

## 14. Initiatives in Environment Management

Category: Environment Management; Land Use Management ;Infrastructure, Urban Governance Civic Engagement

- Environment Health, Pollution Reduction, Land Use Planning, Storm Water Management, Partnership Development

- A. Reclamation of Dump-site
- B. Beach cleaning Project
- C. Reclamation of Storm Water Channel

### A. Reclamation of Dump-site

#### 14.1. Situation before the Initiative

- There were pockets of land in the heart of the city, which were used to dump solid waste generated in the city over the years.
- In absence of properly demarcated landfill site, and of strict vigilance, such small pockets increased in number.
- After the earthquake on 26<sup>th</sup> January 2001, a lot of putrescible material like bodies of dead animals was dumped on this land.
- This created an unhealthy environment for the surrounding areas and increased the possibility of the spread of epidemics, especially during monsoon.



#### 14.2. The Initiative/Innovation

- Mandvi municipality realized the threat posed by these dump sites, and also gauged the potential of the same land parcel in the heart of city for various developmental activities.
- It passed a resolution in the General Body meeting aiming to clear the dumpsites and convert them into parks, and assign wasteland as an alternative landfill site.



#### 14.3. Strategies Adopted

- The municipality identified a parcel of wasteland, away from the city limits, for dumping the entire solid waste generated in the city. The ownership of the land is with the Govt. of Gujarat.
- In the year 1999, two of the dump sites in the heart of the city were cleared, the soil was properly compacted, good garden soil filled

and leveled and what were dump sites once, were converted into public parks with provision for children's play ground.

- The total area converted into the parks was 7850 sq. ft.
- The initial expense incurred in carrying out the entire project was Rs 13, 61,000.
- The municipality presently incurs a monthly maintenance cost of Rs. Nine thousand, which includes water and electricity bills, and the monthly salaries of the maintenance staff.

#### 14.4. Results Achieved

- Improved public health and environmental conditions were achieved in the heart of the Mandvi town, by shifting the dumping sites away from the town's limit.
- Some 7850 sq. ft. land, which was earlier a foul-smelling dumping site, is now a Public Park frequented by the people of Mandvi.



- The land as public park is now a value-added asset for the municipality.

#### 14.5. Lessons Learnt

- Progressive, political leadership, even in small towns can make a difference.
- Adopting environment friendly initiatives not only improve health, hygiene and sanitation but also help develop green areas.
- Vacant, un-productive municipal properties which are of nuisance-value can be converted into value-added land resources

#### 14.6. Sustainability

- Both, from overall sustainable development point of view as also from the viewpoint of environmental sustainability, the reclamation project of Mandvi Municipality is a commendable project. There is a question mark as to whether the alternative site on the parcel of revenue wasteland is the right choice; this is because the new landfill site has not been scientifically evaluated.

#### 14.7. Transferability

- With many small towns having similar un-used or misused land-parcels, the practice of Mandvi Municipality can be applied.

## B. Beach cleaning Project

### 14.8. Situation before the Initiative

- Mandavi is very well known for its beach and harbour in the region of Kachchh.
- The beach is a major attraction for tourists every year.
- Number of haphazard and illegal stalls had started coming up all along the length of the beach to cater to the recreational needs of the tourists.
- These haphazard stalls in absence of regulation and strict vigilance of dumping waste posed an environmental threat.

### 14.9. The Initiative/Innovation

- Mandavi municipality in the year 2000 took strict actions to remove all the illegal stalls, assign land for commercial development and have strict regulations to prevent littering and waste disposal all along the beach.

### 14.10. Strategies Adopted

- An area has been demarcated beyond which even the legal stalls would not be permitted.
- Municipality has appointed two staff members to keep a strict vigilance on location of these stalls and the disposal of the waste generated.
- The area near the entrance that was made available after the removal of the illegal stalls is proposed to have a pay and park facility.
- The income generated from the parking facility is planned to be used for the beachfront development.
- The total expenditure to carry out the removal of the illegal stalls was 15,000.



### 14.11. Results Achieved

- The beach is now clean.
- The commercial stalls have been restricted to the land assigned preventing litter all along the beach
- Land is made available because of proper planning of stalls rendering opportunities for parking and other recreational facilities for generating income.

### 14.12. Lessons Learnt

- The local bodies should take strict measures to maintain the environmental conditions of all the natural features of the region and add to the civic asset.



### 14.13. Sustainability

- The practice of Mandvi Municipality is a sustainable process in all spheres – financial, environmental and cultural.

### 14.14. Transferability

- The processes within the practice are transferable

## C. Reclamation of Storm Water Channel

### 14.15. Situation before the Initiative

- Topansal pond in the rainy season following the natural topography of the region would overflow in the river Rukhmavati through natural channel passing through the heart of the city.
- This natural channel had varying widths along the length and was not hard lined.
- Slums encroached upon the area abutting the channel at various pockets along the length.
- The waste from these abutting encroached areas was being dumped in this channel over the years that caused water logging in the rainy seasons.
- This created an unhygienic environment in the heart of the city.
- During rains as the sufficient depth was not available because of blockages in the natural channel due to waste disposal in the channel, the storm water would flood the surrounding areas and the main road causing hindrance for the traffic movement.
- The area abutting the channel along its entire length belonged to the Municipality, which could not be put to use because of the encroachment.



### 14.16. The Initiative/Innovation

- Mandvi municipality realized the need for constructing storm water channel and clearing the encroachment in the abutting areas to overcome all the above difficulties.

### 14.17. Strategies Adopted

- The task involved conducting meetings with the people to bring out the importance of removing encroachment for betterment of the town.
- The project was financed through the N.S.D.P loan.

- Mandvi Municipality as per the Gujarat Finance Board guidelines invited tenders from eligible organizations to carry out the work.
- The total cost estimated for the project was Rs.1, 40,49,974 of
- Various meetings were organized and people convinced to vacate the encroachments and shift to the land reserved for economically weaker section in the development plan.
- Illegal construction was removed and the entire area along the entire length of the channel was cleaned.
- Channel was evenly dug to a depth of 5' and 6' width and lined with cement concrete.
- A cross culvert across the main road was constructed to ease the water flow at the critical traffic congestion area.
- Filters have been constructed at places to filter the solid waste/plastics flowing in the river.
- The entire project was carried out in an year's time.
- A retaining wall built to support the edges of the channel.
- Financial break up is as follows

Phase 1	Total cost-Rs. 56,71,974
Works awarded on	21/5/2001
Contractor	Medhavi (NGO)
Works completed on	15/4/2002
Phase 2	Total cost-Rs. 83,78,000
Works awarded on	16/5/2001
Contractor	Medhavi (NGO)
Works completed on	50% work completed

#### 14.18. Results Achieved

- Clear channel created for the pond to overflow to down stream river Rukhmawati during monsoon.
- Improved public health and environmental conditions.
- Traffic congestion due to water logging during monsoon is solved.
- Land (24,689 sq. m.) was made available for providing various social and utilitarian activities.
- The available land is an asset for the municipality.



#### 14.19. Lessons Learnt

- Subject to political will, people can be persuaded and motivated to relocate for the sake of common good.
- Preventive measures for improving environmental conditions and creation land resources is possible in small towns.
- The available land is an asset for the municipality.

#### **14.20. Sustainability**

- The process and the practice are both sustainable.

#### **14.21. Transferability**

- The practice is transferable for resolving similar encroachment issues in other towns and cities.