



COASTAL SALINITY PREVENTION CELL
Kharash Vistarotthan Yojana

ANNUAL PROGRESS UPDATE

Coastal Salinity Prevention Cell



2010-2011

Background:

Coastal Salinity Prevention Cell (CSPC) a joint initiative of Aga Khan Rural Support Programme (India), Ambuja Cement Foundation and Sir Ratan Tata Trust has been created as an institution visualized as a fulcrum to develop and strengthen various initiatives of government and civil society organizations, aimed at addressing the issue of salinity, thereby enhancing the quality of life of the coastal communities of the State. CSPC was formally registered as a separate legal entity on Seventh of April 2008, and has been incorporated under Section 25 of the Companies Act 1956.

CSPC, with the financial support of Sir Ratan Tata Trust, has been implementing its mandated activities aimed at (i) developing itself as the knowledge bank on issues related to coastal salinity in Gujarat; (ii) networking and developing linkages with the government and other agencies; (iii) Idea incubation and piloting of area specific innovations and community approaches for addressing salinity related issues; CSPC also functions as the nodal agency for *Kharash Vistarotthan Yojana (KVY)*, The Sir Ratan Tata Trust supported initiative for Gujarat Coastal Salinity Prevention and Mitigation in coastal villages of Gujarat.

CSPC has also put in efforts for idea incubation by implementing small pilot programmes to assess viability of various technological options, viz. Farm Pond Model, Aquaculture in Saline Areas, Salinity Tolerant Horticulture Crops, Dew Harvesting Systems, etc. Further, CSPC has developed a detailed data base (primary and secondary) of all 1,200 salinity affected villages across the coastal areas of Saurashtra and Kutch. This would help understand status of salinity, its impact on livelihood and would become a useful baseline for planning area specific interventions. Working in close collaboration with Civil Society Institutions and government departments, CSPC is also implementing a model for Participatory Irrigation Management in command areas of salinity ingress prevention structures. CSPC has also developed collaborations with WASMO, a state level agency facilitating the implementation of a comprehensive drinking water security programme in coastal villages of Jaffrabad Taluka of Amreli district. Cumulatively, the various activities under KVY programme are being implemented in 140 salinity affected coastal villages of Saurashtra and Kutch and new programme interventions are being identified for scaling up of the activities, to at least 200 additional salinity affected problem villages.

Projects carried out during the reporting period

1. Progress of Physical Activities

a) Coastal Area Development Programme – Consultations for Sanitation

CSPC, in collaboration with WASMO launched a special initiative – Coastal Areas Drinking Water and Sanitation Programme. While acknowledging the

need to have a special focus on the drinking water issues in the coastal salinity affected villages of Gujarat, especially in Saurashtra region, WASMO has launched a special initiative – Coastal Areas Drinking Water programme in different coastal districts. The plan proposed to actively engage the services and involvement of the local partner agencies, existing Implementing Support Agencies and communities in developing detailed village action plans for addressing the drinking water security in the quality affected coastal villages. Accordingly, WASMO has short listed 21 blocks in 9 coastal districts and 12 facilitating agencies to help in the planning processes, based on which funds would be leveraged from the on-going water supply programme to finance the implementation of these village action plans.

CADP is a comprehensive project of ensuring both drinking water and safe sanitation, wherein WASMO had developed set guidelines for implementing drinking water component. And CSPC with the help of external resource person Shri Mayank Joshi is in process of developing guideline and model to implement sanitation component under CADP. The brief details of the project activities carried out are listed below.

- A study on sanitation status at village level was carried out during April to July, 2009.
- The module for training of trainers were prepared for ISA staff orientation during April to June, 2009
- Workshop on “Approaches to address safe sanitation issues in the villages of coastal areas” was organized on July 24, 2009.

The workshop was organized to share the survey findings and sanitation consultation for acquiring feedback and plan strategies for finalizing model to implement sanitation component under CADP. The participants comprised of representatives from selected Implementing Support Agencies, respective DWSC / CMSU, WASMO and CSPC.

Following, the workshop on sanitation – a comprehensive sanitation guideline has been developed. The highlights of the guideline are as mentioned below:

- The sanitation component will cover 150 villages with an objective of achieving Open Defecation Free (ODF) village status in two years.
- Target approximately 25,000-30,000 individual units.
- Establish central mechanism for leveraging Funds from TSC, Corporate and other relevant sources.
- Project implementation by ISA/Pani Samiti or separate Village Sanitation Committees at village level.

- Two options can be made available for the implementing agencies. Capital cost support and revolving funds support.
- In case of the revolving fund model strong SHG, dairy co-operative will be considered for providing revolving funds.
- Innovation in terms of technologies and public campaign can be done under the project.
- ToT on specific modules to the members of ISA, SHG.
- Linkages with other village functionaries for sanitation campaign.

b) Collaboration with SAATH for Demonstration initiative for RRWHS construction & drip promotion in horticulture / vegetable plots in Khara Vistaar of Maliya Taluka of Rajkot District

- Status and duration : Completed in August,2009
- Location : Maliya taluka, Rajkot
- Project cost : Rs.26,89,000 (CSPC contribution Rs.6,62,000, Rs. 2,06,000, other :Rs.9.91,000, Govt. Rs.8,20,000 (for check dam)
- CSPC support : (RRWHS) based drip promotion in horticulture / vegetable plots (CSPC support), Reclamation bund
- Partner Org. : SAATH charitable Trust, Maliya Unit
- Beneficiaries No. : 10 families -2 villages
- Project details: To demonstrate the livelihood options within saline areas among small land holders, leveraging Govt. resources for water harvesting, advocacy for a livelihood resilience model in fully saline

SAATH has been working with 15 villages in the Maliya block of Rajkot district. These villages are affected by salinity ingress to a greater extent. So to demonstrate the livelihood options within saline areas, CSPC in collaboration with SAATH initiated a project for RRWHS construction & drip promotion in horticulture/vegetable plots in Khara Vistaar of Maliya Taluka of Rajkot district. Ten RRWH structures were constructed, and ten RRWHS bases drip system were installed. Families contributed in this initiative in the form of digging a pit for the underground tank, supporting in labour component, arranging for water requirement during construction, storing & protecting raw materials like bricks, cement, fitting drip irrigation sets in the plots, buying & planting saplings, providing manure, etc. Plantations of brinjal, chillies, tomatoes, turmeric, lime, custard apple, pomegranate, mango, papaya, guava, banana, and flowers like rose and okra were made. Successful results were obtained. Families evinced that adoption of drip irrigation crop gets the right amount of water, sunlight and the harvest is also better. Due to RRWHS they would not have to depend on the monsoon, but would be able to plant & irrigate during winters and summers also.

The families stated that now they can grow vegetables and make profits in the summers. As the prices of vegetables increase, the offseason prices do help make a tidy profit for the families.

This summer, the families have planted “cluster bean (guvar)” for the first time as a summer crop. And the results have been encouraging. The family has sold the vegetables and earned an income of Rs.250 to Rs. 300 every alternate day. This experiment has also been extended to chillies and tomatoes but due to some disease in the crop, there is minor success.

Water harvesting structure was also planned under the project. Due to unavailability of technical staff and request from SAATH, CSPC provided technical support for site identification, surveying, designing and preparation of plan estimate of the water harvesting structure. The structure has been constructed. There are two components to the WHS – the pukka structure of 12 m length and left right side earthen bund of 400 m length. The capacity of storing water is 2.5 mcft further leading to support 10 farmers having 60 bighas of land. There is still a scope to deepen the structure for creating additional water storage. The project was completed in the month of July 2009.

c) Aquaculture

- Status and duration: Ongoing- till August, 2010.
- Location : 10 villages of Mahuva & Rajula taluka
- Project cost: Rs.36.38 lakhs; CSPC share : Rs.17.51 lakhs, remaining from beneficiaries, Govt. & Utthan
- CSPC support: towards equipments, technical trainings, administration, Capital cost of Pit digging
- Partner Org. : MSVS + Utthan + CSPC consultant
- Beneficiaries No. : 202
- Project details: Scaling up of pilot project in 2 villages. Artificial rearing of lobsters and crabs.
- Progress details: Identification of 14 groups and sites for pit digging, orientation training, identification of consultants, Liaison with fisheries dept. for cage.
- Expected Benefits: Income of Rs.11,300/family against production cost of app.Rs.5000/year

Based on the experiences and the learnings from the pilot phase, CSPC in collaboration with UTTHAN and the fishing communities has developed a detailed project for scaling up of the project to a larger number of villages. The proposed project aims to provide additional income generating opportunity for

the poor coastal communities through aqua/mariculture, i.e. cultivable marine species.

To access the possibilities of up scaling the activity, CSPC has hired a consultant, Mr. Kamlesh Fofandi for providing technical and marketing support. A preliminary visit to the villages of Bhavnagar, Amreli and Rajkot districts has been organized by Mr. Fofandi. Lobsters are one of the highly priced crustaceans in India and are in great demand as a delicacy in the internal market and as a foreign exchange earner in the export market. It is observed that lobster fattening activity is found feasible in the visited villages.

CSPC in partnership with Matsyagandha Sarvangi Vikas Sanstha (MSVS) has initiated a project on "Scaling up of mariculture pilots in coastal areas of Bhavnagar and Amreli districts". Matsyagandha Sarvangi Vikas Sanstha (MSVS) is the implementing support agency established under the laws of Gujarat and registered as a Society under Societies Registration Act, 1860 and Bombay (Public) Charitable Act, 1950 at Registrar office of Bhavnagar. The main aim of the project is to provide additional income generating opportunity for the poor coastal communities through aqua/mariculture. The project is being implemented with fisheries group across 13 coastal villages. 15 fishermen groups with total 281 members have been formed in the two districts.

- Training has been organized on pit preparation, plan preparation, record keeping, handling treatment & life cycle of Mari-cutler species. The training emphasized on a clear understanding of site selection for pit method, the design of pit, their maintenance, gain knowledge of water & temperature, gain facts of the risk factor in pit culture, etc. Record keeping included
- Various meetings are conducted with the fishermen groups for different activities like the completion of license process, monitoring and supervision of pit progress, aware about FFDA's schemes, record keeping for the daily fish catch, etc.
- MSVS board meeting (one) have also been organized wherein responsibilities of all trustees were discussed, review the progress of the project, etc.
- All the 375 fattening pits have been prepared, and payment of all the pits except 5 pits has been done. All the 51 stocking pits are ready.
- Fish catch of Rs. 884500 was found by all the groups during the quarter. The groups caught fish of Rs. 884500.
- The groups together have made savings of Rs. 175,840, out of which internal landing of Rs. 60,100 is also done.

d) Piloting Agriculture Interventions in SIPC command area

- Status and duration : Completed in November-09
- Location : Una taluka, Junagadh and Kalyanpur taluka, Jamnagar
- Project cost : Rs. 5.10 lakhs; CSPC share : Rs. 5.10
- CSPC support : Agriculture diversification, Trainings and administrative cost
- Partner Org. : Ravi foundation/and Kalyani trust
- Beneficiaries No. : 30 & 57 farmers having land in command area of Khada & Bhogat Bandhara
- Project details: The project purpose is to demonstrate strengthening of farming community livelihood through agriculture diversification in coastal areas, demonstration of high yielding crops, low inputs, and promotion of animal husbandry with agriculture.

Salinity Ingress Prevention Cell of the water resources ministry of GoG has constructed tidal regulator structures and bandhara to prevent sea water ingress and collect sweet water in the bandhara for future use. These bandhara have a good amount of stored water that can be used for irrigation in the nearby cropped areas. The stored water in the bandhara can be used for life-saving irrigation of the crop.

In recognition of the seriousness of the erratic behaviour of precipitation and natural calamities like drought bringing instability to our agrarian economy, it is considered essential to adopt location specific agronomic measures to overcome the water stress condition and sustain the agriculture as livelihood options. In this context, the development of command area of bandhara with people's participation may help to develop a strategy to overcome the vagaries of monsoon to a great extent.

CSPC has planned to pilot agriculture intervention programme around two command areas of Bandhara to enhance the agriculture productivity and profitability, and enhance the water use efficiency and water productivity of bandhara.

- i. Piloting agriculture interventions in the command area of Khada Bandhara in Khajudra village of Una taluka in collaboration with Ravi Foundation
 - Total 1404 plants have been planted by 33 farmers. The saplings include 1010 coconut plants, 64 mango plants and 330 sapota plants. Plants are in good condition and regular water is done. Production will start from 3rd or 4th year, generating income to the farmers.

- 20 vermi compost units have been established in the project area.
 - Crop demonstration of hybrid castor has been done by 10 farmers. The demonstrations are sole cropping as well as intercropping with cotton crop. The crop stand in the field is good, and results will be seen by the end of rabi season.
 - Two cattle camps have been organized by the foundation. Total 244 cattle are treated for different diseases. 48 farm families have benefited from deworming syrup and anti-tick medicines.
- ii. Piloting agriculture interventions in the command area of Bhogat Bandhara in Bhogaat village of Kalyanpur taluka in collaboration with Kalyani Trust
- Total 656 plants have been planted by 9 farmers. The saplings include 417 coconut plants, 100 sapota plants, 70 guava plants, 19 lemon plants and 50 date palm plants.
 - Two cattle camps have been organized by Kalyani Trust. Total 2693 animals are treated.
- e) **Fighting Salinity while Fighting Poverty – Ecology development and land reclamation activities through NREGS**

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| <ul style="list-style-type: none">▪ Partner organization: VIKAS▪ Location : 40 villages Jambusar, Amod and Vagra taluka, Bharuch▪ Project cost : : Rs.1.21 crore CSPC `share Rs.5.25 lakh▪ CSPC support : NREGA activity planning in 16 villages, Orientation & equip 40 volunteers with NREGA processes and Right to Information, technical supervision of NREGA works in project villages, awareness meetings, co-ordination with district authority, HR & administration cost▪ Beneficiaries No.: 4500 land less and small saline agriculture land holders▪ Project details: The project envisage to create a model role of NREGA in salinity reduction and planning processes; generate awareness among people seeking wage employment under NREGA, create a local support system to assess the status, innovative works such as mangrove plantation under NREGA |
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CSPC in collaboration with VIKAS has initiated a project on “Fighting Salinity while Fighting Poverty – Ecology development and land reclamation activities through NREGA”. The project focuses on agriculture labourers, small and marginal farmers belonging to schedule tribes living in coastal talukas of Bharuch district. Major objective of the project is to combine the process of regeneration of natural resources with economic development of the poor. VIKAS has proposed for staff administration and capacity building budget from

CSPC. Field visit to the project villages has been undertaken and VIKAS has been requested to revise the project proposal and take further action.

After getting a comment from the chairman, it has been decided that a pilot project should be undertaken for getting experience and learning from National Rural Employment Guarantee Scheme (NREGS) and develop strategy in future considering the experiences. CSPC has entered into an agreement with VIKAS for the project.

1. The land development activities with people having "SATHANI" land has been initiated in Jambusar, Amod and Vagra talukas. The activities like land clearing and leveling, border bund was undertaken under NREGA. As a part of water harvesting, construction of farm pond was also taken up. Development of village action plan of 12 villages is in process, wherein village action plan of 5 villages is ready.
2. Facilitated process of issuing 341 job cards through application filling, coordination with panchayat, encourage D. A. for planning of work, etc. in all the three talukas.
3. VIKAS facilitated in applying for employment for 70 persons of Jambusar and Amod talukas.
4. Regular meetings have been organized in the villages in all the three talukas.
5. Awareness regarding NREGA was created in 43 villages through gram sabha, parents meeting, falia meeting, etc. People were encouraged to enjoy the benefits of the scheme.

f) Development of Course material

As part of the initiative CSPC has engaged the services of two resource person/agencies namely:

i. Developing a detailed handbook on the agricultural aspects

The assignment of drafting, editing and proof reading the handbook on Salinity Management in Coastal areas of Saurashtra & Kutch have been outsourced to Dr. G. G. Rao, CSSSRI Bharuch. A draft copy of the book has been submitted to CSPC. The chapters include natural resources, physiography of Gujarat state, soil and water conservation measures, agricultural salinity management, reclamation technology for sodic and saline-sodic soils, agro-forestry of salt-affected soils, ways and means to improve crop productivity in coastal area, recommended/improved technologies for coastal tracts of Gujarat for improving the crop productivity, general recommendations for improving agriculture in coastal areas, bio agents/ bio pesticides suggested for different crops in

Gujarat, diagnosis of soil and water samples, water quality issues. With minor changes the hand book would be finalized by the end of May, 2010.

ii. Developing a hand book on the geo-hydrological aspects of coastal Saurashtra and Gujarat.

The draft of the handbook has been completed and submitted to CSPC. The content of the book is classified into three major zones according to the geography of the area. The major zones classified are region from Maliya to Okha, Okha to Diu and from Diu to Bhavnagar. The content covered in the handbook are geomorphic characterization, geology, lithology, geo-hydrology, salinity in context with Saurashtra and Kutch, groundwater quality, recharge potential zones and decision-making tools for water resource planning. The handbook would be finalized by May, 2010 end.

2. Knowledge Management and Networking Initiatives

a) The Research study on “Health Impacts of Poor water quality along coastal areas of Gujarat: State-level assessment, policy implications and development of an action plan.”

Impact of poor water quality on human and environmental condition is a major health problem of current times. A recent study conducted in some villages of Junagadh district of Gujarat showed the huge impact of poor water quality (high Salinity and Calcium contents) on high incidences of Kidney stones in those areas. The overall extent of this problem across the state’s long coastline, health risks due to consumption of poor water quality, interventions under rural health programs and need for policy changes are some of the question demanding the answers to address the problem.

The study aimed at detailing the crucial question of the magnitude of the health risks from poor quality water along the coastal salinity affected villages of Saurashtra and Kutch.

The study report has been submitted to CSPC. (Refer Annexure 1 for findings)
The activities to be completed are as follows:

- i. Workshop with doctors as part of opinion consultation for attribution of diseases to salinity
- ii. Project ending dissemination workshop

b) *Kharash Samvad* – quarterly news letter

CSPC has initiated steps to re-launch the quarterly news letter “*Kharash Samvad*”. The new edition was published from October 2008. The re-launch of the news letter is with the prime objective of reviving the print forum for greater information exchange among all the stakeholders as well as to share experiences and innovative interventions in the context of salinity mitigation across the coastal villages of Gujarat. Over a period of time, CSPC also visualizes “*Kharash Samvad*” as an independent forum for sounding of ideas, views and concerns of the communities affected by salinity. CSPC has entered into an agreement with a media support group – CHARKHA, Ahmedabad for content and editorial support. CSPC has published two issues in the year.

c) Upgrading CSPC website

Website as a tool for information sharing and dissemination is also one of the important link in the overall knowledge management strategy at CSPC. The website has been redesigned in terms of the design and content. The details regarding the organization, its projects, partners and other activities carried out are incorporated in the website.

d) Socio Economic Impact Assessment Study of the Salinity Prevention Structures of Saurashtra Region

CSPC, in collaboration with Salinity Control Division, Bhavnagar has initiated a study on “Socio Economic Impact Assessment Study of the Salinity Prevention Structures of Saurashtra Region”. The coastal areas in the Saurashtra region of Gujarat have very fragile resource base that affects the agricultural and other activities. The basic problem that concerns water in coastal areas is that due to sea water ingress and migration of seawater landwards, whereby the sweet water aquifers is turning saline. This phenomenon also causes reduction in the availability of quality drinking water as well as irrigation water. The Government of Gujarat, through the Salinity Control Division, Bhavnagar has invested in building structures like tidal regulators, bandharas, check dams, spreading channels, reservoir for recharging groundwater and controlling salinity thereby improving water availability and water quality of coastal aquifers. The proposed study will try to analyze in detail the socio economic impact of various initiatives carried out by the department in association with the communities and the impacts that it has in addressing the problems related to sea water ingress, the various options of water harnessing adopted as part of the initiative.

The study covers:

- ⇒ Panch Pipalva TR – Kodinar taluka
- ⇒ Khada Bandhara – Una taluka

⇒ Panch Pipalva Tidal Regulator & Sodam Spreading Channel –
Kodinar taluka.

The primary data in terms of water and soil samples, detailed information of the population, land use pattern, impact on agriculture, cropping pattern, live stock, etc. in the study villages has been collected. Analysis of soil and water samples has been carried out. Case studies of selected farmers have been collected and compiled. The chapters include background, approach and methodology, assessment of Noli and Langdi river basin, Khada bandhara, Panch Pipalva and assessment of spreading channel of Sodam bandhara. The report has been compiled and submitted to Salinity Control Division, Bhavnagar.

e) Collaboration with research institute

CSPC has collaborated with CSSRI, Bharuch with the aim to understanding the issue of salinity and acquiring recommendations for scientific management of soil salinity. CSSRI is a national institute established to conduct research on reclamation and sustainable management of salt affected Vertisols and on the use of poor quality waters in agriculture. Its mandate is to undertake basic and applied research, impart training to farmers and other user agencies. Team of scientists from CSSRI and CSPC team have organized field visit to six villages of Sarvani Trust, Kalyani Trust and TCSR. Water and soil samples have been collected for detail analysis. Visit to field interventions carried out by Vikas-Centre for Development, AKRSP (I) and Ambuja Cement Foundation has also being organized.

f) Study to assess revolving fund mechanism in farm pond project and development of bankable model for scaling up the project

Before scaling up the farm-pond model, it is imperative to understand its economic benefits and its financial viability. Proper clarity about financial cost-benefit analysis of the farm-pond can lead to their larger acceptability and wider replication through loan-based financing rather than a purely subsidy/grant-based funding. In this regard, CSPC has initiated a study for analyzing the financial and institutional structure for scaling up of the farm-pond model. The study would identify suitable mechanisms for accessing institutional credit support to transition to a predominantly loan-based financing from formal credit providers and rural sector-focused financial institutions.

Consultant has been hired for conducting the study. Field visit to the project villages have been arranged for the team of consultants. The data collection of the study is completed and report compilation has been done. The study has well captured the qualitative data, however looking at the need of the financial

institutions it was felt that quantitative information need more inputs to the envisaged benefits of the farm pond activity. To facilitate the requirement, second round of data collection was planned and completed in the month of January 2010. Draft report has been submitted to CSPC. The final report would be ready by mid May.

g) Development of photo library

CSPC being a knowledge bank, disseminates information through publications like newsletter, website, reports, etc. To have a better presentation of CSPC work, suggestions were sought on quality of CSPC publication. Visual documentation of project processes is an important element of printed document. Keeping this in view, it is found imperative to develop a thematic photo bank for the projects instigated by CSPC across different districts. The photos would be utilized for websites, posters, Kharash Samvad, training programmes and all other publications.

The main objective of developing a photo bank is to document different processes of the projects in a visual form, at different stages of project cycle. Two visits of the professional photographers have been conducted in the project areas. Photographs of different activities relating to water resource development and management (recharge wells, roof rain water harvesting structures, check dams, drinking water well, well sealing, percolation tanks, stream treatment, etc.), agriculture development (vegetable plots, agriculture demonstration, horticulture plots, vermin culture, farm ponds, farm bund and outlets, solar fencing, pasture land, etc.) have been captured.

h) Development of CSPC Annual Report

CSPC has been implementing various projects addressing coastal salinity issues in districts of Gujarat since more than six years. Further, CSPC has been registered as section-25 under Companies Act, 1956 in April, 2008 and hence completed fiscal year of organization in March-2009. In this backdrop, CSPC has planned to develop a comprehensive report (to be known as Annual Report) of the activities, achievements and learning's throughout the receding years. Being one of the most essential documents for the organization; Annual Report would:

- (i) capture the achievement and progress achieved so far and to reflect strategic direction for future engagements;
- (ii) reflect the status of various projects under KVY and CSPC, pilot projects, documentation, research and studies; and
- (iii) develop institutional memory.

(Refer Annexure 2 for outline of Annual Report)

i) CSPC Governing Body Meeting

During the year 2009-10 CSPC conducted two meeting of its Governing body. The third Governing Body meeting was organized on September 24, 2009 in Ahmedabad. Meeting was attended by all board members except Dr. Indira Hirway. In this meeting, two new members proposed for the CSPC board viz. Prof Sukhpal Singh (IIM) and Mr. Bharat Lal (Director, Rajiv Gandhi Drinking Water Mission) were invited and were included in the board as advisor by the board resolution. Additionally, the board members also approved the nomination of Mr. Chandrakant Kumbhani as an ACF representative in place of Mr. Hari bhai Mori. The minutes of the board meeting is annexed at Annexure 3

The Fourth board meeting of CSPC was held on 30th March 2010 at SRTT office Mumbai. Board members and advisors except Dr. Indira Hirway and Mr. Bharat Lal attended the meeting. The meeting was conveyed by the new secretary of the board Mr. Pramod Sahu, who has joined as CSPC-CEO from January, 2010.

j) KVY partners meet

KVY partners meet have been organized by CSPC on 19 – 20 March 2010. Representatives for KVY partners namely AKRSP (I), ACF, TCSR, Vikas, FES, SAVA, Kalyani Trust, Sarvani Trust, Utthan, ACT, MSVS, Cohesion Foundation, etc were present for the meet. Representatives from CSSRI, Mahiti, SSK, Sajjata Sangh, fisheries consultant, etc were also present. In all 37 participants were present for the event. The main objective of the meet was to generate collective experience and learnings to identify future direction for the KVY programme in the state. Experiences of the projects were shared by all partners. On the second day, sub group discussion was held for future implementation strategy of CSPC to address coastal salinity issues in Gujarat. Sub group discussion was held on topics like agriculture and animal husbandry, extension and market linkages, fisheries, addressing climate change issues and water management.

3. Nodal Agency – KHARASH VISTAROTTHAN YOJANA

As per the responsibilities bestowed on CSPC as the nodal agency of Kharash Vistarotthan Yojana, the following activities were carried out during the period under reporting:

- a) Facilitated the finalization of Annual Work Plan of ACF, considering the suggestions of Dr. Dhatt and Mr. C. S. Phatak.
- b) Facilitated the ongoing impact assessment study of ACF.
- c) Organized review of agriculture interventions carried out by AKRSP (I), ACF and SRC.

- d) Organized and facilitated quarterly review of TCSR.D.
- e) Facilitation of annual work plan appraisal of FES.
- f) Facilitated site identification for constructing water harvesting structures in the project villages of TCSR.D.
- g) Organized review of NRM and agriculture interventions carried out by TCSR.D and provided suggestions.
- h) Field visits and appraisal of the field interventions being carried out by ACF
- i) Provided inputs for study conducted by ACF on ground water modeling titled "Consolidated learning from the Salinity Ingress Prevention Measures undertaken in the coastal areas of Gujarat" by Igrae, Arcadis.
- j) Conducted visit to Salinity Resource Center to understand the new "Sahyog" initiative, possibilities of scaling up same. A discussion regarding need for knowledge services and how to fulfill same was discussed with the community and staff.
- k) Attended meetin organized by Vikas – Center for development with "Sudarshan Krishi Seva Kendra, Amreli" to explore the potential for expanding concept of SRC in SKSK available in coastal area. As a nodal agency CSPC pushed salinity irrigation agenda to address under such private initiative.
- l) Co-organized a meeting for linkages with SIPC, DRDA for coastal area development. The meeting held on October 30, 2009 was attended by the government official from SIPC, water supply, NREGA and DRDA. The meeting briefed the government official about the status of salinity interventions and location, structures/activities required to curtail salinity.

Progress against activities initiated and continued during the reporting period

Sr. No.	Items	Status	Target	Progress	No. of villages covered	No. of beneficiaries	Remarks
A	Physical Works						
	Agriculture activities in the command area of Khada Bandhara	Completed			1	136	
	Agriculture activities in the command area of Bhogat Bandhara	Completed			1	13	
	Promotion of salinity tolerant crops practices, eco restoration	In progress					
	Up scaling of lobster fattening	In progress					
	Wadi programme	Completed			1	65	
B	Promotion of Efficient use of water through demonstration/extension/exposure						
	Field programme in Maliya	Completed			1	10	
	Piloting of aquaculture activities	Not planned for the reporting period					
C	Promotion of Information Dissemination						
	Sanitation consultations	Completed					Consultations have been organized with different stakeholders and workshop thereafter has been arranged.

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	IEC material development on sanitation	Completed					
	IEC material development on RO based drinking water	Completed					Brochure on awareness regarding RO based drinking water has been developed.
	Web site upload						The hosted website is up dated.
D	Collaboration through Research						
	Health impact assessment study of coastal districts (Care Water)	Completed					Study has been completed. Report has been submitted to CSPC.
	Scoping study in Tamilnadu	Not planned for the reporting period					
	Monitoring of fisheries project & development of strategy for fisheries portfolio	Not planned for the reporting period					
	Development of handbook on agriculture interventions	In progress					The handbook final draft is submitted. The final publication is to be completed by May,2010
	Study to assess revolving fund mechanism in farm pond project and development of bankable model for scaling up the project.	In progress					The Final draft report is submitted.
	Catalogue on Geo hydrological information	In progress					The handbook is

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	of coastal belt of Saurashtra and Kutch (ACT)						ready for printing and publication. The print copies would be available by May,2010.
E	Publication, Media, Films, Plays, etc						
	Kharash Samvad	Continuous					
	Publication of consolidated thematic report	In progress					
	Preparation of CSPC Annual Report	In progress					The content is prepared. The final report would be printed in June,2010.
	Development of photo library	Completed					Photo shoot of activities relating to water resource development and management & agriculture development have been captured.
F	Rotational funds for loan based activities						
	Loan based interventions with fisheries group (SSK, Jodia)	Not planned for the reporting period					The proposed project would be initiated in May,2010 covering 20 groups in Jodiya taluka.

	Collaboration with SAVA (Navi Bandar for WATSAN programme under TATA GE)	Not planned for the reporting period					The proposed activity is cancelled as the village is dropped from the Tata-GE project.
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List of Partner Organizations of KVY and CSPC

1. Aga Khan Rural Support Programme (India), Junagadh
2. Ambuja Cement Foundation, Junagadh
3. Arid Communities and Technology, Bhuj
4. CHARKHA, Ahmedabad
5. CARE Water Group, Anand
6. Centre for Developmental Alternatives (CFDA), Ahmedabad
7. COHESION Foundation, Ahmedabad
8. DOSHION, Ahmedabad
9. DRDA – Porbandar and Amreli
10. Environmental Technologies in Arid Areas, IIM, Ahmedabad
11. Foundation for Ecological Security (FES) – Anand
12. GRISERV – BAIF, Bhavnagar
13. GRAM LAXMI, Jamnagar
14. KALYANI, Jamnagar
15. Salinity Ingress Prevention Circle (SIPC), Rajkot
16. SAATH, Maliya Taluka of Rajkot
17. SAVA, Jamnagar and Porbandar
18. SARVANI, Jamnagar
19. SAVE, Ahmedabad
20. Tata Chemicals Society for Rural Development (TCSR), Jamnagar
21. UTTHAN, Bhavnagar and Amreli
22. Vivekanand Research and Training Institute (VRTI), Kutch
23. Vivekanand Research and Training Institute (VRTI), Amreli
24. Vikas Centre for Development, Bhavnagar
25. WASMO, Gandhinagar
26. Market pulse
27. Casfor
28. Sajjata sangh
29. Development Support Center (DSC)

List of External Resource Persons

1. Mr. C. S. Pathak, Development Consultant, Natural resources (Land and Water)
2. Mr. V. G. Nalvade, Consulting Engineer and Executor, Lift Irrigation and Water Supply Specialist
3. Dr. G. Gururaja Rao, Head Central Soil Salinity Research Institute (CSSRI) Regional Research Station, Bharuch
4. Mr. K. Fofandi
5. Mr. H. Kikani, Consultant, Communication & Documentation
6. Mr. Dinesh Prajapati, Consultant

Annexure 1

The Research study on “Health Impacts of Poor water Quality along Coastal Areas of Gujarat: State Level Assessment, policy implications and Development of an action plan”.

Impact of poor water quality on human and environmental condition is a major health problem of current times. A recent study conducted in some villages of Junagadh district of Gujarat showed the huge impact of poor water quality (high Salinity and Calcium contents) on high incidences of Kidney stones in those areas. The overall extent of this problem across the state’s long coastline, health risks due to consumption of poor water quality, interventions under rural health programs and need for policy changes are some of the question demanding the answers to address the problem.

The study aimed at detailing the crucial question of the magnitude of the health risks from poor quality water along the coastal salinity affected villages of Saurashtra and Kutch.

Also, on a larger level, the study tried to:

- i. Analyze potential economic and social costs and link them to the current investment on rural drinking water and health in these areas.
- ii. How do these health costs on society compare with these investments?
- iii. Is it possible to supply safer drinking water or structure better rural health programs to avoid these health risks that have a debilitating effect on the livelihoods of poor living in these areas?

CARE Water group, Anand was assigned a study to find the Impact of poor water quality on health situation. The study covered 5 areas (50 villages) along the coast, covering coastal areas in districts of Kutch, Jamnagar, Amreli, Bhavnagar, and Anand, with a minimum of five villages selected from each district. Larger districts like Kutch and Jamnagar will have proportionately more number of villages.

The findings of the study would be useful for creating a macro-picture along the entire coast of Gujarat. It would also provide the basis for comparison of these results with the current policy on rural health in these areas and whether local health workers are aware of the scale of health risk. Data collection and compilation is completed and draft report is received. The major findings are discussed below.

In Kutch district

- i. The study used records of patients suffering from Urological, dermatological and eye diseases reported from the sample villages

- ii. The study revealed that 3.14 percent of the population in the 30 villages of Kutch is affected by kidney stone in a single year.
- iii. No eye diseases were caused due to environmental factors.
- iv. Major factors for the diseases are salinity in water, sand, scorching sun, difference in day night temperature, inadequate water availability and people's attitude towards good hygiene.
- v. It is observed that though there are lots of urological cases among the people in Kutch, there is not a single urology specialist or hospital located there.

In Jamnagar district

1. Occurrence of renal (1.2%), skin diseases (0.2%) and eye (4.2%) is almost constant in G. G. hospital during the last 4 years.
2. From 50 households surveyed in Jamnagar, 38 percent of the people suffer from renal stone, 46 percent from skin complaints and 14 percent from eye disease. People are not clear about the causes for these ailments.

In Porbandar district

1. Of the 50 households, 26 (52%) households are earning through farm and non-farm labour.
2. Source of water supply is very poor, 36 percent families are using water from ponds and Virda; whereas, panchayat supplied water is used by 20 percent of hhs, followed by privately owned wells with 30% hhs; and 6 families are purchasing water regularly.
3. The operative treatment expenses for kidney stone is about Rs 12,380/-. In some of the cases the expense is beyond one lakh rupees due to complication in operation.

Proposed Design of Preventive Health for Kidney stone

Many of the ailments discussed under study are social ailments. A coarse grain dominated, milk deficient diet with poor access to water availability is also linked to poverty. With more in-depth study, one may establish that occurrence of kidney stone would be high among the poor and with poorer access to health facilities, their treatment is also minimal. For an ailment such as Kidney stone, a preventive health program should focus therefore on multi-pronged aspects:

- a) Availability of adequate, affordable and safe drinking water
- b) A complete look at food and nutrition relevant to stone occurrence – Calcium, Magnesium, Vitamin B6, Fluoride
- c) Occupational and ergonomic factors such as sleep posture and work environment that allows for regular breaks.

It is proposed that findings of the study will be shared with concern stakeholders and authority for their inputs and views to finalize the study report.

COASTAL SALINITY PREVENTION CELL



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Kharash Vistarotthan Yojana

April 2010 to March 2011

Coastal Salinity Prevention Cell (CSPC)

23, Yogashram Society,
Opp. Kenyug Apartments,
Shyamal Cross Roads,
Ambawadi, Ahmedabad: 380 015
Ph.: 3251 9799 Tele Fax: 2660 4969
Website: www.cspc.org.in
E-mail: info@cspc.org.in

**Annual Progress Update of Activities Carried out by
Coastal Salinity Prevention Cell (CSPC)**