

In spite spending more than an hour in the area, we couldn't meet any fisherman, who could have enlightened us on the functioning and economics of the fishing activity. There was no evidence of organized or systematic pisciculture. No fishes were visible in any of the ponds.

### 3. Solid Waste Dumping:

Solid waste from the neighborhood (mainly the hospital in this place) was dumped on roadside area of the pond. It was mainly the packaging material like thermocol, paper, cartons, etc., but glass (light tubes, bulbs, bottles) and plastics were also visible. Construction rubble was also present.



**Fig. 3. Solid waste dumped along the artificial fishing pond**

Holding pond was full of water and the level upto which tidal water reached could be observed. Mangroves in the intertidal zone were present but in degraded / stunted size and shape, as could be deduced from their height and canopy shape. Variety of species around the pond was limited (*Avicennia*, *Sonneratia*, *Derris*, *Salvadoraa*, *Sesuvium*, mainly). More species in the total area of concern were noticed, e.g. *Aegiceras*, *Rhizophora*, etc.

Banks of the pond suffered due to dumping from the neighborhood as reported earlier. The dumping is so serious that the original bank line is not visible. The banks are being planted with trees thus consolidating the ground formed by dump. This situation is visible all around the pond. It is feared that if the process continues, the pond will keep shrinking while the banks with their dumps will keep on encroaching further, and one may feel (wrongly) satisfied with broadening of the 'green belt' occupying the dump.

The 'Park' ground is planted with Neem, Raintree and Subabhul. Presently however, no pattern (aesthetics or landscape or educational or recreational, etc.) or theme is evident. The ground sloping into the pond is, as elsewhere, loaded with solid waste (construction rubble and domestic refuse) and relics of mangroves.

The committee met the local Ward Officer of the NMMC. He suggested meeting with the Dy. Municipal Commissioner for the area. We couldn't accede to the suggestion due to time constraint and conveyed our regrets to DMC.

It is suggested that the Committee shall meet next in Belapur CBD office of MPCB for final summing up of the proceedings so far and drafting suggestions for improvement of the situation. Some important information inputs are necessary from relevant authorities, especially from NMMC, CIDCO and FD. The information needed from them is about:

1. Objectives and Plans for development of the Park.
2. The sewage treatment plant and monitoring mechanism for functioning of the same.
3. Provision of solid waste disposal according to development plan of the township.
4. Proposed disposal of bio-medical waste from the hospital.
5. Mechanism in existence for protection and nurture of mangroves vegetation.
6. The fishing activity, number of families involved and quality and size of yield.

#### **4.4 Minutes of the Meeting held on 16/5/2005 at MPCB (HQ), Sion, Mumbai:**

The following Member of the Committee were present:

1. Prof. Dr S. B. Chaphekar
2. Dr A. R. Supate
3. Mr. A. B. Jain
4. Mr D. M. Choukhande
5. Mr S. S. Doke
6. Mr. N. Sadasivan

The following invitees were also present:

1. Mr. Venugopal, Senior Planner, CIDCO, Navi Mumbai
2. Mr. G. D. Khan, Executive Engineer, NMMC, CBD, Navi Mumbai
3. Mr. A. R. Patnigire, Dy. Municipal Commissioner, NMMC, Navi Mumbai

Following other MPCB Officers were present for the meeting:

- 1) Dr. S. B. Katoley, Advisor, MPCB
  - 2) Mr. P.M. Joshi, Sub-Regional Officer
  - 3) Mr. K.B. Shinde, Sub-Regional Officer
  - 4) Mr. A.F. Deshmane, Sub-Regional Officer
1. Dr. Chaphekar, explained in brief the purpose of constitution of the Committee and the work done so far. He requested the representatives of CIDCO and NMMC to share their points of view. Mr Venugopal, Sr. Planner, CIDCO informed that they had started the beautification and development of the park and the area around the holding pond. However, after some initial work, this was stopped and the entire zone of Airoli was handed over to NMMC. As such both these areas are in an abandoned state at present. He further informed that the fishing ponds were illegal; however he sought 10 days' time to verify the documents. (1) No document is received till the day of writing this Report. As regards bridge construction site, which is presently occupied by the remnants of construction, falls in CRZ II. The map prepared by CIDCO for development and beautification of the park area as well as

## **OBSERVATIONS:**

Based on the observations made and information gathered so far, Recommendations are made, which are given in this part of the Report.

### **5.1 HOLDING POND & AREA AROUND AT AIROLI :**

#### **5.1.1 Holding Pond of STP:**

- Though CIDCO has handed over this area to NMMC as early as in June, 2004, NMMC claims that this was done only orally and at the moment of writing this report, we are worried about the legal status of ownership of this piece of land.

#### **Recommendation:**

All the legal formality for handing over this area to NMMC by CIDCO should be expedited and NMMC should pursue the matter for taking further action.



**Fig. 4. Holding pond at Airoli with Mangroves growing along the boundary**

#### **5.1.2 Beautification of holding pond:**

- Along the fringes of the holding pond, the mangroves are in degraded condition.

#### **Recommendation:**

The NMMC, with the help of expertise available from Forest Department as well as from other sources, should undertake a programme of protection and restoration of mangroves. Beautification plan should be considered for preservation and improvement of mangroves which are already in existence in the area. All along the boundary of the pond, wherever the mangroves are degraded, plantation of mangroves should be undertaken in which towards the water a row of *Rhizophora* should be planted. While plantation of mangroves, natural zoning of mangroves should be considered as a guideline.

### 5.1.3 Dumping of waste:

- Bank of the pond is covered with waste dumped, especially construction waste and domestic refuse. This is gradually reducing the area of the pond and increase in the land along the periphery of the pond.

#### **Recommendation:**

NMMC should take immediate steps to stop dumping in that area and clean up the entire area of the existing debris and waste especially along the banks of the pond. This cleaning should be done to reach the original pitching of the bank.



**Fig.5. Dumping of refuse & municipal solid waste on the bank of Airoli holding pond**

- The entire area surrounding the holding pond looks dirty and unkempt. Beautification of area surrounding the holding ponds is needed urgently.

#### **Recommendation:**

The area surrounding the holding pond should be beautified by shade trees and ornamental bushes. The possibility of designing of jogging track should also be considered. From the partial reclamation area opposite sector 16, a wooden walk- way on wooden stilts should be planned to reach about 10 m. inside the pond. This walk-way will serve as a bird watching point for nature enthusiasts.

## 5.2 SOLID WASTE DUMPING SITES:

- All along the banks of the holding pond dumping of construction and domestic refuse is taking place at present. The area is also used as open air latrines.

#### **Recommendation:**

These activities should be stopped forthwith. NMMC should be responsible for cleaning and maintaining these areas by stepping up vigilance. The NMMC should consider setting up of public toilets at suitable locations and the waste from these toilets should be connected to the city sewage system.

- The present condition and functioning of the STP is observed to be very poor. Substantial amount of sewage was found to be accumulated and heavily sedimented in the pond. The conditions are eutrophic as indicated by foul odour, presence of blue green algae and generation of bubbles rising from bottom of the pond. The sewage water is seen to be going into the creek without any treatment. The waste water will affect aquatic life. Proper operation and maintenance of STP is required to be done by the NMMC.

**Recommendations:**

1. Functioning of STP should be efficient and be done by technically competent personnel. The NMMC should device a monitoring mechanism to ensure efficient and round the clock functioning of STP as per guidelines issued by MPCB.
2. The aeration tank should be desilted. The silt removed should be disposed off in the area marked for solid waste disposal.
3. The disposal point for the treated waste water should be properly designed and located in consultation with expert agency such as NIO, Goa.
4. The sewage flow meters and energy consumption meters should be installed at STP. Proper record should be maintained. Monthly returns should be submitted to the MPCB.
5. All the equipment of STP, including the lining of the pond should be repaired and maintained properly.



**Fig. 6. Non-functioning aerator at Airoli Sewage Treatment Plant**

- There are several ponds (Some 60 odd as reported by locals) constructed across flow of tidal water in the mangrove area i.e. CRZ-I. All these ponds are reported to be illegal. Some of the tidal water flows into these ponds along with fish-fingerlings. Locals harvest these, after sometime. This fishing mechanism means that young, immature fishes are harvested and that fishes are not allowed to grow to their normal size. It is a fact that many of the fish species breed in mangrove areas. If the finger- lings are harvested in this way the fish population in the creek will be adversely affected. Whenever commercial fishing is done in the creek, it will also be adversely affected.

#### **Recommendations:**

1. Since these fishing ponds are illegal, they should be dismantled immediately. The barren areas thus remaining behind should be opened, by digging trenches if necessary, for free movement of tidal water and be planted with the mangrove species that exist in the vicinity.
2. The NMMC authorities may explore the possibility of directing the traditional fishermen community to refer to the Supreme Court directive for organizing aquaculture parks. Feasibility of such parks should be checked by CZMA, before permitting the activity in Airoli.



**Fig.7. Fishpond opposite to Burns Hospital, Airoli**