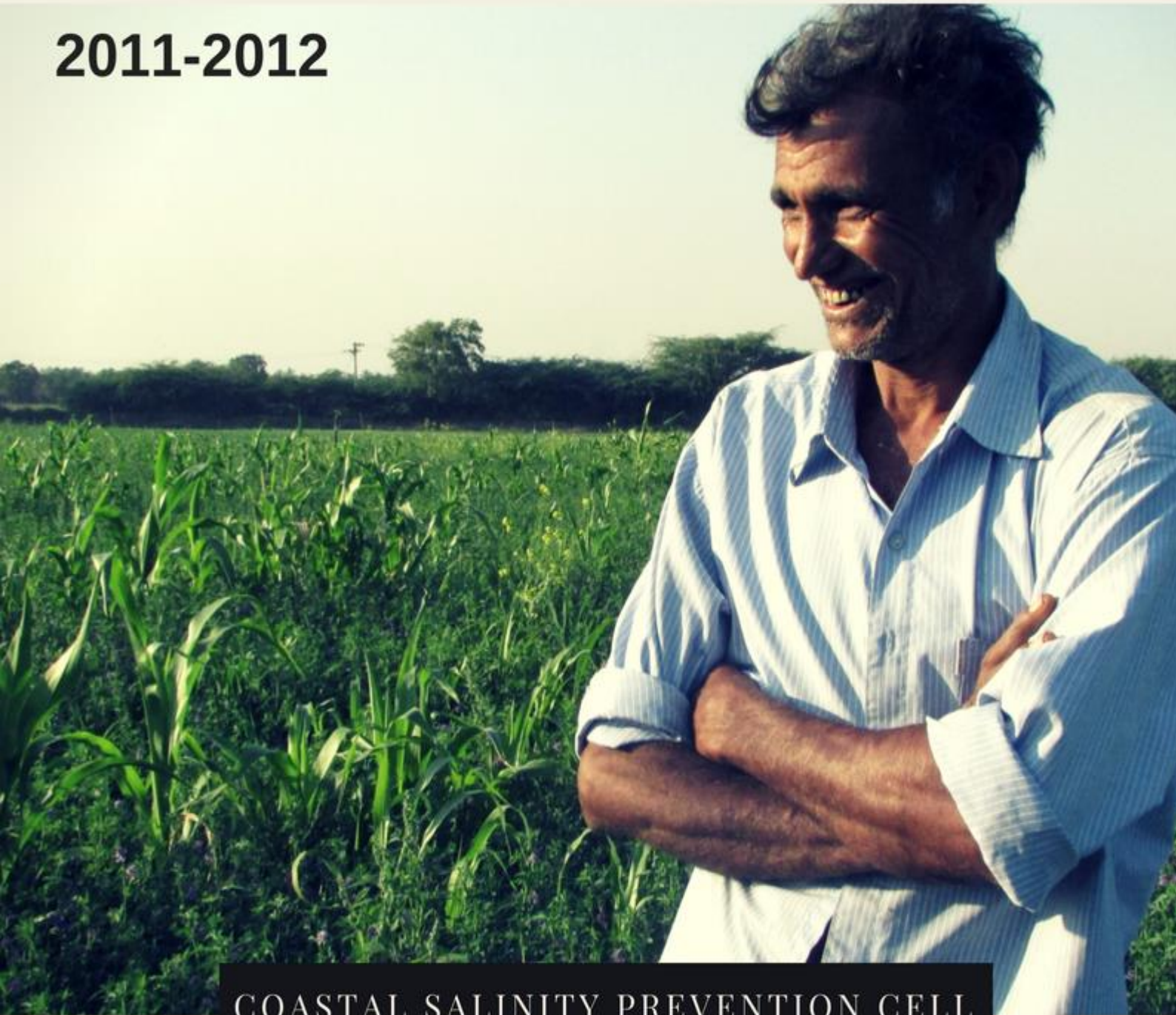


ANNUAL PROGRESS UPDATE

2011-2012



COASTAL SALINITY PREVENTION CELL



COASTAL SALINITY PREVENTION CELL
Kharash Vistarotthan Yojana

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 pit for 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 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 are able to grow vegetables and make profits in the summers. As the prices of vegetables increase, the off season 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 – 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 bigha of land. There is still a scope to deepen the structure for creating additional water storage. The project was completed in month of July 2009.

c) 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 behavior 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 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 of 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.

d) 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 has been

outsourced to Dr. G. G. Rao, CSSSRI Bharuch. 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 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) *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.

b) 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.

c) 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.

d) 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.

e) 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.

f) 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)

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 TCSRDR.
- e) Facilitation of annual work plan appraisal of FES.
- f) Facilitated site identification for constructing water harvesting structures in the project villages of TCSRDR.
- g) Organized review of NRM and agriculture interventions carried out by TCSRDR 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 Igra, 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 meeting 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.

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

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Kharash Vistarotthan Yojana

April 2011 to March 2012

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

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