was prescribed with dietary changes with inclusion of mineral mixture in daily diet. The buffalo successfully conceived via insemination two months post treatment. Strict adherence to the diet and the hormonal treatment thus yielded positive results. Govindbhai now understands the importance of a balanced diet for his cattle and advocates the same to fellow cattle rearers.

## PROMOTING BETTER INTERCALVING PRACTICES

It is a common practice among the farmers of coastal Gujarat to milk their cattle for long periods. The average milking duration of cattle in the area is between 18 to 24 months. This continuous milking affects milk production and productivity of cattle. Peak lactation occurs among cattle between 2 to 4 months after calving, and it steadily declines thereafter.

Continuous milking of cattle not only reduces milk production capacity, but also leads the cattle into silent heat, which affects their reproductive capability. In the natural world, cattle breed every 12 months. Also, from an economical viewpoint, continuous milking causes more damage than good. On the one hand the milk production decreases, on the other the feeding and maintenance expenditure remain constant thus reducing income earning capacity.



CSPC worked in a campaign mode in its programme villages to promote scientific intercalving practices which would result in increased milk production and hence improve profitability. The organisation recommended the farmers to reduce the intercalving period to 4-6 months in order to gain the maximum advantage of peak milk production.

## **PROMOTION OF BETTER FEEDING PRACTICES**

The importance of a balanced diet is known to everyone. A meal plan consisting of essential vitamins, minerals, carbohydrates, calcium and protein is essential for overall health of humans as well as animals. One of the most important reasons for low milk production among milch cattle is improper feed rationing.

According to the projections made in the report of the working group formulated for the 10th Five year plan, the country had 62% deficit of green fodder, 22% deficit in dry fodder and 64% deficit in concentrates.

## **THE AZOLLA EXPERIMENT**

Green fodder is especially scarce during summer months. CSPC promoted Azola ponds in its programme areas beginning July 2019 to provide a low-cost, protein-rich alternative for green fodder.

Azola is an aquatic herb which grows on water in a symbiotic relationship with Anabaena, a blue-green algae.

It is a fast-growing plant and can double in biomass within 3-10 days. Azola can be harvested from the 10th days onwards due to its fast-growing nature.

To grow Azola, the interested farmers were asked to construct a small pond of 4-4.5 sq.mt. area. This pond was to be filled with water. 7 mother beds of 16×3×1 ft were developed by CSPC in lead farmers land. This allowed CSPC to provide farmers with the initial culture at no cost.

CSPC supported the farmers with culture, plastic sheet and net along with technical guidance. Within three months, 1193 farmers had adopted the feed in 86 villages of Talaja. Farmers could harvest 1-2 kg of azola from the 10th days onwards. This was given to cattle as combination feed along with dry fodder.

The key factors contributing to the fast adoption of were;

- Preparation of Azola feed within a few days
- Improved yield and fat measured from milk collection centers

These easy to understand outcomes helped in nudging other farmers and catalyzed propagation of the intervention.

Also placing Azolla mother beds at strategic locations, along with standardization of all raw material required like nets, plastics etc. helped in optimizing operations.

## **IMPACT**

Comparison of milk yields of 128 milch cattle pre and post azola consumption found that average milk yield increased by 7%, milk fat increased by 5%. This improved the monthly income of cattle rearers by 12% or Rs.1333 per lactating animal.

source: internal study



## FROM THE FIELD

### AZOLA GAINS

Dhapa Rukhadbhai of Nichadi village of Talaja block is a small farmer owning 1.8 acres of land and 2 buffaloes. He had undertaken Azola cultivation on his land a few months back with the support and guidance from CSPC. He was sceptical at first but today Azolla has become an essential in his household. When he started feeding Azolla to his Jaffarabadi buffalo, he observed an increase in fat from 7 to 9% and the yield also improved by 0.5 litres per day.

He had to put in a lot of efforts to cultivate Azolla as three of his Azolla beds were damaged by stray animals. For the fourth time, he constructed the bed on an elevated surface and fenced the bed to protect it from further attacks. The reason he put in such efforts despite several failures is the apparent ease to cultivate Azolla and its cost effectiveness in comparison to other expensive cattle feed such as cotton cake. Earlier he had to purchase 100 kgs of cotton cake per month for his buffaloes which has since the azolla adoption come down to 50 kgs per month.



### SILAGE PRODUCTION

Silage is a method of preservation of fresh green fodder by cutting and storing the fodder for a period of 2-3 months. The stored fodder undergoes fermentation through the process of acidification which allows it to retain maximum nutrients. In simpler words, Silage is pickled fodder.

Silage offers a low-cost and efficient way to supply green fodder during the summer season. In 2019, the organisation provided 52 farmers with readymade Silage bags of 1000 kgs to test effectiveness and elicit interest. The experiment with readymade silage bags suggested that the silage needed to be used within 15 days of opening the bags to prevent deterioration of quality.

CSPC procured a silage making machine in order to store silage in small quantities of 80-100 kgs. 49 interested farmers developed silage units on their farms.

Most of the farmers used the silage making machine which was made available on a rental use mode to pack green fodder. These packaged silage bags were stored in underground pits for a period of 3-4 months to allow for development of silage. 28 tonne of silage was produced by farmers in programme villages. Positive response has been received from the farmers who developed in-house silage fodder.

In the coming year, the organisation intends to promote silage development in entrepreneurship mode.

This will create an income generating opportunity for interested individuals or SHGs and enable the farmer to directly access high quality local silage.

Apart for the promotion of Azolla and Silage, the organisation also spread awareness regarding the importance of balanced feeding practices, use of cattle feed concentrate, correct proportion of cotton seed cake, etc.

### **CAPACITY BUILDING OF CATTLE REARERS ON CATTLE MANAGEMENT PRACTICES**

CSPC undertakes various measures to promote better cattle management practices among dairy cattle owners. Some of the activities undertaken during the year are as follows:

- **MONTHLY MEETINGS WITH CATTLE REARERS:** The field workers of CSPC conduct monthly meetings with dairy cattle owners in villages of programme area to disseminate better cattle management practices on topics such as Animal health and Nutrition, Infertility, Balanced feeding, Government schemes, Azola and Silage production, Proper intercalving interval, Vaccination, etc. A total of 1060 cattle rearers benefitted from the knowledge extension trainings on best practices in milch cattle management.
- Broadcastings messages related to vaccination schedule and best practices to farmers of programme villages

### **MILK MARKETING**

CSPC has entered an MOU with MAAHI dairy to improve dairy reach and ensure better returns for cattle rearers. It identifies

prospective villages with good daily milk yields without institutional milk marketing facilities and informs MAAHI dairy. This has lead to establishment of 85 village-level Milk Pooling Points (MPPs).

It also identifies irregular pooling points and undertakes surveys to ascertain reasons for irregularity. This helps the organisation in identifying villages which would benefit most from the dedicated animal husbandry programme of CSPC.

### **GHCL-BAIF TIE-UP**

CSPC also undertakes another programme in 30 villages of Sutrapada block in partnership with Gujarat Heavy Chemicals Limited (GHCL) and BAIF. The key components of the programme are cattle breed improvement through promotion of Artificial Insemination (AI), Animal Nutrition through distribution of cattle feed concentrates and Cattle Health through organisation of Veterinary camps.



# WATER, SANITATION AND HYGIENE

## 15K Females reached via MHM Program



The focus of the water, sanitation and hygiene program during the year was upon ensuring that community gets quality drinking water and manages the resources economically through conducting water budgeting.

Another focus area was Menstrual Hygiene Management. A focussed and standardized module-drive program was implemented to raise awareness regarding menstrual hygiene, products and tackle the taboos and myths surrounding the topic.

Hygiene education to school children and providing adequate sanitation and drinking water infrastructure to schools formed another prominent focus area of the program.



## **DRINKING WATER**

Coastal Gujarat is particularly vulnerable to frequent bouts of drinking water shortages. The groundwater which has traditionally been the main source of drinking is becoming increasingly unsuitable for consumption due to high TDS and fluoride content, a direct result of salinity ingress in the region. The problem is further compounded due to absence of freshwater bodies.

Drinking water supply schemes have been a boon for these communities and CSPC has worked extensively in the past to connect its programme villages with drinking water supply systems. However, as most coastal villages form the tail end of the supply system, uniform availability of drinking water is not guaranteed. According to Water availability mapping undertaken by CSPC of 900 coastal villages, it was found that, more than half, 540 villages received water every 7 days or even lesser frequency in the summer months.

### **WATER BUDGETING**

Given the nature of the problem, CSPC initiated an exercise aimed at promoting judicious and economical use of water available to ensure that the shortage of summer months could be better managed.

Water Budgeting is now a regular exercise which is undertaken in programme villages to map the demand and supply of drinking water available to a particular village, thus explaining the demand-supply mismatch to the community and promotion of water saving techniques.

These techniques are aimed at reducing wastage and increasing water usage efficiency. The communities are encouraged to install micro irrigation systems in their field, collect the used household water for irrigation purposes, install water meters at farms and cultivate low-water requirement crops, etc.

### **WATER QUALITY MANAGEMENT**

Another targeted and constant intervention undertaken in programme villages is water quality testing and reporting. Consumption of water with high TDS, solubles, fluoride, chloride and nitrates has been linked with negative health outcomes and is a source of recurrent expenditure for a household.

CSPC promotes regular water testing and chlorination of water in operational villages. The organisation has over the years developed a database of 1200 villages by regular collection of water samples from drinking water sources. The organisation informs the community about the results of the seasonal water testing undertaken.

Corrective measures include promotion and training for regular chlorination of water and installation of portable water filters at strategic locations in the villages.

## MENSTRUAL HYGIENE MANAGEMENT

Menstruation continues to be shrouded in shame and entrenched under various social norms, taboos, religions beliefs and myths. India has approximately 355 million menstruating adolescent girls and women faced with multi-level socio-economic barriers to menstrual hygiene.

60.3% adolescent girls in India do not know about menstruation prior to their first period. According to NFHS-4 findings, only 12% women use sanitary napkins while most of them still use unhygienic materials such as old rags, dried leaves, newspaper, etc.

The lack of toilet access makes menstruation management more difficult for 66% of the menstruating population of India. Menstruation also has an impact on educational outcomes of girls. According to a 2015 study undertaken by Dasra, 23 million girls drop out of schools every year due to lack of access to proper menstrual hygiene management facilities.

Given this scenario, a dedicated Menstrual Hygiene Management programme was initiated in 2018 with the aim to change negative perceptions and behaviour associated with menstruation while also providing information about the range of menstruation products available, their use and safe disposal.

### KEY PROGRESS NUMBERS 2019-20

**No. of Adolescent Girls**

**6513**

**No. of Women**

**9367**

**No. of Villages**

**0185**

**No. of women and girls trained to stitch pads**

**0315**

**No. of School Teachers**

**0547**

**No. of Asha workers and Anganwadi workers**

**0664**

**Eco friendly products sold**

**0806**

**Boys and couples counselling modules**

**SUCCESSFUL PILOT**

### THE PROGRAM STRUCTURE

An individual-centric, participative model was designed wherein trainings and awareness sessions were conducted with small groups of women over a five-month period via 4-part structured module. Small groups of 25-30 girls are formulated in school and women are reached out through the medium of village-level Self Help Groups.

The programme also undertakes regular health checkups of women and adolescent girls. Another crucial aspect of the MHM programme is ensuring the access to menstrual hygiene products. Adolescent girls and women are trained to stitch cloth pads and upon the assembly of disposable pads.



# IN FOCUS

## MHM MODULES

1. PUBERTY AND MENSTRUATION  
Biological process of menstruation, the period cycle
2. PRE-MENSTRUAL SYNDROMES AND PRODUCTS  
PMS, associated discomforts, domestic cures and product options
3. MYTHS AND TABOOS  
Myth busting, origin of taboo practices and their non relevance today
4. MYTHS AND TABOOS  
Revision of modules 1 to 3, menstrual hygiene practices

Various tie-ups with pad manufacturers are undertaken to ensure timely and regular access to low-cost and environment-friendly sanitary pads.

A unique initiative of the programme is conducting couple counselling to sensitise male counterparts upon the various aspects of menstruation.



An important component of the MHM programme was a positive change in the beliefs and perception of women and adolescent girls regarding menstruation. During the year, the midline assessment of the programme was undertaken to assess the change in perception as well as shift in menstruation hygiene practices. The key results of the assessment which covered 600 adolescent girls and women are given below:

The programme has put in place strong monitoring mechanisms to assess the change in perceptions of women post the implementation of the project. As per the updated (as of March 2020) data of the monitoring tool, the following outputs were reported.

## IMPACT

- 94.7% women regarded menstruation blood as pure.
- More than 90% women did not believe that cooking food during menstruation will result in the food going stale.
- Out of the 162 school going girls surveyed, 134(82.71%) went to school during menstruation.

Source: Midline Evaluation

- Opposed to 73% of women who regarded menstruation blood as impure, now only 1% women consider it impure.
- 78% of the women feel that temples can be visited during menstruation as opposed to 8% reported during the baseline survey.
- 94% women believe that cooking is appropriate during menstruation vis a vis 56% reported earlier.

Source: Internal Study







## WATER, SANITATION AND HYGIENE FACILITIES IN SCHOOLS

120 primary government schools of Amreli, Dahod, Bhavnagar, Kutch and Devbhoomi Dwarka are covered under the WaSH in School programme which intends to create and sustain hygiene and sanitation facilities in the government schools and ensure that every student inculcates hygienic practices.

All the 120 schools covered under the program were provided sanitation and water facilities. The installation of water filter was undertaken along with construction or rejuvenation of drinking water and handwash stations.

### KEY PROGRESS NUMBERS

**No. of Primary Schools**

**No. of Behaviour Change Activities**

**No. of Children**

**120**

**480**

**24000**





# EDUCATION

## 97 Government Primary Schools

Improving learning outcomes of rural children is key to bringing them at par with their urban counterparts and enabling them to lead a better life. The education programme at CSPC which initiated in 2015 entered Phase II this year.

The focus of the second phase is upon ensuring delivery of quality education and capacity building of teachers and head masters of 97 government primary schools of Okhamandal block in Devbhumi Dwarka District.



Children in rural India suffer disproportionately due to inequitable access to quality education as compared to their urban counterparts. Most government primary schools in India face a scarcity of teachers. Many a times, due to the scarcity of subject specific teachers, the onus to teach such subjects is laid upon teachers available with the schools irrespective of their subject expertise.

According to ASER survey of Gujarat schools, 23% students of class 8 could not correctly read a paragraph in Gujarati, 65% students of class 8 could not do simple division, and 62% class 8 students couldn't read an English sentence.

These numbers reflect the inability of the education system to develop foundational literacy skills. The lack of foundational comprehension, numeracy and self-expression skills makes higher education challenging.

Such children who have accumulated years of learning deficits develop into unskilled young adults. Ultimately, they are faced with narrowed career choices and reduced future scope for economic growth.

In order to remove learning deficits and improve the level of education, the organisation initiated a dedicated education programme in the year 2015 in Okhamandal block of Devbhoomi Dwarka district.

This block was identified to work as it had lower literacy rates than the state average. The education level in the block has been traditionally low because of dominance of first-generation learners, low female literacy and poor school-community connect.

Phase I of the programme which lasted from 2015 to 2018 focussed upon two areas: Early Childhood Care and Education (ECCE) and Primary education.

Work with ICDS centres was undertaken through capacity building of Anganwadi workers and through a network of village level volunteers.

Under the primary school component, remedial classes were organised for children with learning deficits, library management trainings were undertaken and a resource center was developed at DIET Jamnagar.

In Phase I, the programme reached out to approximately 1400 children aged 3-6 years and 3200 children aged 7-14 years of age.

The key achievements of the completed phase were; 70% students developed foundational skills in literacy and numeracy and 50% students in upper primary demonstrated improvement in Maths and Science, and Children in Anganwadis demonstrated improvement in 5 school readiness indicators.

The programme has expanded its scope and reach in Phase II which was initiated in 2019. The programme has been tasked to cover 97 government primary schools of the block to improve learning capabilities of children.

The key areas of focus under the second phase are; Ensuring delivery of quality education through capacity building of Headmasters and Teachers, and Community Engagement.

As per an MOU entered with the Department of Education, Government of Gujarat; CSPC will serve as block level resource for training teachers and interface with District Primary Education Officer.

During the year, the programme team was set up by recruitment of 10 new staff. Various capacity building exercises were undertaken during the year to orient the recruited staff as well as the existing team on the newly defined components of Phase II to enable them to undertake implementation with ease.

The initiation of the more comprehensive Phase II saw a wealth of research studies which were undertaken to assess the current status of education so that proper planning and targeted interventions could be planned.

Since 2019 was the start of the new phase, more focus was upon data collection and research.

The details and findings of the studies undertaken during the year are on the next page.

## PHASE II - EDUCATION PRGORAMME

### ACADEMIC



INSTRUCTIONAL SUPPORT TO  
HEADMASTERS



IN-CLASSROOM SUPPORT TO  
TEACHERS



LIBRARY MGMT SUPPORT TO  
TEACHERS



CAPACITY BUILDING OF  
TEACHERS

### COMMUNITY ENGAGEMENT



Strengthening of School  
Management Committee



Awareness/Sensitization of  
Gram Panchayats



Engagement with parents of  
irregular students



# STUDIES UNDERTAKEN DURING 2019-20

## SCHOOL PROFILING

SCHOOL OBSERVATION  
CLASS ROOM OBSERVATION

### Rationale

To gauge the baseline learning levels of children

To assess existing teaching learning practices in schools

To understand the gap in current teaching practices

## VILLAGE PROFILING

STATUS OF EDUCATION  
SOCIO ECONOMIC CONDITION  
TUITION CLASS INFORMATION  
SCHOOL MANAGEMENT COMMITTEE  
PROFILING

### Rationale

To understand the existing status of education in village

To assess teacher availability and student attendance

To understand the relation between community and school

## SCHOOL PROFILING

The activity was undertaken for 97 schools of Okhamandal block wherein facilitators collected information on various parameters such as enrollment, infrastructure, teacher student ratio, trainings, Mid-day Meals, School Management Committees, etc.

### Head Master

- HM appointment as per seniority in schools amongst teachers. Very few schools have HM who have cleared HTAT test.
- No HM was sure of average attendance of their school, though data was uploaded every day on the central server.
- HM refused to share information with the Facilitators about their Gunstov academic Grade.

### Teaching and Pedagogy

- About 70% schools lacked grade-wise assigned teachers. In a particular school the student teacher ratio was 63:1.
- Most Schools follow Multi grade teaching due to shortage of teachers.

- Vadi Shalas (extension schools) were all single teacher schools and hence they were multi grade.
- Under the Pragyna Program two classes are required, but schools had only one class allotted to Pragyna for Grade 1 & 2.

### School Assembly

- Teachers don't participate in school assembly.
- Model Schools had some different activities for school assembly.

### Library

- Most schools lacked an allotted library period and a reading room.
- There were Cupboards full of books, but no useful children literature.

### Infrastructure

- 50 % Schools do not have enough Classrooms.
- In most school computer labs do not function.
- Schools lack proper drinking water and water tanks were not cleaned regularly.



## SCHOOL OBSERVATION

Conducted in 94 schools to understand teaching methodology, school assembly, library, etc.

## CLASSROOM OBSERVATION

Conducted in 30 schools to understand classroom processes practiced in various grades

### KEY FINDINGS

1

Most schools had a timetable but it was not strictly followed and 30 schools didn't have a time-table

In most schools, teachers didn't prepare written lesson plans

2

School assembly timings varied between 12 to 60 minutes

In 90% classes teachers didn't introduce the subject being taught

3

75 schools didn't have teachers in the ratio prescribed; i.e. 1:40

No instance of use of relevant pedagogical TLM (Teaching Learning Material) was noted

4

While 83 schools had a library cupboard filled with books, 52 schools didn't have an allotted library period

Teachers narrated answers to questions in the textbook which was taken as the end of topic or chapter.



## VILLAGE PROFILING

The profile of 42 programme villages was prepared through intensive surveys in each village.

This allowed the education programme staff to establish connect with different members, groups and officials of the village. It also helped understand the perception of community towards education and the level of participation in childrens' education.

The key findings of the Village Profiling process are below:

### Education

- Some villages had vigilant guardians who were interested in their child's education. They regularly visited the school to get a report on their child's progress.
- Most girls drop out of school post grade eight.
- Not all educated people have jobs, even educated people are engaged in farming.
- The role of parents in motivating the children to study at home was non existent.

### Economic Condition

- Mosh households had BPL cards in most villages.
- Every household irrespective of their socio-economic condition owed a motor bike, TV with cable and mobile.
- Illegal electrical lines were a common sight in the villages.

### Madassa

There are many Madrassas in Dwarka, Rupendbander, and Bet but regularised and standardised education is absent.

## Tuition Class Information

- Girls in certain villages have started tuition class/ play groups
- Private school teachers also run tuition classes

A significant activity undertaken along with Village profiling was SMC profiling of each village surveyed. The key findings are below:

## SMC PROFILING

1

Of the 96 SMCs, 40 SMC were established between 2015 to 2018 and need to be reconstituted.

2

In 20 schools, SMC meetings were not conducted. Instead the Headmaster visited SMC members to take their signatures.

3

In some schools, SMC members sign the SMC register and walk off without attending the meeting.

4

98% schools had School Development Plans made without the knowledge of the SMC members, they only signed the plan upon completion.

5

There are schools where signatories for the bank account have not been changed.

## COVID AND THEREAFTER

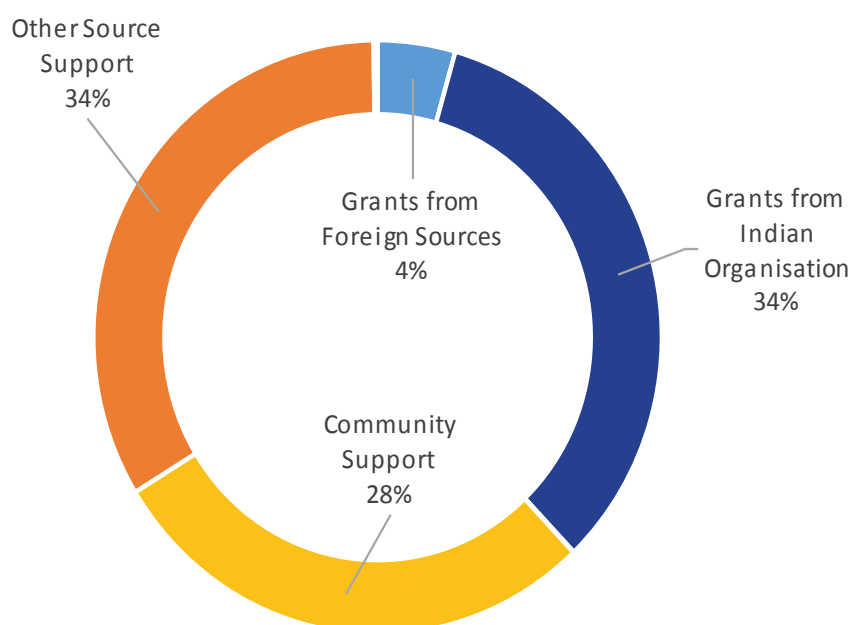
The workplan was developed based on the findings of the studies, however; the CORONA pandemic impacted the programme in a huge way.

The closing of schools meant that most of the planned activities and trainings had to be postponed. Also, even post opening, the gap in academic calendar is going to pose a huge challenge to student learning levels.

# FINANCE

## FINANCIAL UTILISATION

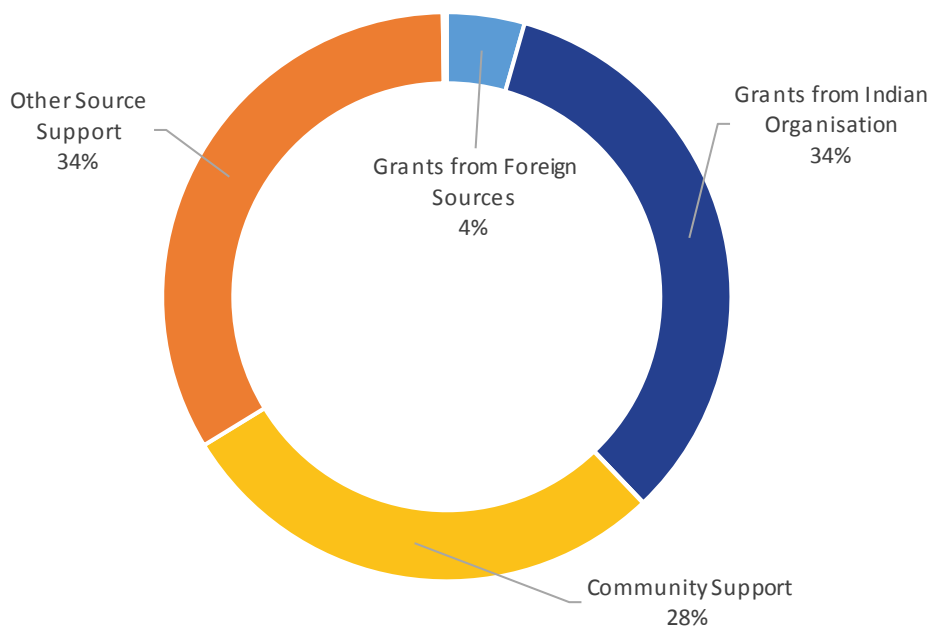
Utilisation Head	Expense (in lakhs)	Expense (%)
Programme and Grant Expenses	1670.10	90.74%
Administrative Expenses	160.20	8.70%
Capital Expenditure	10.14	0.55%
<b>Total</b>	<b>1840.44</b>	<b>100%</b>



## SOURCES OF FUNDS

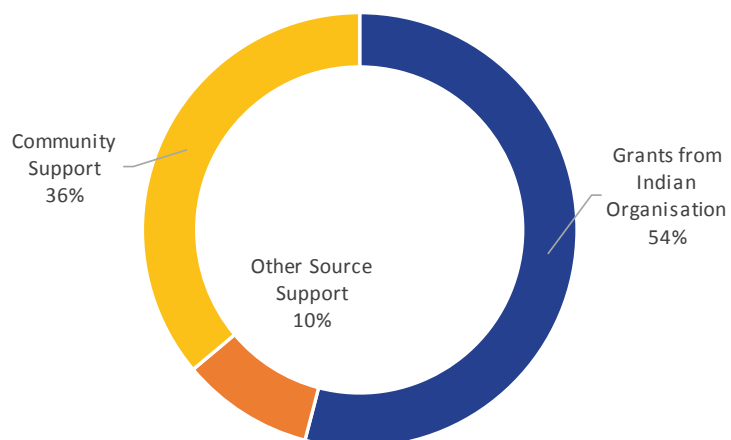
Sources of Funds	(in lakhs)	( in %)
Grants from Foreign Sources	81.38	4.42%
Grants from Indian Organisation	616.51	33.45%
Government Support	0.50	0.03%
Community Support	522.78	28.37%
Other Source Support	617.45	33.51%
Revenue Income	2.71	0.15%
Reserves Interest Income	1.53	0.08%
<b>Total</b>	<b>1,842.86</b>	<b>100%</b>





## DEVELOPMENT SUPPORT BY CSPC

Development Support by CSPC	(in lakhs)	( in %)
Grants from Indian Organisation	86.07	54.05%
Other Source Support	15.69	9.85%
Community Support	57.47	36.09%
<b>Total</b>	<b>159.23</b>	<b>100%</b>



# FINANCIAL STATEMENTS 2019-20

## BALANCE SHEET 2019-20

Coastal Salinity Prevention Cell  
Balance Sheet as at March 31, 2020

Particulars	Note No.	As at March 31, 2020 (Rs.)	As at March 31, 2019 (Rs.)
<b>I EQUITY AND LIABILITIES</b>			
<b>1 Shareholders Funds</b>			
(a) Share Capital	3	600,000	600,000
(b) Reserves and Surplus	4	2,936,061	2,694,375
		<b>3,536,061</b>	<b>3,294,375</b>
<b>2 Non Current Liabilities</b>			
(a) Other Non Current Liability	5	1,952,379	2,882,241
<b>3 Current liabilities</b>			
(a) Trade Payables		1,986,601	1,494,890
(Includes total outstanding dues of Micro and Small Enterprises Rs. Nil (31 March, 2019: Rs. Nil)			
(b) Other current liabilities	6	27,985,181	10,731,083
		<b>29,971,782</b>	<b>12,225,973</b>
<b>TOTAL</b>		<b>35,460,222</b>	<b>18,402,589</b>
<b>II ASSETS</b>			
<b>1 Non Current Assets</b>			
(a) Fixed assets			
(i) Tangible assets	7	1,976,102	2,884,492
(b) Non-current Investments	8	-	1,006,374
(c) Long Term Loans and Advances	9	1,483,752	1,789,207
		<b>3,459,854</b>	<b>5,680,073</b>
<b>2 Current Assets</b>			
(a) Short Term Loans and advances	10	1,247,091	730,567
(b) Cash and Cash Equivalents	11	30,638,103	11,851,197
(c) Other Current Assets	12	115,174	140,752
		<b>32,000,368</b>	<b>12,722,516</b>
<b>TOTAL</b>		<b>35,460,222</b>	<b>18,402,589</b>

See accompanying notes forming part of the financial statements

1-24

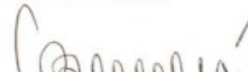
In terms of our report attached.

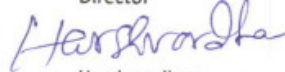
For Deloitte Haskins & Sells LLP  
Chartered Accountants

  
Joe Pretto  
Partner

For and on behalf of the Board of Directors

  
Apoorva Oza  
Chairman

  
Chandrakant Kumbhani  
Director

  
Harshvardhan  
Chief Executive Officer

Mumbai, 24 September, 2020



Ahmedabad, 24 September, 2020



# INCOME STATEMENT 2019-20

Coastal Salinity Prevention Cell

Income and Expenditure Account for the year ended March 31, 2020

Particulars	Note No.	For the year ended March 31, 2020 (Rs.)	For the year ended March 31, 2019 (Rs.)
<b>I INCOME</b>			
(a) Grant income and Donations	13	69,839,204	95,700,491
(b) Other income	14	423,747	686,956
<b>Total income</b>		<b>70,262,951</b>	<b>96,387,447</b>
<b>II EXPENSES</b>			
(a) Grant Expenses and Programme Expenses	15	54,001,168	79,554,501
(b) Employee Benefit Expenses	16	9,955,965	10,152,526
(c) Other Expenses	17	6,050,604	5,999,764
(d) Depreciation	7	13,528	79
<b>Total expenses</b>		<b>70,021,265</b>	<b>95,706,876</b>
<b>III Excess of Income over Expenditure before tax</b>		<b>241,686</b>	<b>680,573</b>
<b>Tax expense</b>			
<b>Excess of Income over Expenditure for the year</b>		<b>241,686</b>	<b>680,573</b>

See accompanying notes forming part of the financial statements

1-24

In terms of our report attached.

For Deloitte Haskins & Sells LLP

Chartered Accountants

*Joe Pretto*

Joe Pretto  
Partner

For and on behalf of the Board of Directors

*Apoorva Oza*

Apoorva Oza  
Chairman

*Chandrakant Kumbhani*

Chandrakant Kumbhani  
Director

*Harshvardhan*

Harshvardhan  
Chief Executive Officer

Mumbai, 24 September, 2020

Ahmedabad, 24 September, 2020



# REACH US

## HEAD OFFICE

Coastal Salinity Prevention Cell  
3, Sanidhya Bungalows,  
Opp. Land mark Hotel,  
Nr. Ashok Vatika BRTS Stand,  
Amli-Bopal Road, Off. S.G. Road  
Ahmedaabad – 380058  
Phone No:- 079- 26936406 | Website: [www.cspc.org.in](http://www.cspc.org.in) |  
Email at [info@cspc.org.in](mailto:info@cspc.org.in)

## CLUSTER OFFICES

### MITHAPUR

Tata Chemicals Hostel, Near Okhai Handicrafts  
Mithapur

### RAJULA

CSPC, Nr. Huva College, Dharnath Society -2  
Rajula, Amreli

### TALAJA

CSPC, above Maharana Medical Store  
Nr. Dr Vaghela's Clinic, Rampara Road Talaja, Bhavnagar

### MANDVI

CSPC, H. No. 86, Nilkanth nagar,  
Mandvi, Kacchh

### WAGHODIYA

House No.4, Gajanand Society,  
Mododhar Road, Madodhar  
Waghodiya, Vadodara 391760



CSPC Coastal Salinity  
Prevention Cell



CSPC\_Guj



CSPC\_Guj



Coastal Salinity  
Prevention Cell Gujarat







# 2019-20

## ANNUAL REPORT



# CSPC

AN INITIATIVE OF TATA TRUSTS, AKRSP(I) AND ACF