

TATA CHEMICALS LIMITED



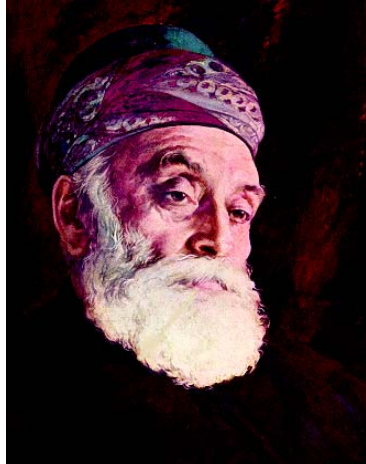
*When Chemistry Cares...
A Community Smiles.*

Tata Chemicals, Mithapur

Vision:

Integrated development of the region through an optimal utilization of natural resources with focus on improving the quality and availability of water, agriculture productivity and animal resource and to become a benchmark resource center for other to replicate.

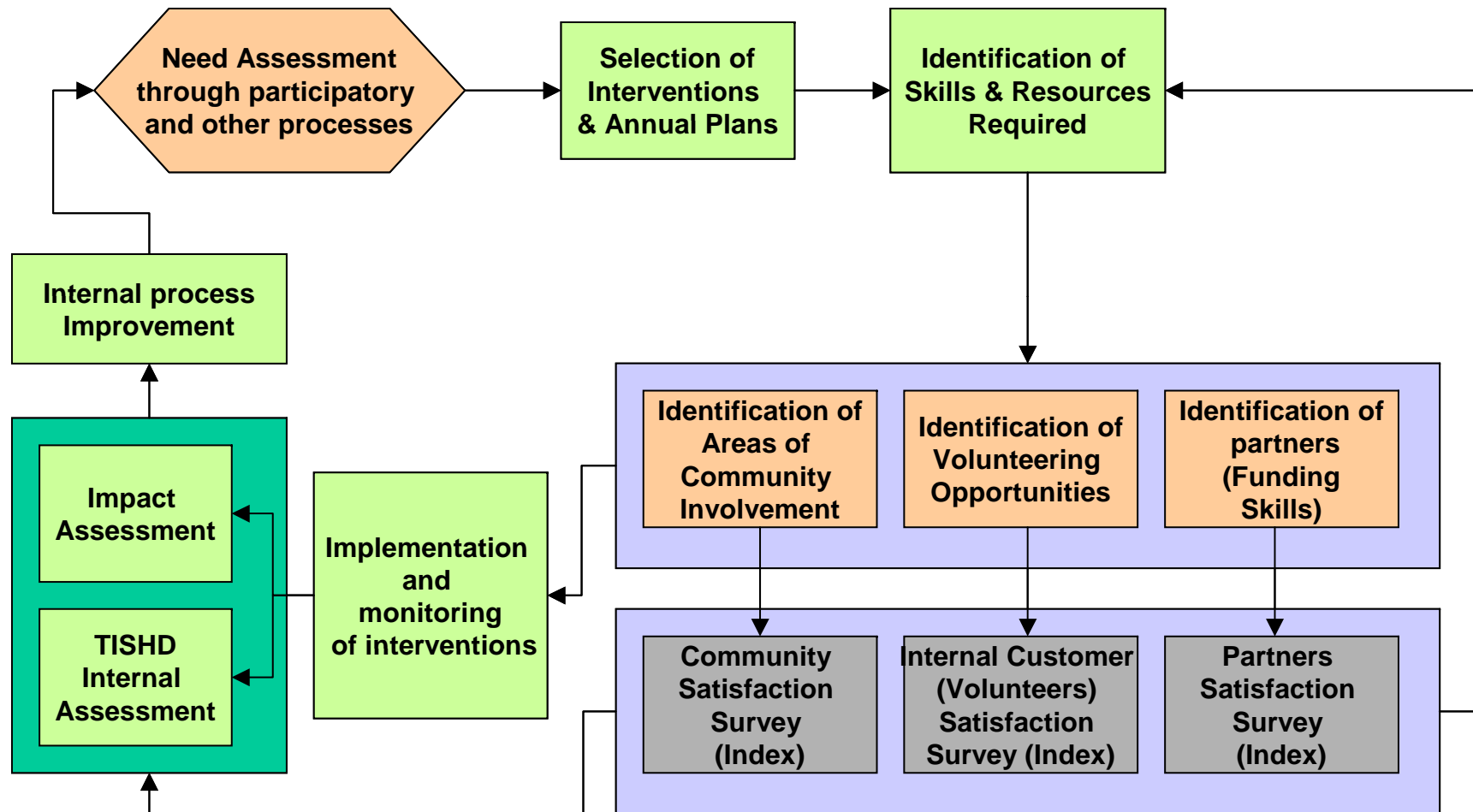
Beyond the boundaries



“What comes from the people must go back to the people, many times over “

Tata Group Principle

SUPPORT TO SURROUNDING COMMUNITIES : PROCESS FLOW



Process flow Diagram – Stakeholder involvement in community development

UNDERSTANDING COMMUNITY NEEDS

Why?

How?

- ✓ **Participatory Rural Appraisals**
- ✓ **Community Meetings with Senior Leadership**
- ✓ **Impact Assessment Surveys**
- ✓ **Need Assessment studies**

What are the results? Prioritization Matrix

PRIORITISATION OF COMMUNITY NEEDS

Quality Function Deployment Tool

Stakeholder Needs (Community) Near the Fertilizer plant at Babrala	IMPORTANCE	Animal husbandry	Agriculture diversification & Agriculture Growth program	Land Reclamation	Self Help Groups	Vocational training	Family welfare project(Mobile services) / Medical camps	Infrastructure development (new	Rural energy programme	Promoting entrepreneurship of rural poor through soft loans	Sanitation programme	Adult literacy drive
Needs	→ Direction of Improvement	+	+	+	+	+	+	+	+	+	+	+
Opportunities for employment / livelihood	5	9	9	9	9	9	-	1	1	9	1	-
Improved Living conditions												
Improved infrastructure	4	1	-	-	3	1	-	9	1	3	9	-
Improved availability of health care (primary)	4	3	3	-	3	-	9	1	1	1	9	1
Improved availability of basic education	4	1	1	-	3	3	-	9	-	1	-	9
Sustainable Management of natural resources	5	9	9	9	3	-	-	3	3	3	9	1
Assistance in building capabilities/capacities	4	9	9	9	9	9	9	1	1	9	9	9
Support during times of stress	2	3	-	9	9	-	3	-	-	-	-	-
Creating awareness for health and hygiene	3	3	3	-	9	-	9	3	3	-	9	3
Strengthening ties / bonds with community	4	9	9	9	9	3	9	9	3	3	3	9
Ethical conduct	5	1	1	1	1	1	3	1	1	1	1	1
	1325.0	157	147	140	173	69	156	145	53	88	197	131
	100.0	11.8	11.1	10.6	13.1	5.2	11.8	10.9	4.0	6.6	14.9	9.9
Ranking		3	5	7	2	14	4	6	15	13	1	8

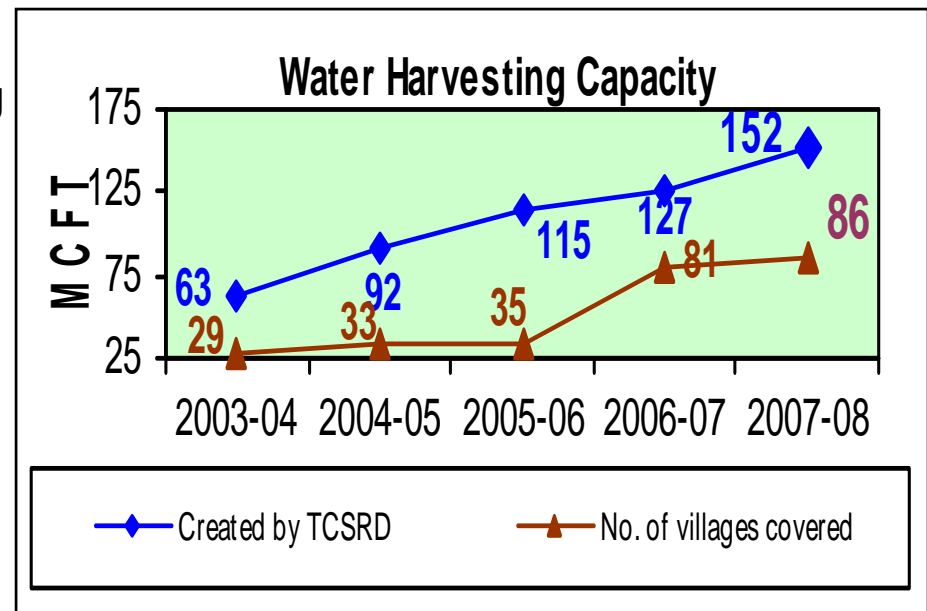
WHY – WATER MANAGEMENT IN MITHAPUR

- Mithapur is located on the western most tip of Saurashtra Peninsula in the Jamnagar district of Gujarat is surrounded on three sides by the sea.
- The biggest concern here is unavailability of fresh water.
- Average annual rainfall 12-15 inches.
- Salinity ingress because of high runoff and slow soil retention rate.
- This region is one of the most drought prone regions of the country,
- Overall backward area, however agriculture is still the predominant occupation here.
- No water harvesting infrastructure.

WATER MANAGEMENT PROJECTS

Initiatives Taken:

- **Integrated watershed development project.**
- **Salinity Ingress Mitigation Project.**
- **Water & Sanitation Management (WASMO) project**
- **Roof rainwater harvesting project.**
- **Special project for large water harvesting structure**
- **Water saving technologies**



PROCESS STEPS

The most important aspect of this program is people's participation. The management and responsibility of watershed structures rests with the villages which results in a ownership.

1. **Creating awareness for project, its objectives, and concept of participation through village meetings, awareness drives, exposure visits and training programs.**
2. **Formulation of the village committee & Self help groups with representatives from all segment including women members (mandatory).**
3. **Conducting participatory rural appraisals (PRA) and creation of village action plan & collection of contribution from communities.**
4. **Training the user groups and the committee members on account keeping, decision-making, and project planning through implementation of a pilot entry point activity.**

PROCESS STEPS....

5. Construction of water harvesting structures, water supply structures/ systems and structures for mitigating salinity ingress.

- These include: check dams, water storage structures, Village ponds, diversion channels, sub-terrestrial dams and bandharas, farm ponds and farm bunds.**
- Groundwater recharge is carried out through recharge pits and recharge of wells.**
- Additionally, roof rainwater harvesting structures are constructed to collect quality drinking water.**
- Drinking water distribution systems, construction of new wells, constructing bore wells fitted with hand-pumps and creating structures that are exclusively for drinking purpose also form a part of this**

6. The last step is appropriate use of water to ensure sustainability have been taken up in earnest. A process to establish water codes in the villages has also been initiated.

INTEGRATED WATER SHED PROJECT

Purpose :

- **Harvesting rain water by constructing check dams, farm ponds, farm bunds & well recharging**
- **Utilization of Rain water for Agricultural activities, Animal husbandry & drinking water**
- **To promote downstream activities like Agricultural productivity, small scale income generation activities & Af-forestation**



TUPNI VILLAGE

Located around 15kms from Dwarka, Tupni village is one of the most drought prone area



Type of Land (hectares)	Tupni
Wasteland	712
Agriculture Land	836
Residential Land	49
Other Wasteland	984
Total Land	2235

Water requirement for Agriculture activities : 10 .9 lakh m3/annum

WATER MANAGEMENT AT TUPNI VILLAGE

Tupni	Capacity (mcft)
Villar Pond	0.7
Sanvara Pond	0.8
Navapar Pond	0.5
Dhora Bondha	2.1
Small Talao	0.3
Palathri	1.0
Ratu	1.1
Awad Mataji	1.5
Ravaji Dam	2.2
Gandhari Talao	0.6
Mataji	2.0
Vijadin	2.1
Ladagar	2.5
Charakh Dam	3.5
Unaki	0.7
GLDC	3.2 Million cubic feet
Small Structures	2.4



Total rain water harvested : **27.2 million cubic feet**

WAY AHEAD

- Total water harvested through water shed project : 7,41,769m³/annum
- Water requirement from farmers : 10,99,000 m³/annum
- Additional water requirement : 3,57,231 m³/annum

Action Plans to mitigate :

- To construct more water harvesting structures (Target : 5 structures in 3 years)
- To promote water saving technologies like drip irrigation, sprinkler irrigation (Target : 70 farmers in 3 years)
- To increase the productivity of existing agricultural land through land reclamation, Planting high yielding crops & Organic farming

WATER & SANITAION MANAGEMENT

Purpose:

To provide safe drinking water in sufficient quantity (70 liters/day/head) at a their door step

- To execute & operate the project though village community**
- To built awareness & capacity building in the community**

WATER & SANITATION MANAGEMENT IN BHIMRANA VILLAGE

Bhimrana is located 3 kms away from Mithapur that has average population of about 5000. There is no source of fresh water in this area. Since 15 years, the village is totally dependent on tanker based water supply.

Projects implemented to solve the issue :

- Construction of Roof Rain water harvesting structures (RRWHS) with capacity of 10,000 liters in 220 houses
- Construction of elevated tank of 1.2 lakh liters capacity
- Construction of sump of 1 lakh liter capacity
- Pipeline networking connecting to every door step
- Installation of RO (Reverse Osmosis) plant of capacity 2000 liter/hour

IMPACT TO THE COMMUNITY

In short,

Bhimrana village has gained

- **Continuous supply of drinking water throughout the year**
- **Availability of water at their door step there by reducing time span of 3hrs/day in collecting water from near by places**
- **Enhanced the storage capacity of rain water (22 lakh liters/ annum)**
- **Additional supply of RO water (2000 liters /hr)**
- **Established village level organization (Paani samithi) capable of operating the entire system without any external support**



SALINITY INGRESSMENT

Purpose

- **To prevent the salinity ingress by constructing “ salinity bhandaras” in the coastal area**
- **To reclaim saline soil suitable for agricultural activities**
- **To provide safe drinking water in coastal villages by constructing rain roof water harvesting structures**
- **To minimize the water usage by water saving technologies**

SALINITY INGRESS IN DWARKA TALUKA

- Dwarka Taluka is surrounded three sides by seawater (Arabian sea). Due to this, salinity ingress is the perennial problem prevailing in this area. As time passes by, the underground sweet water turned into brackish water because of which the soil became saline - unfit for agricultural activities & availability of drinking water.

Efforts taken to prevent salinity ingressment :

- Construction of “bhandaras”(underground impervious layer & check dam above the ground) - 4 nos
- Construction of RRWHS(Rain roof water harvesting structures) – 600 nos in 6 villages
- Land reclamation – 60 hectares



SALINITY INGRESS – IMPACT

- 60 Hectares of agriculture waste land reclaimed
- Additionally ,Irrigation facility made available for 150 hectares agricultural land
- Water from 15 wells turned from brackish to sweet water due to harvesting of rain water in “bhandaras”



WATER MANAGEMENT - SUSTAINABILITY

- 1. The most important aspect of this is active involvement and capacity building of the community.**
- 2. Our role is to facilitate the process, add last mile financing funds where ever required and ensure that benefits reach the economically weaker section**
- 3. The management and ownership of all structures rests with the village. This has resulted in a system of ownership, responsibility and creation of a participatory environment.**
- 4. Every structure built has and every activity undertaken has been selected, implemented and regulated by village committees, user groups etc.**
- 5. Distribution, use and payment for water is decided by them and from the collections many villages have themselves been able to construct other dams paying 70-80% of the cost of these structures.**

WATER MANAGEMENT – RISKS INVOLVED

- 1. Conflict because of unfair and inequitable use and distribution of water.**
 - Through transparent processes, sharing of information and facilitation.**
- 2. The risk of people moving towards high yielding, high return intensive water use crops leading to water resource depletion.**
 - The IEC component of project targets optimization of use of water and appropriate agricultural interventions.**
 - Continuous capacity building on water management.**
 - Trying different appropriate agriculture models with indigenous crops**

WATER MANAGEMENT - IMPACT

- 1. 152 MCFT capacity created benefiting 86 villages.**
- 2. Direct economic gain per year is approximately Rs. 200 - 250 Lakhs.**
- 3. Indirect gain has been improved water quality and availability. Over and above invisible benefits of the program are**
 - Capacity building of people & Community empowerment.**
 - Ownership of assets created**
 - Increased awareness and village cohesion.**
 - Community advocacy and participation in policy formation**
- 4. Today many committees have repaired and strengthened their structures and built other structures with the money collected from the village contribution. Their access to district authorities and banks has increased. They have also established more than 180 Self-Help-Groups that are engaged in micro-finance.**

INCOME GENERATION INITIATIVES AT MITHAPUR

Need: Mobilize weaker sections, Promote savings ,improve economic status and build capacities.

Initiatives: Self Help Groups form the backbone

Rural Entrepreneurship development program

Initiative: Okhai Brand promoted at national level and across borders

Training at NIFT, state of art tailoring unit at Mithapur

Members are decision makers

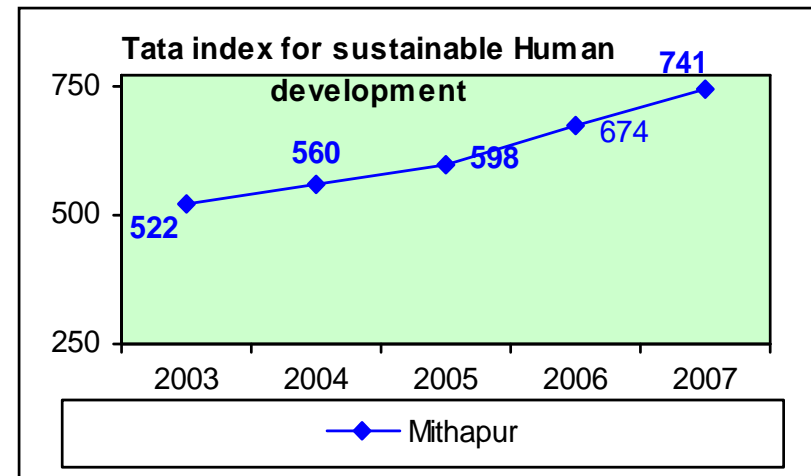
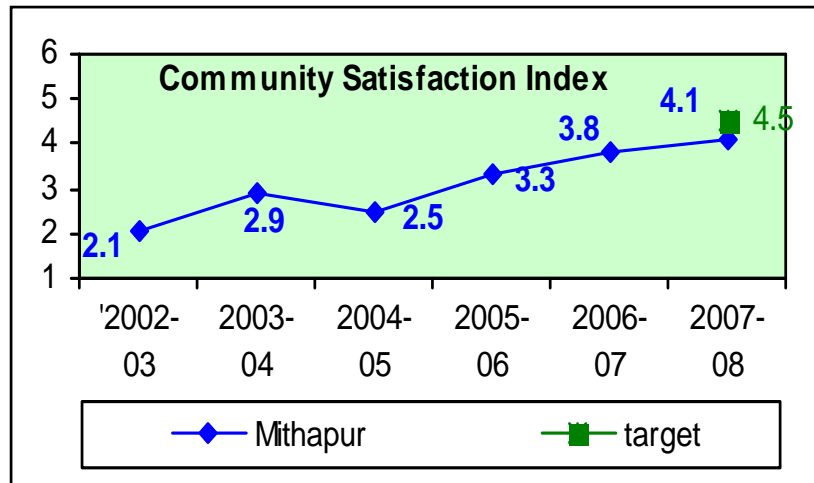
Impact: Rise in Income level, Social Mobilization



200 SHGS ,
275 trained
Entrepreneurs

FEED BACK & MONITORING

- Periodic Review
- Annual Impact Assessment Study
- Social Audit by third party (CSI)
- Tata Index for Sustainable Human Development (TISHD)

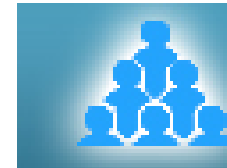


OUR PARTNERS

An International Initiative



Against Avoidable Disablement

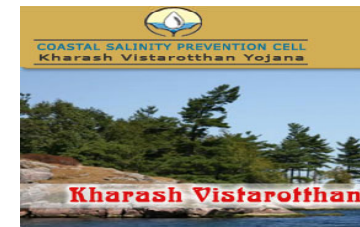


NATIONAL BANK FOR AGRICULTURE AND RURAL DEVELOPMENT



- COMMUNITY**
- ✓ UNICEF
 - ✓ DRDA
 - ✓ PFI
 - ✓ CAPART
 - ✓ Impact India
 - ✓ NABARD
 - ✓ MKC Roko Cancer

- Water**
- ✓ DRDA
 - ✓ WASMO
 - ✓ Swajal Dhara
 - ✓ SRTT
 - ✓ CSPC



THE ROAD AHEAD...

Continuous learning and policy advocacy.

Global Benchmarking

Creation of a centre of excellence.

Sustainability (Handover to Community)



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Thank you.