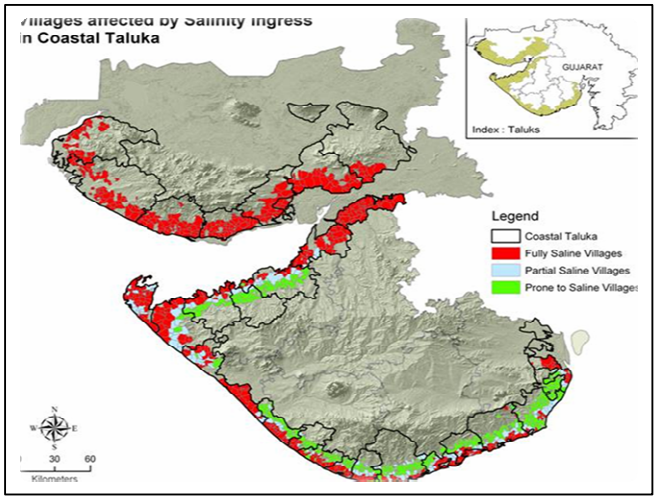
Coastal Areas Development Programme

Enhancing Drinking Water Security and Promotion of Safe Sanitation in the Coastal Villages of Gujarat

BACKGROUND



Imbalance between the ecology and economy in coastal regions has created serious problems for the life and livelihood of coastal population. One of these problems is ingress of salinity into land and water resources on the coast. Gujarat State, with its more than 1600 km of the coast, is suffering from this problem, and the coast of Saurashtra is affected maximum by this problem. A major consequence of this problem is the acute shortage of potable water in this region. Based on the current drinking water situation, it may be concluded that the coastal region needs a special strategy as far as drinking water is concerned. This is because the entire region has specific constraints as well as specific potential with regard to drinking / domestic water that need to be addressed collectively through a well-designed strategy. Since the coast is an attractive region for a large number of economic activities like salt works and other industries, agriculture, mining and quarrying, trading and shipping, ports, jetties and other infrastructure, tourism etc, these activities have grown at a very rapid rate, particularly after the economic reforms, on the coast. They have put a huge pressure on the coastal and marine environment, including water resources, right from Jamnagar to Junagadh to Bhavnagar. This has intensified the problem of drinking water on the coast. Thus, there is a need to address these issues through a common strategy.

Sanitation or the lack of it is also a vital issue. A direct relationship exists between water, sanitation, health, nutrition and human well being. India still faces the most daunting challenge wherein around 65 percent of the total rural population remains devoid of access to basic sanitation facilities. Sanitation denotes a comprehensive concept; in fact it is a "way of life" which is expressed in clean homes, communities, institutions for a better health and safe environment. Moreover, practice of safe sanitation is a crucial indicator for quantifying improvement in standards of living. It has now been realized that the standard alternatives and solutions have not helped in overcoming water and sanitation related difficulties in coastal villages. Hence, new solutions – technological as well as institutional - need to be thought of for solving the problems in a sustainable, socially acceptable as well as cost effective manner.

COASTAL AREA DEVELOPMENT PROGRAMME (CADP)

While acknowledging the need to have a special focus on the drinking water and sanitation issues in the coastal salinity affected villages of Gujarat, especially in Saurashtra region, a special initiative has been launched – Coastal Areas Development Project in different coastal districts by the Water and Sanitation Management

Organization (WASMO) and the Coastal Salinity Prevention Cell (CSPC) with the financial support of Sir Ratan Tata Trust and Conrad N Hilton Foundation. The project, which also involves the community and civil society organisations, is designed to ensure availability of safe drinking water and sanitation facilities across 300 coastal villages, spread across 21 talukas of nine districts, namely Ahmedabad, Anand, Amreli, Bharuch, Bhavnagar, Jamnagar, Junagadh, Porbandar and Rajkot.

PROJECT OBJECTIVES

The objectives of the project are as follows:

- Provide seasonal security and conservation of water supplies with an integrated combination of pipe and local traditional water sources;
- Provide more hygienic household and community environments with sanitation improvement and increased hygiene awareness in communities;
- Community managed implementation of water supply and sanitation improvements with facilitating inputs for community capacity building and empowerment;
- Provide institutional facilitating support for community level groups through the independent implementing support agencies;
- Demonstrate the benefit and rational use of multiple source water supply using technological options and integrated community managed solutions;
- Ensure participation of communities, especially women at all levels of decision making processes.

Expected outcome

- **Drinking water security**
  300 villages – 145,000 Households
- **Sanitation**
  150 villages – 25,000 Households
- **Water resource management**
  Approximate 50 "no source" villages
- **Development of mini water quality laboratory**
  5 sub-district locations catering to 250 villages
- **Solid liquid waste management**
  10 villages on a pilot basis

DISTRICT-WISE DETAILS OF VILLAGES COVERED

Sr.	District	Taluka(s)	Number of Villages	Implementing Support Agency (ISA)
1.	Rajkot	Maliya	15	Cohesion Foundation
		Maliya	3	PIU – WASMO, Rajkot
2.	Jamnagar	Khambaliya	12	PIU – WASMO, Jamnagar
		Okha & Kalyanpur	15	Tata Chemicals Society for Rural Development
		Jamnagar	30	J. V. Nariya Trust
3.	Porbandar	Porbandar	15	Saurashtra Voluntary Actions
4.	Junagadh	Kodinar	30	Ambuja Cement Foundation
		Sutrapada Una Maliya Mangrol Veraval	30	Aga Khan Rural Support Programme (India)
5.	Amrelli	Jafrabad	30	Vivekanand Research and Training Institute, Bhavnagar
		Rajula	15	PIU -WASMO, Amrelli
6.	Bhavnagar	Mahuva	30	PIU – WASMO, Bhavnagar

Sr.	District	Taluka(s)	Number of Villages	Implementing Support Agency (ISA)
		Talaja Bhavnagar		
7.	Ahmedabad	Dhandhuka	15	MAHITI
8.	Anand	Khambhat	15	Foundation for Ecological Security, Anand
9.	Bharuch	Vagra, Amod	45	Vikas - Centre for Development and PIU - WASMO, Bharuch
	TOTAL		**300**	

FINANCIAL

Organisation	Support towards…	INR (Million)
WASMO & Govt. of Gujarat	Drinking Water Infrastructure & facilitation cost to ISAs	356.00
Sir Ratan Tata Trust & CSPC	Subsidy for construction of sanitation units & facilitation cost to ISAs, Innovations, Project Management	50.00
Conrad N Hilton Foundation	Water Resource Management, Water Quality Monitoring, Innovations & Post project facilitation support to ensure sustainability	51.70
Community	Part capital cost for drinking water and sanitation units	63.00
	TOTAL	**520.70**

KEY FEATURES

Drinking water security: The community, government and non-government organizations have put in efforts to develop cost-effective and sustainable water supply facilities in the villages. The entire scheme is designed with a bottom up approach where village community design and plan their system based on their need. The Gram Sabha and village Pani Samiti (sub committee of Gram Panchayat) are directly approached for true decentralized empowerment and planning. A unique feature of the scheme design is that all schemes are designed with 70 liters per capacity per day (lpcd) (instead of 40 lpcd) service criteria and villages have been endowed with matching storage capacity. The community would contribute 10% towards the cost of the schemes, which would fulfill the drinking water needs over the next 30 years.

The project entered into the second year of implementation. Technical and administrative sanction was accorded to 256 and 241 villages respectively. The schemes emphasised on in-village drinking water storage and distribution system and strengthen local Samitis to take care of the operation and maintenance of the drinking water supply. The schemes aimed at equity in distribution, strengthen sustainability of sources, cost effectiveness, terrain appropriateness and use of existing infrastructure and resources. The drinking water scheme was completed in 97 villages and is in progress in the remaining villages.

Water resource management: Sustainability of drinking water is a critical issue in any community-managed drinking water project. Coastal villages are vulnerable and prone to salinity ingress resulting into deterioration of drinking water sources. Further, the distance surface-based sources have its own limitations in terms of regularity of water supply and quality. Keeping this in mind, it has been thought of including a very crucial component of strengthening of local water sources. The activities vary from one region to another depending upon local terrain condition, geological formations and requirements. The work relating to repair and reconstruction, construction of water harvesting structures which directly benefit the drinking water resources such as check dam, sub-surface check dam, diversion channel, catchment improvements, deepening and de-silting of pond, etc. are taken up. Potential sites in 19 villages were identified and technical surveys, drawings and design development is completed. Physical work of the identified structures is in progress.

Water quality monitoring and surveillance: Water quality is a major cause of concern in the coastal region. In absence of alternative safe drinking water source, the communities have to depend on saline water which leads to health issues like kidney stone and skin diseases. It has been observed that on an average, a family spends around Rs. 8000 to 10000 / year on health mitigation. It is also imperative to create awareness about inferior water quality and its impact on human health. Hence mini water quality laboratories are established at various sub-district level strategic locations, where such infrastructure facilities are not available. These labs are established with local non-government organizations for promoting water quality monitoring and surveillance. The laboratory shall undertake water sampling and analysis of bacteriological and chemical content periodically. Based on the findings, appropriate recommendations for preventive measures will be shared with the community and other government departments.

***Environmental Sanitation*:** Improved sanitation is an integral part of the project implementation strategy. The project aiming at making 106 Open Defecation Free villages was initiated based on prior detailed household sanitation survey and beneficiary identification. Further the list of beneficiaries was verified and approved by the village officials and technical training regarding techno-economic options was conducted. Sanitation being an essential and challenging component required intensive effort on awareness generation about its need and importance. Further, sanitation is not just limited to construction of toilets, but its objective is to bring behavioral change among the communities. Thus, rigorous efforts on capacity building, Information Education Communication (IEC) and awareness generation, quality supervision and behavioral change are made. Various software activities like school programmes, hamlet meetings, gram sabha, IEC campaigns, street plays, workshops and so on were organized in the villages. An additional incentive of Rs. 1,000 per unit over and above support provided by the Government as per Total Sanitation Campaign (TSC) norms is provided to beneficiary from the project budget. A total of 106 villages have been identified for achieving ODF status, where all the households would be covered through construction of sanitation units. Construction of 4,594 toilet units has been completed upto June 2011 and physical work of 1,203 toilets is in progress.

CONVERGENCE

The Conrad N. Hilton Foundation (CNHF) has extended support of INR 50 Million, which will add value to the CADP through integration of drinking water, water quality monitoring and surveillance, integrated water resource management, protecting drinking water sources from contamination and hygiene elements. The approach adopted offers a model for totally decentralized governance, thus making the Water Committee a permanent institution that can prove that local governance is empowered to handle drinking water, sanitation and heath within the village. The extended support of CNHF helps in taking up innovative technological solutions for no-source villages and to enhance project duration from twenty-four months to thirty-six months, which will ensure effective institutional strengthening and achieving a behavioral change process of the rural community.

The project provides an innovative model of Public Private Partnership where the resources from Government's existing programmes are leveraged with non-government funding partners joining hands to provide holistic solutions to rural communities to have access to safe water and improved habitat which helps in improving health and overall livelihoods.

SUCCESS STORIES

Communal harmony ensures water security in Dari village

Dari village in Veraval taluka, Gujarat, has always been a peaceful and harmonious place populated by about 600 Muslim and 400 Hindu families. The only spiking point was water. The village received water at one outlet in the village, courtesy the Regional Water Supply Scheme. But inequitable distribution of the life-sustaining liquid would often trigger friction among the residents and during summer, the villagers frequently engaged in pugnacious exchange of words and much more. Water supply, the villagers agreed, must flow into each and every household.

In 2009, the Coastal Salinity Prevention Cell (CSPC), Ahmedabad, along with the local Implementing Support Agency Aga Khan Rural Support Programme (India) (AKRSP (I)), Ahmedabad selected Dari for setting up drinking water infrastructure under the Coastal Area Development Programme (CADP). At the outset, 20 meetings were held in different hamlets of the village to create awareness on the programme. Spearheading the cause were two local lads, Jagdish Bamaniya and Faruq Hasan Aakani, both selected by AKRSP (I) for their eagerness to help in solving the problem, coupled with their existing rapport with the community. The duo also contributed towards planning and organizing workshops and exposure visits for the villagers.

The drinking water scheme, estimated at around Rs. 1.8 million, was designed with the help of engineers from AKRSP (I). Once the scheme was approved, Jagdish and Faruq initiated the task of collecting contribution from the community. They collected contribution from 350 households and deposited the amount in the bank. Thanks to their efforts in getting the village folk together and ensuring communal harmony, the drinking water scheme was operationalised soon thereafter, bringing clean water directly to each household in Dari.

Dhaniben of Jajasar: overcoming challenges

Jajasar village was proving to be a very challenging village for Cohesion Foundation Trust (CFT), which is the ISA designated for Rajkot district. Numerous faliya and village meetings, trainings, personal meetings and Gram Sabhas did not yield the desired results and the people were not ready to pay even a single paisa as community share. The people expected the government to pay for all civil works in their village as they had been spoon fed with relief measures after the destructive earthquake which struck these parts in 2001.

Dhaniben, an experienced worker in CFT, having also worked as an ASHA worker for three years, was aware of the difficulties being faced by the project team in mobilizing the community's share and promised all possible help to the team in resolving this issue. She would go from habitation to habitation and knock on each individual door and initiate a dialogue with the villagers about community participation. Slowly but surely, her persistence paid sweet results with individual households starting to contribute their share.

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