CHAPTER-2
A STUDY AREA

2.1: BRIEF HISTORICAL SKETCH OF BHAKTI MOVEMENT:

The importance of Bhakti as an independent path for self-realization or for experiencing the divine can be traced back to medieval period. The Vedic tradition had at this time become static, rigid, and uncreative and failed to inspire people in accommodating new changes. The excessive importance given to scriptural authority, the rigidity of the caste system, the insensitivity of Sanskrit scholars towards regional languages, created restlessness amongst both sensitive thinkers as well as the masses. In south India this began with the Alvara saints. They imparted spiritual wisdom in a simple poetic form to the masses in their own regional languages, going beyond caste system. The path of devotion was supported by the exponents of the Vedic tradition such as Ramanuja, Madhava and their philosophers (Joshi, 2009). After it flourished in the south, this path spread to the north. The compositions of Mira, Kabir, Surdas among others enriched the Bhakti school in the north. The spread of non-vedic traditions such as Jainism and Buddhism in the south, had already undermined the caste system, and had opened the doors of spirituality also to women (Joshi, 2009).

2.2 WARKARI SAMPRADAY:

Warkari meaning "a pilgrim" is a Vaishnava religious movement (sampraday) within the bhakti spiritual tradition of Hinduism, geographically associated with the Indian states of Maharashtra and northern Karnataka. Warkaris worship Vithoba (also known as Vitthal), the presiding deity of Pandharpur, regarded as a form of Krishna, an avtar (incarnation) of Lord Vishnu. It respects Dnyaneshwar, Namdev, Tukaram, Chokhamela and Eknath, all of whom are accorded the title of Sant. It depends on a duty-based approach towards life emphasizing, moral behavior and strict avoidance of alcohol and tobacco, and strictly abide by vegetarian diet and fasting on Ekadashi day (twice a month), self-restraint (brahmacharya) during student life, equality and humanity for all rejecting discrimination based on caste or wealth, the reading of holy books by all castes, the reading of the Haripath every day and regular bhajan and kirtan (Nemade, 1981).
2.2.1 Inception and Impact:

In Maharashtra the Warkari cult of the Bhakti movement is influenced by both the north as well as south. It was the Bhagvata tradition which worshipped Visnu, in its various forms by the various cults in Bhakti literature; the Bhagvat occupies the central position. Bhakti in the south as well as in the North, as Bhagvat Bhakti, adopted a liberal, egalitarian approach, to the spiritual because of which the social elevation of women and Dalits became possible. Later devotional saints of south did not provide a philosophical foundation to their approach by writing commentaries on any scripture. In Maharashtra however, we find Dnaneshwari, a commentary on the Bhagvat-Gita in Marathi. Eknatah, who succeeded Dnyaneshwara, commented upon the Bhagvata in Marathi and his Eknathi Bhagvata discussed the moral and socio-philosophical issues of his times through the preaching are of Krisna. Through his Bhavarth Ramayan he discussed the ethical principles and character of Rama (Nemade, 1981).

Bhakti movement is the most significant creative upsurge of the Indian mind during the present millennium. In Maharashtra this movement has an unbroken tradition which can be traced back to the thirteenth century on the eve of Muslim invasion on the kingdom of Deogiri. Throughout these centuries there has hardly been a period of any considerable length when the marathi-speaking people of India can be said to have enjoyed peace and prosperity. Until the rise of the Maratha kingdom in the middle of seventeenth century, society passed through hard times under often fanatical Muslim governments. That the Warkari movement mostly led and sustained by the underprivileged classes, should arise in this time of national catastrophe and, despite hostile conditions, develop quietly into the most influential mass movement of rural Maharashtra, it is the successful result of the broad-based, autonomous and unique style that is generated within it (Nemade, 1981).

In contrast to the Mahabhunava’s, the Warkari movement did not have a prophetic autocracy. In order to be effective the Warkari movement has chosen to be governed by laws generated from the mass of its own underprivileged supporters and have refrained from bursting out in short-lived manifestos. It maintained its distance from active politics and avoided direct comment on any political activity, whether of the Muslim or the Hindu rulers. It has been liberal and inclusive. Although spread over Maharashtra, Karnataka and Andhra, it never had a fixed and a regular establishment, so
that it could not suffer economic loss. Small village temples and individual domestic idols of Vitthal distributed the centres of its faith into every home (Nemade, 1981).

2.2.2 Ethical Principles of Sampradaya:

The Warkari code is flexible and is modified by succeeding generations, since Warkari philosophy emphasizes spirit rather than form. A Warkari should observe such prohibitions as the avoidance of wine and non-vegetarian food. He should fast on certain days; he should condemn certain sins and believe in doing well to others. Each of these ethical values can be related to the impoverished and exploited classes and the backward economy of the region. Secondly the democratic influence of the Warkari saints had its simplicity in all religious matters and its powerful philosophy acceptable to the common people.

They did not resort to strange, outlandish dress, but made only simple modifications in the day-to-day dress of the common people. Clean clothes, a daily bath, a tilak on the forehead, and necklace of tulsi beads were more suited to the underprivileged economy. Pilgrimage to Pandharpur and not to the extensive North India Gangetic shrines was essential, and this had to be undertaken by walk, in the company of fellow Warkari’s, so that the devotees were also in touch with the larger world of the sect every year (Nemade, 1981).

2.2.3 Wari:

The Bhakti movement in Maharashtra, under the aegis of Dnyandev took the form of Vithoba cult (Vithoba meaning Father Vitthal - regarded as form of Vishnu). Vithoba the black colour deity of Pandharpur, was worshipped by the pilgrims of the Warkari cult, with whom it was a regular practice to journey to Pandharpur and back at least twice every year. A Warkari was one who made a wari - around trip or pilgrimage. The Warkari cult is so named as its followers practice wari i.e., going to Pandharpur regularly on Ekadasis of the months of Asadha, Kartika, Magha or Chaitra. It is also called malkari, because he wears the garland of tulsi and undertakes the wari. It respects Vedic traditional scriptures such as Vedas and Bhagvata, Gita etc. It also has its prasthantrayi in Marathi which consists of Dnyaneshwari, Bhagvata by Eknatha and Gatha by Tukarama. It also gives importance to Amrutanabhava, Changdev pasasthi, Abhang-gatha of Dnyaneshwara, Namdeva and compositions of all warkari saints of all castes. Moral
norms such as speaking the truth, treating women (other than one’s wife) like a mother, etc are to be followed (Joshi, 2009; Sadarangani, 2004).

### 2.2.4 Warkari Saints:

From the thirteenth century onwards Pandharpur emerged as the pilgrimage of the Warkari Bhakti movement, which boasted an impressive galaxy of saints and devotees. Although the Warkari’s worship the Vitthal of Pandharpur, the Samadhi of the saints have become, in effect, the Warkari panth’s nodal organizing centres. The Sampradaya continues to be immensely popular and a critically important piece in the fabric of contemporary Maharashtrian selfhood. The Pandharpur pilgrimage is closely associated with the cult of Vithoba and with the long ancestry of the poet saints of Maharashtra. The unusual side of the Maharashtrian Bhakti is its unique link between the saints and Vithoba of Pandharpur, as well as the kind of relationship which is set up between them. It can be said, indeed that, the entire Warkari panth is organized around the saints (Mokashi, 1987).

There were about fifty poetic Warkari saints. Some have slipped through the cracks of the recorded history but nearly all of them have come from the silent majority of regular folk. There was Savata Mali of the Gardner caste, Sena of the Barber caste; Gora, the potter; Kanhapatra, the dancing girl; Janabai, the house servant, and Chokhamela, the untouchable (Youngblood, 2003). Main five saints of Maharashtra being Dnyandev (1275 to 1296) the outcaste Brahmin; Namdev the tailor (1270 to 1350), Eknath (1533 to 1599) the householder Brahmin, Tukaram (1608 to 1659), and Ramdas (1608 to 1681), regarded as a political saint and preceptor of Shivaji (Sadarangani, 2004).

### 2.3 THE PALKHI (PALANQUINS) PILGRIMAGE:

Each year from every corner of Maharashtra, the Warkari’s converge on Pandharpur on the eleventh day (Ekadasi) of the fortnight of the waxing moon in the months of Ashadh (June-July) and Kartik (November-December) and to a lesser in Magh and Chaitra in order to honor Pundalik and to worship at the feet of Vitthal. This tradition dates back to thirteenth century to the great poet-saints Dnyaneshwar and Namdev at that time. Since then all the subsequent Warkari saints, have by their continuing example, established this pilgrimage as the prominent ritual of the Panth. The term Warkari is applied to “any pilgrim on his way to Pandharpur”. So the Palkhi pilgrimage includes all
the ordinary Warkari men and women as well as their gurus i.e. the entire living Warkari community. But it also includes all the great saints of the past. These saints are also taken along faithfully each year on the most climactic of all the pilgrimages and festivals, the one in the month of Ashadh. They are taken along carried in palanquins –palkhis- under the representation of their paduka’s (Mokashi, 1987).

Around each one of these saints palkhi’s there has coalesced over time a traditional procession of hundreds or thousands, or even, in the most important instances, tens of thousands of Warkari pilgrims who accompany the saint from his samadhi or commemorative temple, wherever it happens to be in Maharashtra to Pandharpur. The oldest, the most traditional, and most revered of all these palkhi’s is that of Dnyaneshwar, which starts from his temple in Alandi and walk for fifteen days over 250 km to Pandharpur on the occasion of the Ashadh pilgrimage. Palkhi procession from Dehu to Pandharpur in Ashadh was begun in the nineteenth century and is regarded as second only to the Dnyaneshwar palkhi in sanctity. The combined processions reach to Pandharpur on the bright dasmi (tenth day of Ashadh). It is estimated that during 1980’s around 10,0000 Warkari’s attended this ceremony at Pandharpur (Mokashi, 1987).

2.4: DESCRIPTION OF THE STUDY AREA:

Saint Dnyaneshwar from Alandi and Saint Tukaram from Dehu are among the most significant and distinguishing features of the Warkari Panth located along River Indrayani in Pune District of Maharashtra state (Figure 2.1). Dehu and Alandi are very favourite resort of what are described as the Warkaris, who regard Dehu, Alandi and Pandharpur as sacred places. Apart from being home to the temples, Dehu and Alandi serves as the venue of the Palakhi festival, celebrated every year in the month of Ashadh (June) and Kartik (November). Each year in November, March, and June big fairs are held which are attended by 4-5 lakh pilgrims each. Everyday around 10,000-50,000 pilgrims visit these places. Both of these places are located in Pune District and close to Pune city.

2.4.1 Dehu:

Dehu is located at 18°43’ N and 73°46’ E. It has an average elevation of 594 meters ASL. As of 2001 India census, Dehu had a population of 5340. It is located in Haveli Tehsil, on the right or south bank of the River Indrayani; and a large alienated
village about thirty miles north-west of Pune and about three miles north of Shelarwadi station on the Mumbai-Pune railway track.

Figure 2.1: Location of study area: Dehu and Alandi
Dehu was the birthplace of Tukaram, the famous devotee of Vithoba of Pandharpur. Tukaram was born in the year 1608 and left this world in 1651. It is believed that he went to Vaikuntha. Others think that the poet's spirit is supposed still to live in the Saint Tukaram temple at Dehu, where a yearly fair lasting for four days is held in his honour on the dark second of Phalgun or March. Dehu has also a temple of Vithoba where people come on the bright and dark elevenths of every Hindu month to pay their devotions to the god. A palanquin of the saint with a Dindi is set by the management of the Devasthan Committee to Pandharpur to attend Ekadashi fair held there on Ashadha Vad.11. The footprints (padukas) of the Saint are taken to Pandharpur in the palanquin.

In the Kartiki fair the programs of ‘palanquin procession’, ‘kala’ etc are not held. The pilgrims visit the place on their way back from Alandi for the darshan of Vitthal-Rakhumai, which is located in the heart of the village. The image of the Saint Tukaram is also installed in the temple which forms a part of the temples of Vithoba-Rakumadevi, Ram, Laxman, Sita, Mahadeo, Garuda, Ganpati and Maruti in one compound.

Drinking water treatment plant is constructed and being in operation at Bodakewadi about 2 km upstream of Dehu from where water is supplied to Dehu through pipes. Some pilgrims also use the water of Indrayani River and surrounding wells.

2.4.2 Alandi:

Alandi is located at 18° 40’ 37.42” N and 73° 53’ 47.76” E on the bank of River Indrayani, 25 km east of Pune, India. It has an average elevation of 577 meters ASL. As of 2001 census Alandi had a population of 17,561. Alandi on the Poona-Nasik road, on left bank of River Indrayani, about twelve miles south of Khed; is a small municipal town. Alandi is noted as containing the Samadhi and temple of the great Saint Dnyaneshwar (1271-1300) where a large yearly fair is held in November-December. Dnyaneshwar was born in 1272 (Shak 1194). In 1290 he wrote a Marathi treatise - Dnyaneshvari, based upon the well known Bhagvadgita.

Alandi has six other temples of Bahiroba, Malappa, Maruti, Pundlik, Ram, and Vishnu. Another object of worship is a masonry wall which is said to have served Dnyaneshwar. Pilgrims come on the dark eleventh of every Hindu month, but the vital day is the dark eleventh of Kartik or November-December when thousands of pilgrims assemble. There are more than 400 Dharmshalas in the town and as such there is no
problem of accommodation for the pilgrims. The water of the River Indrayani is impounded at a distance of ¾ mile and supplied through pipes. A committee is appointed for management of fair and makes necessary arrangements of water supply and sanitation.

2.4.3 River Indrayani:

The River Indrayani originates near Kurvande village at the head of the Kurvande pass, on the crest of the Sahyadris about three miles south-west of Lonavala, and flows towards east through the Nane-Maval region. It then enters the open country and passes twelve miles east to Dehu, a place of pilgrimage sacred to the Saint Tukaram. From Dehu it flows twelve miles south-east by the village of Alandi, a place of pilgrimage sacred to Dnyaneshwar, and keeping south-east for about twenty miles, turns north and confluences the River Bhima. Valvan Dam at Kamshet, situated on the Indrayani River, is a hydroelectric generating station.

The river Indrayani a tributary of river krishna has its source in the Maval Taluka of Pune District of Maharashtra state (India). It originates on the crest of the Sahyadris hills of Western Ghats; it ultimately meets the river Krishna, which disposes its water into Bay of Bengal. River Indrayani carries both industrial and urban effluent. The River does not flow for at least seven to eight months. The river water is so polluted that it is considered as a danger to the health of inhabitants and millions of pilgrims visiting the pilgrimage towns of Dehu and Alandi located on its banks. The main causes of pollution in the river water are due to rapid urbanization and direct uncontrolled discharge of household and industrial wastes and sewage. It was observed that residents of Dehu and Alandi and other residents along river Indrayani and millions of pilgrims visiting these places are continued to be exposed to unsafe water and associated health risks.

2.5: PILGRIMAGE AND ENVIRONMENTAL ISSUES OF THE STUDY AREA:

Natural resource depletion and environmental degradation associated with tourism activities pose severe problem to many regions favoured by visitors. The fact that most visitors choose to maintain their patterns of relatively high consumption and waste generation in the places they visit. The two main areas of environmental impact of tourism are: pressure on natural resources and damage to ecosystems. Furthermore it is
now, widely recognized that environmental degradation caused by visitors in turn poses a serious threat to public health (Neto, 2003).

**2.5.1: Factors Affecting the Environment:**

Large scale movement of visitors during pilgrimages has a high potential to influence the environment in sacred sites. In traditional pilgrimage, environmental effects are governed by seasonality and are limited over time and space. Significant changes in scale, frequency and character of such visits over the past few decades reflect new pressures on the environment of sacred sites. Two kinds of factors that are most likely to affect the environment in a pilgrimage centre include visitor flows and urban growth of the place. These factors in turn affect the environment through three interrelated processes: (1) Pressure on basic services, (2) increase in pollution and (3) degradation of natural resources (Shinde, 2007).

**2.5.1.1: Visitors flow:**

Only sporadic information is available about the number of visitors at Dehu and Alandi, both in past and present. At Dehu 1000 pilgrims were attending the bright and dark Ekadashis and 3000 pilgrims attended Phalgun Vad fair at Dehu in 1981 while 50,000 pilgrims attended the Kartik fair held at Alandi (Gazetter of Bombay Presidency, 1885). It was recorded (Gazetteer of Bombay State, 1951) that 21,000 and 80,000 pilgrims attended the Kartik fair (Nov-Dec) at Dehu and Alandi respectively in 1951, where as the records for Ashadhi fair are available for Dehu only. From 1959 to 1964 about four thousand to five thousand people attended the Kartik fair and about two thousand to three thousand pilgrims’ attended the Phalgun fair at Dehu (Census of India 1961). The aggregate congregation at the two fairs of Ashadh and Kartik at Alandi was more than a lakh. The annual pilgrimages at Dehu and Alandi had drawn as much as one or two hundred thousand Warkari pilgrims every year in 1980’s (Mokashi, 1987).

We were able to provide a better approximation of visitor flows from the detailed fieldwork undertaken for this study. We found some pattern in visitor flows and this occurs at the interval of day, weekly and, monthly and annual level data. In Alandi, annual peaks of about 400,000 – 500,000 pilgrims per day are reached during the fairs in November (Kartiki Ekadashi) and June (Ashadh Ekadashi). In Dehu, the aggregate annual congregation at the two fairs is almost 700,000 (Figure 2.2). In Alandi, weekly peak in
numbers of visitors is reached on Saturday and Sunday; these days witness visitor numbers in excess of 25,000. Figure 2.2 illustrates a comparison between visitor flows in Alandi and Dehu, where daily average was about 25,000 and 4,500 visitors, respectively.

Figure 2.2: Visitor number during various pilgrimage activities at Dehu and Alandi.

Figure 2.3.: Weekly visitor’s flow pattern at Alandi and Dehu.
Another contributor to visitor flows is the regular celebration of marriages in Alandi. It is estimated that on every marriage day about 13426 extra devotees attend temple which could be 537040 numbers per year (Considering 40 marriage events per year). Each year during the marriage days, around 200-400 marriages take place daily. As a pilgrimage centre, Alandi is also home to several charitable trusts and *dharmshalas* or pilgrim-lodges. Traditionally, *dharmshalas* were built to provide accommodation to pilgrims. There were more than 400 registered *dharmshalas*, in Alandi and most of them were believed to have an average capacity of 20 rooms and one large marriage hall.

Annual visitor numbers average to 10 million in Alandi and 2.5 million in Dehu. A majority of daily visitors to these places come from the nearby metropolitan centres of Pune, Pimpri-Chinchwad, and Nashik. Ideal stay duration of the pilgrims during the annual fairs (*yatras*) is 6 days. Pilgrims coming on normal days and monthly *Ekadashis* stay for 2 hours. These two hours are utilised to visit main temples of *Tukaram* and *Dnyaneshwar Maharaj*.

### 2.5.1.2: Urban growth:

As per 1951 census the population of Dehu and Alandi was 2000 and 2170 respectively. From the population of 2000 and 2170 it grew to 23150 and 28000 in 2008 with the annual growth rate of 16.13 and 18.25% respectively, according to *Grampanchayat* (Village council) Dehu (2007-08) and Rural Health Center, Alandi (2007-08). Dehu was a very small village established before 16th century. At the time of *Tukaram* the population of Dehu was supposed to be 150-200. Only two to three *Dharmshaalas* were present in 1950’s. Pilgrims visiting Dehu were residing in these *Dharmshaalas* for one or two days (Bendre, 1951). This village started growing since the 18th century. Because of Defense Establishments, many people got an opportunity to work which resulted in population growth of Dehu. In 1941 population reached to 1794. It was observed that only 4% population depends on pilgrimage related income. Presently only four to five *Dharmshaalas* in Dehu did not able to accommodate large number of pilgrims and these *Dharmshaalas* are rarely used for marriages.

In case of Alandi the population grew rapidly because of several reasons among these, high visitor’s number (Figure 2.2 and 2.3) resulting in increasing material demands resulting in economic opportunities. This has resulted in migration from parts of state, especially rural Maharashtra. Secondly Alandi has become known as a place for mass-
marriage ceremonies for impoverished parents who would avoid expenses for a daughter's marriage.

It was observed that 60.81% population was migratory, whereas only 39.18% population is local. It was observed that 14.41% population reside in Dharmshalas without paying any charge. 45.95% population had their own house, 38.73% population live on rent, excluding Dhramshala residents. Thus to meet not only the requirements of the increasing number of pilgrims but also local residents, houses, new roads, bridges, stadium, toilet, hotels, Dharmshala's, shopping centers, etc are constructed, which attract additional labor and technology. Alandi is also surrounded by emerging industrial areas such as Chakan, Markal, Chikhali, Moshi and Bhosari, which create employment opportunities.

2.5.2: Effects on the environment:

The environmental implications of further growth of pilgrimage in the study area need to be understood. The most important direct effect that the pilgrimage brings on the environment is increased pressure on the carrying capacity of the River ecosystem. Increased transport and construction activities lead to large scale destabilisation of natural landforms, while increased tourist flow leads to increase in solid waste dumping as well as depletion of water and fuel resources. Noise pollution from vehicles and public address systems, water pollution, vehicular emissions, untreated sewage, etc. also have direct effects on bio-diversity, ambient environment and general profile of pilgrimage destinations. Because no systematic study has been conducted on this subject, present study throw light on the current status of the River ecosystem and environment which helps preparation and implementation of Management Action Plan (MAP).

2.5.2.1: Stress on basic services

In absence of sewage treatment plant, domestic sewage is discharged directly into river at both Dehu and Alandi. Only 15% of houses are connected to underground drainage system which carries domestic and kitchen waste. Most of the places have open drains and always remain filled with garbage and blocked by silt resulting in mosquito breeding sites. 23.57% and 26.36% local population of Dehu and Alandi, respectively, does not have an access to toilet (Figure 2.4). Based on the field observations, it can be said that about 100 and 400 pilgrims stay in Dehu and Alandi for Parayan, regularly. A
group of people come and stay for around one week followed by another group at the same place. Pilgrims occupy several places such as main temple, Dharmsalas and other smaller temples of these towns. These groups may be as small as ten members to larger groups of eighty to hundred people. Out of these, 99% of them go for open defecation because of unavailability of toilet facilities. Toilets are rendered unclean and most of the pilgrims prefer to go for open defecation. During festive periods less than 1% pilgrims use toilets (especially Dharmsala toilets) 99% go for open defecation (Figure 2.5), which flushes in river during rainy season resulting in increasing water pollution and in non-rainy season resulting in nuisance smell.

![Graph showing local population at Dehu and Alandi having no access to toilet.]

Figure 2.4: Local population at Dehu and Alandi having no access to toilet

2.5.2.2: Solid Waste:

There are no standard and flexible methods of collection and disposal of garbage. In absence of proper collection system the households, shops and commercial establishments throw the waste on to the streets. This subsequently drains into drainage system resulting in blocking of drains which create smell and mosquito breeding sites leading to unhealthy conditions.
2.5.2.3: Increase in Pollution:

Several villages and towns rely on River Indrayani for drinking water. Important activities observed along the river are pilgrimages bathing, washing, open defecation, cultivation, sand removal, fishing, irrigation, drinking water intake, and industrial activities. It was observed that there was no underground sewerage system in Alandi. The domestic sewage generated in the town is directly discharged into the Indrayani River without any treatment, which is a major source of contamination of the river water. The problem becomes severe considering the large number of pilgrims visiting the town daily and lakhs of devotees visiting the town during the Ekadashi festivals. Similarly, the solid waste generated in the town including biomedical waste is disposed off indiscriminately along the riverbank. There is no standard Municipal Solid Waste Management System in the town. Thus, the untreated sewage and solid waste are the major sources of contamination of the river water (MPCB, 2004-05). However, the study conducted by MPCB had some shortfalls because of less sampling size and frequency. Beside these activities the river ecology is significantly affected by municipal sewage released in between Dehu and Alandi, especially at village Chikhali. It was reported that about 32 MLD of sewage is released in the river daily out of which only 16 MLD is partially
treated and remaining sewage is discharged without any treatment in river (MPCB, 2005). Similar studies were carried to monitor the ambient air quality and ambient noise quality in the Alandi town by Maharashtra Pollution Control Board (MPCB, 2004-05). It is seen from the above results that the ambient air quality in the town was generally within the NAAQ standards prescribed by the CPCB. The SPM and RSPM levels were slightly high.

### 2.5.2.4: Damage to Ecosystems:

Beside the consumption of large amounts of natural resources, the pilgrimage activity also generates considerable waste and pollution. Disposal of liquid and solid waste generated by the pilgrims has become a problem for these religious places that lacks the capacity to treat these waste materials. Disposal of such untreated waste has, in turn, contributed to reducing the availability of natural resources, such as freshwater. Apart from the contamination of freshwater by untreated sewage, pilgrimage activities can also lead to land contamination from solid waste (Neto, 2003).

### 2.5.3: Environmental Degradation and Threat to Public Health:

Waterborne diseases are acute but it is difficult to find out exact number of cases of waterborne diseases in local population and floating population. It was recorded that during the year 2004-05 total of 1065 cases of diarrhea were reported in Primary Health Center at Alandi which are about 85 cases per month. During the year 2002-03 only 20-25 diarrhea cases were recorded in Primary Health Center at Alandi per month. From March to May 2005 jaundice cases were on rise, about 90 cases of jaundice were recorded at Alandi (MPCB, 2004-05). During the year 2006-07 on an average 53 cases of diarrhea with total of 640 cases were recorded in the Alandi Primary Health Center. At the same time out of 541 water samples analysed 73 samples were found polluted. (Primary Health Center, Alandi, 2006-07). However these figures do not make any sense in relation to the studies of impact assessment because several components are involved in the public health which will be discussed in a separate chapter.