

Multi-Party Accountability for Environmentally Sustainable Industrial Development: The Challenge of Active Citizenship

**A Study of Stakeholders
in the Lote-Parshuram
Chemical Industrial Belt,
Chiplun, Maharashtra**

Study Report No.

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Foreword

Development Research Centre (DRC) on Citizenship, Participation and Accountability is a research partnership based at the Institute of Development Studies (IDS), Sussex, U.K, which brings together research institutions and practice based civil society groups from India, Brazil, South Africa, Mexico and Nigeria from the South and the U.K from the North. DRC project explores the issues of poverty, exclusion and marginalization within the framework of rights and citizenship. 'Making rights real for poor people' is what DRC project aims at and it seeks to contribute to this goal through research, dissemination, policy influence and capacity building.

PRIA entered into this partnership in 2001. As part of DRC, PRIA continues to conduct research studies relating to various aspects of citizenship, participation and accountability.

We are happy to bring out this publication as part of DRC study report series and we do hope that the readers will find this exercise beneficial.

March, 2004

Rajesh Tandon
President, PRIA
New Delhi



Preface

The present report is an outcome of PRIA's research study on **Multi-Party Accountability for Environmentally Sustainable Industrial Development in Lote- Parshuram Industrial Area, Chiplun.**

This study attempts to look at an industrial zone where the government and the industries have started the process of development with specific goals and objectives. The study also tries to seek a glimpse of the various stakeholders and their understanding and experience in the industrial development process and their role as stakeholders in seeking and negotiating for accountability from the dominant groups.

This report is organized in three sections. **Session I context** provides the responsibilities of Maharashtra Industrial Development (MIDC), objectives, activities and methodology. **Session II Key Findings** focuses on the contexts of land, shelter, rights and entitlements, and interaction with institutions and some case studies. **Session III Emerging Issues** interprets the findings and draws lessons from it.

We are grateful to PRIA for their encouragement and support throughout the study. Mr. Vijay Kanhere has been a pillar of strength throughout the study with his valuable comments and inspiration to plough through the vast data and Ms Arifa Bijlee, Mr. Ashok Kadam and Sachin of Parivartan, provided us their active support by taking up the task of data collection. We are also indebted to all the respondents for sharing their experiences and views during the data collection process.

Above all, we express our sincere thanks to Dr. Mary Alphonse, Principal, College of Social Work, Nirmala Niketan for allowing us to conduct the study.

Vaijayanta Anand



Section 1

Introduction

According to the World Commission on Economic Development (WCED) Report (1987), 'Our Common Future', sustainable development is defined as development that meets the need of the present without compromising the ability of future generations to meet their needs. It contains within it two key concepts:

- The concept of “needs”, in particular the essential needs of the world's poor, to which overriding priority should be given, and
- The idea of limitation imposed by the state of technology and social organization on the environment's ability to meet present and future needs.

These two key concepts are over ridden by the notion of development synonymous with industrialization leaving many countries with the worst consequences for the poor and the environment. The most popular model of development pursued by the majority of countries is industrialization and technological excellence. The under-developed and developing countries follow this route of industrialization and more-industrialization to reach the pinnacle of development.

Technological development or industrialization is not value free or neutral to the socio-economical structures in which it operates. It inevitably leads to the strengthening and enrichment of the social segments that are already strong and rich and to increasing exploitation and marginalization of those who are poor and powerless. This happens both within and across countries. It also has the effect of tearing apart the fabric of societies. The rich, powerful and technologically dominant section of the societies in different countries, both developed and developing, becomes a single distinct global segment acting together for their mutual profit and moving further away from the rest of their own societies not only economically but, also socially, culturally, intellectually and ideologically.

This mode of development leaves behind a trail of damaged environment, polluted air, water and ecosystem, degraded forests and diverse species of flora and fauna. The displacement or destruction of the habitats of large masses of people is also one of the products of such a development model.

The fruits of such development may be the increase in GDP of the country and economic growth but the cost paid for the development is too high.

Millions of the poorest are forced to pay the cost by letting go of their land, getting ejected from their habitat or suffering the bad effects of industrialization.

In the present scenario the benefits of industrialization cannot be equated to that of development. The people in the area demarcated for industrial growth cannot be seen as mere beneficiaries, customers, displaced people or victims, they are stakeholders and thus equal partners in deciding the fate of their area. The idea of sustainable development includes the participation and inclusion of the people of the area as equal stakeholders. Thus, their role cannot be relegated to being mere spectators mutely suffering the consequences without control on the process.

Stakeholders, Participation, Accountability and Sustainability

In a 1993 USAID document consisting of a formal statement of principles on participatory development (Lo Voy 1999) there was a shift from the term 'beneficiary' to 'customer' carrying with it a cluster of associated meanings. From the implications of a 'customer service' ethos for development practice to the ironies of viewing recipients of aid as active consumers, USAID's statement of principles captured the shift from the project to the broader terrain of participation in development, arguing that there is nothing more basic to the development process than participation. The statement highlighted the broad access by people to their country's economy and participation in their society's decision-making processes (Attwood 1993:1).

With echoes of the recent World Bank rhetoric on 'country ownership' USAID's statement puts forward a vision of participation in which 'the country' and 'the community' are firmly in the 'driving seat'.

The World Bank statements since have emphasized on ownership, accountability, strengthening the capacity of the poor for self-reliance and partnership.

The word 'participation' has been aptly described by the group effort of the World Bank's learning group on participation, initiated with SIDA support in 1991 as 'Participation' is a process through which shareholders influence and share control over development initiatives, decisions and resources which affect them (World Bank 1994, cited in Rietbergen McCrachen and

Narayan 1998:4). This would mean sustainable development could occur by the participation of people, especially disadvantaged people, when they influence the decisions that affect them.

The word 'accountability', thus, takes centre stage where the major actors in the development process are accountable for their acts to the stakeholders. If the actors and stakeholders are the same, the development process cannot be sustainable without the accountability of the multi-parties involved in the process.

To strengthen the concept of democracy and civil society and to evolve the idea of good governance, an informed collective assertion of rights from the marginalized stakeholders could be the only solution to seek accountability and to stake their claims on the development process. This issue of participation of marginalized stakeholders takes on a new meaning if the development process involves the setting up of industries. The parties involved here are of so many hues that accountability is a moot point. The major actors like the government, the industry owners and people of the area collide in a space with completely opposing motives and interests, turning the space into a war zone and the marginalized groups into martyrs.

This study attempts to look at one such industrial zone where the government and the industries have started the process of development with specific goals and objectives. Where do the people of the area especially the marginalized fit in this process? What is the accountability of the various parties involved? These are some of the questions the study attempts to probe. The study also tries to seek a glimpse into the minds of the various stakeholders in terms of their understanding of industry and development. It also highlights their experience in the industrial development process and more important their role as stakeholders in seeking and negotiating for accountability from the dominant groups.

Context

In the year 1988, the Government of India announced a scheme for the development of growth centres and selected five growth centres in the state of Maharashtra at Akola, Chandrapur, Dhule, Nanded and Ratnagiri. Under the scheme, about 600 to 800 hectares of land was to be acquired for each growth centre. In November 1988, the state government decided to set up 65 growth centres covering each district of the state. The state government also announced a programme for the establishing of 140 mini industrial areas at the taluka level. The Maharashtra Industrial Development Corporation (MIDC) was entrusted with the major responsibility of carrying out all the work.

MIDC is the primary industrial infrastructure development agency of the Maharashtra Government constituted under the Maharashtra Industrial Development Act 1961. MIDC was established on 1st August 1962 with the basic objective of setting up industrial areas with a provision of industrial infrastructure all over the state for planned and systematic industrial development. MIDC believes in its motto '*Udayamat Sakal Samruddhi*' (Prosperity to all through industrialization).

MIDC is also a 'Special Planning Authority' for all its industrial areas for various functions such as the selection of land, planning, development and management of industrial parks. The major activities of MIDC are:

- Development of industrial areas by acquiring land.
- Preparing the layout with suitable grouping of plots of various sizes and the allotment of plots on leasehold basis.
- Construction of roads, drainage systems and the provision of streetlights in the industrial areas.
- Planning, implementing and managing water supply schemes.
- Establishing common facility centres (CFC) by providing accommodation for banks, post offices, telecom facilities, police stations, fire stations, medical facilities, canteens, etc.
- Establishment of effluent collection and disposal systems for chemical zones.
- Implementing government / semi government projects.

MIDC aims at the rapid and orderly establishment and growth of industries in the entire state to achieve balanced industrialization; and to set up industrial areas at different locations with the necessary infrastructure.

Since its inception, MIDC has already established at least one industrial area in every district of the state. Right from the selection of the site, land acquisition and planning, to development of the basic infrastructure, has been done by MIDC in these areas.

The MIDC has played a major role in developing separate chemical zones. It describes chemical zones as Industries having chemical processes as a part of the manufacturing activity and involving the storage of chemicals, the use of chemicals, solid, liquid or gaseous- emissions, air pollution, emitting odours, dust, smoke, etc. These are preferably located in the separate chemical zones where substantial liquid effluents are generated from the industrial units.

In such zones, the MIDC claims to have arranged for the collection of treated effluent from the industrial units and its disposal at a suitable point stipulated by the Maharashtra Pollution Control Board (MPCB), a state government body set up for keeping a constant check on effluent treatment and disposal. Up till now coastal locations were preferred for setting up chemical zones because of the availability of creeks for the disposal of treated effluent. The MIDC has implemented such schemes at Dombivali, Trans Thane Creek, Badlapur, Kalyan Bhiwandi, Roha, Taloja, Ambernath, Patalganga, Tarapur, Mahad and Lote-Parshuram.

Lote-Parshuram Industrial Area (LIT) is located in the Ratnagiri District of the Konkan region of Maharashtra. In 1978, the Maharashtra Industrial Development Corporation (MIDC) appropriated 570.73 hectares of land of Lote, Awashi, Sonegaon, Dhamandevi and some other villages for setting up a Chemical Industry Zone. The development of the industrial belt was part of the government's plan to develop the Konkan region and provide better survival opportunities for people.

The Lote-Parshuram area is surrounded by the Sahyadri Mountain area in the east and the Arabian Sea in the west. This area is bestowed with abundant natural resources. The unique feature of this area is the confluence of two rivers- Jagbudi and Vashishta joining at the Dabhol Creek and flowing into the sea. The area receives more than 340 centimetres (cms) of annual rainfall and is endowed with a fertile soil suitable for horticulture and rice cultivation. The major produce of this area is the Alphonso Mango, the best quality of mangoes. There is a strong fishing community settled around the creek surviving on fishing in it.

The setting up of an industrial zone in this area has brought about drastic changes in the lives of the people. The major reason for the setting up the industrial belt by the MIDC was the availability of the creek for the discharge of treated effluent water. The consequences of setting up this industrial belt were multidimensional. There are many stakeholders in the whole process of the development of the industrial belt. It is essential to understand how these stakeholders perceive the whole process of industrial development. The participation of stakeholders in the process also needs to be studied. The major stakeholders also owe accountability to each other, which needs to be looked at.

Research objectives

This study broadly aims at understanding the perception of various stakeholders with regard to the positive and negative experiences of industrialization, the various dimensions of their stake holding in the industrial development and the relationships that have been established during the process. The study has tried to look at the marginalization of certain groups in the whole process and the results of such a marginalization.

The specific objectives of the study are to study and understand

1. The socio-economic profile of the villagers.
2. The perception of the village people with regard to their experiences, both positive and negative, of industrial development.
3. The informal and formal methods used by the villagers to influence and negotiate for their stakes.
4. The perception of the village people about aspects like accountability and responsibility, development and citizenship.

Research Methodology

Research design

The research study is quantitative and descriptive in design. This study has been conducted in seven villages situated in the proximity of the Lote-Parshuram Industrial Belt.

Source of data collection

The primary source of data collection were the village people living in the proximity of the Lote-Parshuram Industrial Belt, the representatives of the

Maharashtra Industrial Development Corporation, Maharashtra Pollution Control Board, Lote-Parshuram Industrial Association and one representative of each industry. Focus group interviews were also conducted. Discussions were also held with the NGO (Parivartan) activists.

The secondary source of data collection included newspaper clippings, documents from earlier studies and public hearings and policies.

Sampling design

The universe of the study with regard to village representatives covered 15 villages situated in the proximity of the Lote-Parshuram Chemical industry belt.

The sample for the study consists of seven villages selected from the above 15 villages.

The criteria for the selection of villages were:

1. Close proximity to the industrial belt.
2. Representing major caste communities of the area affected by industrialization.
3. Representing marginalized and minority communities.

Each village comprised of four to five *wadis* or a cluster of houses, consisting of one homogenous caste group or occupation group. An attempt was made to take at least one *wadi* representing one caste group, so four to five *wadis* per village were selected for the study.

The sample consisted of 97 respondents of which 53 respondents were men and 44 were women.

The sample distribution can be depicted in this way.

The other people interviewed were:

- MIDC representatives: Two Executive Engineers and one clerk.

Table 1 : The Village wise Distribution of the Respondents.

Name of the Village	Men	Women
Sonegaon	9	11
Kotivili	13	6
Asgani	13	14
Lote	7	7
Pirlote	3	1
Awashi	5	3
Lavel	3	2
Total	53	44

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- Pollution Control Board: One representative.
- NOCIL: One Executive Engineer (Project Manager)
- Doctor: 1 (Primary Health Centre).
- Lote-Parshuram Chemical Industries Association: One representative.

Focus group discussions

Men - Two groups each consisting of 15-20 men.
One group belonged to the agricultural community and one group belonged to the fisherfolk community.

Women - Two groups each consisting of 10-15 women.
One group belonged to the agricultural community and one group belonged to the fisherfolk community.

Tools of data collection

1. An interview guide was prepared in consultation and through discussions with the local people who were to be involved in data collection. The interview guide was pre-tested in the field and improved prior to its finalization.
2. A separate format was developed for the focus group interviews.

Plan of analysis

Since the data was very much descriptive and gave specific characteristics of each village and each occupation group, the data was analysed manually and at the initial stage village narratives or case studies were drawn to give the study enough depth.

Operationalization of concepts

1. **Stakeholders:** Stakeholders are the individuals, groups and institutions, broadly the chemical industries, the government and villages nearby with varying stakes in the particular project or policy.
2. **Accountability:** Accountability is liabilities on the stakeholders for non-performance of committed obligation. This would include issues of compensation for land holding, non-compliance with pollution control rules and other promises made.

3. **Environmentally Sustainable Industrial Development:** It means development that does not destroy the resources of the local people (stakeholders) and provides optimum benefits to the people (stakeholders).

Section 2

Key Findings

The complexity of the data generated demands a different way of depicting the data and its analysis. The first part will deal with the data collected from the seven villages. The second part will deal with data collected with the help of focus group interviews and the third part will deal with data collected from the government representatives, industry representatives and MIDC representatives.

(A): The Generic Findings of all Villages

1. The village wise distribution of the respondents:

The table clearly shows that an attempt was made to get equal representatives from men and women. The number of respondents is more in Asgani as more *wadis* were taken as per the population and occupation/caste groups. Sonegaon and Kotivili represented the fisherfolk community. Lote, Pirlote and Awashi were the villages affected by the MIDC in the first phase.

Table 1 : The Village wise distribution of the respondents:

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Total	53	44

Whereas Asgani and Lavel were included in the expansion phase of the MIDC, these villages were also selected as they consisted of *wadis* representing varied occupations/caste groups.

2. The wadi wise distribution of respondents:

The data in table 2 clearly shows that in every village an attempt was made to take major *wadis* and every *wadi* has been represented by an approximately equal number of respondents.

The data clearly shows that in every village an attempt was made to take major *wadis* and every *wadi* has been represented by an approximately equal number of respondents.

3. Religion:

It can be seen from the above table that the majority of respondents (80.4%) were Hindus. Around 10.3% belonged to the Boudh religion which is a scheduled caste community converted to Buddhism. Only 9.2% respondents belonged to the Muslim community.

Table 3 : Religion of Respondents

Religion	No. of Respondents	Percentage
Hindu	78	80.4
Boudh	10	10.3
Muslim	9	9.2
Total	97	100

Table 2 : The wadi wise distribution of respondents

Name of the Wadi	Name of the Village	No. of Respondents
Sonegaon	Bhoiwadi	4
	Boudhwadi	4
	Ghagwadi	4
	Katalwadi	4
	Brahmanwadi	4
Kotivili	Bhoivasti	6
	Pashtewadi	5
	Boudhwadi	3
	Mohalla	5
Asgani	Baitwadi	4
	Kulewadi	5
	Dhadwewadi	5
	Padumalewadi	5
	Naynakwadi	4
Lote and Pirlote	Mohalla	4
	Dhangarwadi	6
	Chalkewadi	4
Awashi	Patwardhanwadi	4
	Pirlote	4
	Malwadi	3
	Malkarwadi	2
	Deolwadi	3
Lavel	Boudhwadi	3
	Shindewadi	2

4. Caste:

It can be seen that 39.17% respondents belonged to the Kunbi caste. This caste group is traditionally known as an agricultural based community. The other major caste group represented is Maratha (19.5%) which again is a dominant land owning community engaged in agriculture as well as in commercial activities.

Besides this, it is significant to note that 10.3% respondents belonged to the Bhoi community, which is a fisherfolk community dependent mainly on fishing for survival. The other backward community represented by 10.3% respondents included the sub-caste groups - Dhangar, Gavli, Mali, Ghorpi, Parit and Gurav. The Boudh community has been represented by 10.3% respondents. Both the OBC and SC community own very little land and work as agricultural labourers for their survival.

5. Age of the respondents:

The table indicates that the respondents were evenly distributed in most of the age groups. The younger age group (16 yrs. to 39 yrs.) respondents represented the second generation of the families after the MIDC took over whereas the older age group (40 yrs. to 72 yrs.) respondents actually saw the MIDC coming in and had also seen the villages before the chemical industries were set up.

Table 4 : Caste

Caste	No. of Respondents	Percentage
Kunbi	38	39.17
Maratha	19	19.5
Bhoi	10	10.3
Brahmin	1	1.03
Other Backward Caste	10	10.3
* Boudh (Scheduled Caste)	10	10.3
Not Applicable	9	9.2
Total	97	100

* (Boudh has been included here as a recognized scheduled caste group).

Table 5 : Age of respondents

Age Group	No. of Respondents	Percentage
16 yrs. 23 yrs.	10	10.3
24 yrs. 31 yrs.	31	31.9
32 yrs. 39 yrs.	19	19.2
40 yrs. 47 yrs.	15	15.6
48 yrs. 55 yrs.	11	11.3
56 yrs. 63 yrs.	5	5.1
64 yrs. 72 yrs.	6	6.2
Total	97	100

6. Educational background:

Table 6 : Educational background of both men and women respondents

Education Level	No. of Respondents		Total No. of Respondents	Percentage
	Male	Female		
Illiterate	4	10	14	14.4
Primary Level	8	6	14	14.4
Secondary Level	34	25	59	60.8
Higher Secondary	2	3	5	5.1
Graduation	5	--	5	5.1
Total	53	44	97	100

This table indicates a very significant characteristic of the respondents' profile. Except for the 5.1% of male respondents who had studied up to graduation, the others did not seem to have much formal education input. 14.4% of the respondents were illiterate and another 14.4% have studied up to the primary level only. The trend seems to be of limiting education only up to the secondary level. In both men and women respondents, higher numbers have completed the secondary level of education. industrialization began in this area 20 years back, yet the education scenario seems to be grim with hardly anybody reaching the post graduation level. It should be noted that none of the women respondents have studied beyond the higher secondary level.

7. Occupational background:

The data brings out an interesting pattern of occupation followed by the respondents. Of the 97 respondents, the majority (that is 34.02%) is engaged in agriculture and is also employed in services mainly in the industrial belt. The other major occupation is service mainly in the industrial belt (25.7%). It should be

Table 7 : Occupational background

Occupational background	Total No. of Respondents	Percentage
Service	25	25.7
Agriculture	12	12.3
Fishing	1	1.03
Self employed	5	5.1
Agriculture, Fishing and Service	2	2.06
Agriculture, Service and Self employed	3	3.09
Fishing and Self employed	2	2.06
Service and Self employed	7	7.2
Others (Rent of house, money order)	2	2.06

noted that 12.3% respondents seem to be dependent solely on agriculture as their occupation. Only one respondent follows fishing as the main occupation for living. All the other respondents and their family members are dependent on various combinations with traditional occupations like fishing or agriculture. It is really significant to note that 25.7% from the service group and the 7.2% earning through service and self-employment do not follow any traditional occupation.

8. Occupation in the industrial belt:

As mentioned in the above data, 27.8% respondents themselves or their family members were working in the industrial belt. Of these, 14.4% were on contract work. The others were working in permanent jobs. All of them, except for one working as a gardener, were engaged in skilled work like welding, mechanical jobs, driving, which they had learnt on the job. One woman respondent worked as a health worker in Gharda Hospital. The others were all men. None of the women were employed in the industrial belt. All of them were either absorbed in the job five to eight years back or recently. Their age profile ranges from 18 years to 40 years with a few exceptions. All of them have some educational background with the majority having studied up to the secondary or higher secondary level. This is an extremely significant aspect. Although, the industries have existed for more than 15 years, the absorption of local people seems to have been a recent phenomenon. All of them got jobs in the industry through their own efforts. The listing of industries they work in, include large industries like Rallies, Gharda, D'Nocil, Excell etc.

9. Safety equipment and other facilities:

All of them said that they received all the safety equipment and got other facilities like a canteen at the work place. They also received bonus if they were in permanent jobs.

10. Family income per year:

It was extremely difficult to compute the annual family income. Many gave the amount of agricultural produce as their income. The data indicates approximately, that the lowest annual income seems to be Rs.10,000 (Lote, Dhangarwadi) per annum and the highest is Rs.8 lakhs (Kotivili, Mohalla) per annum. The average range of annual income seems to be Rs.40,000 to Rs.50,000. This would mean that the monthly income could be as low as Rs.1,000 to Rs.4,000.

11. Landholding and land acquisition:

Of the 97 respondents only 24.7% respondents have agricultural land. Many of them have lost their land to the MIDC. The land holding pattern is at two extremes. Around 18.5% had one acre to six acres of land. In all 5.15% of the respondents owned land ranging from 15 acres to 70 acres and have lost most of the land except for one respondent who had 70 acres of land. The large land-holdings belonged mainly to the Muslim community who used it for horticulture and agriculture. It should be mentioned here that the land holding pattern is very complex in this region. Many respondents were tilling tenancy land owned by someone else. They had to follow an extremely tedious process of registering their land and then claiming compensation. The situation of Dhangarwadi in Lote village was very peculiar. All the people here were shepherds using grazing land for their cattle. This land was owned by the Maratha or Brahmin community who sold it to the MIDC. They could not claim any compensation but lost their very source of income.

12. Compensation received and its expenditure pattern:

The villages affected by land acquisition were Lote, Awashi, Asgani and Lavel. Of these the most recent acquisitions took place in Asgani and Lavel. Lote and Awashi were affected a long time back. The compensation offered then was Rs.50 per *guntha*. The Asgani and Lavel villagers were offered Rs.600 per *guntha* but after stiff resistance and negotiations received Rs.1200 per *guntha*. (10 *guntha* $\frac{1}{4}$ of one acre).

The compensation received was mainly spent on building houses, buying shops or on marriages. None of them purchased land or saved any part of the compensation for the future except for two respondents.

13. Direct impact of the industrialisation:

To understand the direct impact, the researcher used the concept of key events. Every respondent was asked to relate one key event, which according to him/her depicted the direct impact of having the industrial belt in their vicinity. The responses were extremely revealing. The key events corresponded with the occupational groupings, which dominated the villages. For example, Sonegaon and Kotivili both consist of *wadis* of the fisherfolk community. The respondents from these *wadis* spoke of similar key events. The other *wadis* of the agricultural based Kunbi community also spoke of the same key events.

The key events described by the respondents are:

- I. The Bhoi community from Sonegaon spoke of two events. On two separate occasions suddenly a large number of dead fish floated on the surface of the creek. The fish died due to a sudden release of highly toxic chemicals in to the creek. These events were so sudden and devastating that the whole crop of fish died in one single blow. Fishing which was the mainstay of these villages was absolutely finished. The fish never revived again and the creek is known as a dead creek now. The meagre low quality fish now present smells of chemicals and is inedible. The Bhoi community functioned as a co-operative. They did communal fishing or pooled in all their resources to collect fish. Later on the fish produce was distributed to each family as per the number of members or the type of fishing assets owned by them. The fish produced was either bartered by the women for food grains or sold by women in the nearby villages. The collapse of fishing as an occupation has brought absolute hopelessness and a sense of anger in these *wadis* especially among the women who actually sold or bartered the fish produce.
- II. The agricultural communities from all villages spoke of two events occurring almost every week or month:
 - a. All of them mentioned a phenomenon called burnt crops or premature rotting of the crops or fruit. The agricultural land used by them is grossly polluted due to the seepage of toxic chemicals discharged illegally by industries in the lands or the leakage from rotted pipelines carrying chemical effluents. The agricultural produce is minimal and many a times inedible. The worst affected were the horticulturists (Muslim community) tilling large tracts of land. The respondents talked of sudden flooding of the land by effluents or the premature rotting of crops or fruit. The land is slowly becoming uncultivable and the situation is grim in a majority of the families where agriculture is the only source of income.
 - b. The other event mentioned by all the villagers with an agricultural base was the death of cattle. They reported incidents of cattle dying in wells, nullahs or streams after drinking effluent-polluted water discharged by the industries. The cattle included cows and buffaloes. These events are occurring regularly and have affected all the respondents owning cattle or depending on cattle for subsistence.

III. The Boudh community and Dhangar (cattle grazers) community mentioned the loss of their traditional occupation other than the above events as the key event affecting them. The Boudh community or scheduled castes were working as agricultural labourers and were left without work as the land they worked on was acquired by the MIDC. The lack of education and skills has left them with very little choice of occupation. The Dhangar Community (Lote) lost their entire grazing land under the land acquisition process. However, they did not own any of this land and were only using it for grazing. Thus, they did not receive any compensation. Their major source of income was raising cattle and selling milk. They are now left with no source of income due to the loss of their grazing land.

IV. The other events mentioned by the respondents were:

- a. A blast in one of the industries killing some workers.
- b. Incidents of suffocation and gas leakage affecting children in schools.
- c. The beating up of village youth by the industry people on the pretext of theft or trespassing.

V. Other events mentioned:

All the respondents spoke of health problems suffered by them due to air and water pollution. All of them mentioned a pervasive unbearable stink (bad odour) and a feeling of breathlessness all the time. This sensation increases in the night as the air pollution increases at night. The women mentioned restlessness, the trembling of hands and a feared for the children's health as they seem to fall ill most of the time.

The respondents talked about one particular event in Nutan Vidyalaya where one day children suddenly started gagging and vomiting either due to the leakage of gas from a nearby industry or a sudden increase in air pollution. There were protests and an inquiry was held into these incidents. However, people feared a reoccurrence of these events.

It should be mentioned here that all the above key events received a lot of press coverage. These events have also been studied and the facts that emerged have been extensively used to fight against the blatant flouting of the pollution control threshold.

14. The perception of respondents from the villages about accountability of the industries / MIDC / government towards them:

The concept of accountability was explained to the respondents so that they could relate and define accountability in their context.

- I. All the respondents felt that the industries and the MIDC did not show much accountability to them at any stage. All those respondents who lost their land to the MIDC felt that they had had no choice and also no idea about the kind of industries that would come up on their land. They were given oral assurances of secure jobs in the industries and of the provision of facilities like schools, hospitals, improved transport and water supply. None of these oral assurances were fulfilled. The MIDC gave a formal notice to all the villages, prior to the acquisition of the land and also paid compensation as promised. The price of the land in the first acquisition was meagre. Many felt cheated as they were tenants and not the actual landowners. The litigations are still going on and the land claims are still controversial. All the respondents felt that the MIDC did not have a detailed dialogue with them with regard to the type of industries being set up on their land and the possible consequences. They were not forewarned about issues like pollution, effluent release in creeks and lands, the layout routes of pipelines carrying effluents. The respondents strongly felt that the MIDC and later on the industries were accountable to villages in these major aspects.
- II. The respondents from the fishing community expressed their bitterness and anger about the issue of accountability on the part of the MIDC and the industries. They were not informed or consulted about the use of the creek for letting out effluents. They all mentioned that like the land, they owned or used the creek for their living and so had a full stake in deciding how the creek was used. They never associated the industries with their livelihood till the time when the fish died in the creek on such a large scale. This brought them in direct conflict with the industries. They felt more cheated than the agricultural communities who at least received compensation for the loss of their land. They felt that the MIDC and the industries were fully accountable to them on the issue of the pollution of the creek leading to the mass death of fish and thus rendering the whole fishing community jobless. The industry responsible for these occurrences should have owned responsibility immediately.
- III. The other aspect of accountability mentioned was the absolute disregard for the other drinking water sources like wells and streams. The seepage

of chemical effluents and the illegal discharge of chemical effluents have rendered most of these sources non-potable and polluted. The respondents felt that the industries and the MIDC are the sole culprits for this. The MIDC now claims to have absolute ownership on the drinking water source - the river Vashishti and has thus destroyed all the other natural sources of drinking water, which were easily available to the villages earlier. They felt that the MIDC should provide free regular and potable drinking water as they are accountable for the loss of the other water sources.

15. The perception with regard to concepts like sustainable development, participation and stake holding:

The respondents were asked to define these concepts the way they could relate to them in their context. The concepts were explained in the local language.

I. The concept of sustainable development

All the 97 respondents were asked about their understanding of the concept of development. A majority of the respondents equated development with the development of service infrastructure like schools, hospitals, roads and transport. According to them these were the key aspects for development of the villages. However, the respondents also felt that only industrialization can lead to an improvement in infrastructure and also a better standard of living. The respondents felt that sustainable development can be defined as an improvement in traditional occupation sources, infrastructure and suitable industrial development, which can co-exist with the traditional pattern of occupation without harming the environment and natural resources.

II. The role of the respondents in the development process and the concept of participation

Of the 97 respondents a majority of the men saw their role in development at the village level. They feel they can play an active role in deciding about the development of their village. All of them equated attending meetings and participating in agitations to participation in the development process. The women respondents' understanding differed a lot from men. Many women could not define development at all. Some felt that having a healthy family, a secure source of income, and good

facilities for children like health and education were indicators of development. They felt that their role in the development process was related to having a good family atmosphere, being a good wife and mother. They expressed their desire to be a part of the village level efforts for development.

III. The perception of respondents about the concept of stake holding

All the men respondents understood stake holding as their right to their legal landholding and the right to compensation if their source of livelihood is affected. They also expressed stake holding as the right to decide for their family and village. Women respondents did not give much response but felt that the right to water sources and fuel were their stake holding and thus, they had the right to safeguard these and protest against any attempts to pollute or overrule these rights.

16. The methods and ways used by the village people to negotiate and influence the industries in safeguarding their stakes:

The efforts of the people in dealing with the impact of industrialization can be understood at three levels (a) Individual level (b) Group level or Village level (c) Formation of large groups across villages with the help of NGOs or political parties.

I. Individual level

The earlier data revealed that 27 respondents took up jobs with the industry. They were all individual efforts. These people felt that with the loss of the traditional sources of occupation like agriculture or fishing, the only alternative for survival was the taking up of jobs in the industry. These respondents expressed a sense of security with the job. It can be seen from their responses that these people felt alienated from their villages when issues related to pollution were taken up. Many did participate in the local demonstrations held by the village people but did not completely feel a part of the organized efforts of the people.

II. Group level or village level

In most of the villages the day-to-day events like the death of cattle or wells getting polluted were dealt with at the village level. The procedure followed has been more or less similar in these villages. As soon as an

incident occurs a case is registered with the local police station. The animal carcass is sent for post-mortem and the cause of death is linked to the pollutant. Then the related industry is identified. The chemical analysis of the water source causing death of the animal is also done. The whole village comes together irrespective of *wadis* and approaches the culprit industry. Sometimes they have to stage demonstrations. Agitations and negotiations are held to stipulate the amount of compensation to be given to the person affected. A similar procedure is followed if the crop is affected by land pollution. On many occasions villages with similar problems have come together to put up a struggle against some of the issues. Some of the major efforts have been:

a. Akhil Dabhol Khadi Bhoi Samaj:

This is the organization, which brought together all the villages (42 villages) around the creek belt facing the problem of creek pollution and dwindling fish produce. The major issue taken up by this organization was the death of fish in large numbers and the resulting unemployment among the fisher folk community. The struggle included lodging a complaint, identifying the culprit industry, approaching the industry, organizing agitations and seeking political support. The leaders are politically affiliated and have a strong hold on the whole fisher folk community. Their struggle did yield results. The village people belonging to the fishing community were given compensation in the form of money, which was divided equally among the affected families. Each family received around Rs.2,000 in this deal.

b. Another interesting issue is being tackled commonly by some villages coming together. They have been helped by an NGO - Parivartan. The villages like Lavel and Asgani are to be included in the expansion plan of the MIDC. The village people here have come together to negotiate and assert their rights. The rate of compensation for land acquisition was one of the issues taken up. There were lots of meetings and agitations and through an organized effort; the village people were able to get better compensation. They were offered Rs.600 per *guntha* by the MIDC, which was raised to Rs.1,200 per *guntha* after the agitation by the people.

c. There are other issues like suffocation cases in schools due to the sudden increase in air pollution or the accidents in the industry

causing the death of villagers. These are also tackled on a common platform by some villages coming together and pressurising the industry.

III. The Efforts of the NGO - Parivartan

A study was conducted by Parivartan with the help of PRIA to understand the impact of the industries on some villages. The major focus was on health. The results of the study were used to organize a public hearing to bring forth all the parties involved and raise these issues. This was the first time that the industries, the MIDC and the people came face to face and aired their views. The setting up of a proper effluent treatment plant was the major responsibility accepted by the industries along with other agreements. Besides this, a petition was also filed by Chargaon Sangharsh Samiti, Shramik Sahyog and some other individuals against the State of Maharashtra, the MIDC, the Collector and the Pollution Control Board. The High Court advised the appointment of a high-powered committee to examine the extent of pollution and its effect on land, water and air. A committee was appointed and gave an extensive report on all the aspects related to the impact of pollution. The committee consisted of experts from the Bhabha Atomic Research Centre (BARC), the Indian Institute of Technology (IIT), Mumbai, the MIDC and the Maharashtra Pollution Control Board (MPCB). The Committee confirmed the extent of pollution and its impact and the Court further ordered that provision be made for green belts, the setting up of effluent treatment plants, water and air monitoring centres and corrective measures for the industries to prevent the pollution of the Dabhol creek. These measures were not implemented fully.

(B): Case Study of Three Villages

The earlier part of Chapter III: Part I(A) dealt with the general findings of all the 97 respondents. As mentioned in the beginning, the complexity of the data demanded that at least some major variables also needed to be analyzed at the micro level. Each village data presented a mosaic of the village socio-economic and ecological system. Thus, a separate case study was prepared for some villages trying to analyze the varied data presented by the various *wadis* in the village. The micro case studies give a glimpse of actual human instances and a feel of the communities, which has a tendency of getting lost in the generic presentation. Some of the variables like conceptual understanding of respondents with regard to concepts like sustainable

development, participation, stake holding have not been analyzed in the case studies as they appeared fragmented. The village case studies consist of all other major variables spread over all the *wadis*.

These case studies add substantial value to the research study and may help in any kind of planning required to be taken up in future.

Case Study - I

Sonegaon

Sonegaon is a village situated in Khed Taluka of Ratnagiri district. This village is situated near the Lote-Parshuram Industrial Belt. It consists of many smaller hamlets called *wadis*. All the *wadis* are connected to each other. Sonegaon is based near the Dabhol Creek. Each *wadi* has one dominant caste group

involved in one particular traditional occupation. Fishing seems to be the major occupation traditionally followed by many *wadis* of this village. The significance of selecting this village for the study was its proximity to both the industrial belt and the creek. In all, five *wadis* were selected for the study. Each *wadi* represents a particular caste group with a prominent traditional occupation. Altogether 20 respondents were interviewed from these five *wadis* of Sonegaon Village. Care was taken to give enough weightage to each *wadi* and also the gender.

Each *wadi* is represented by four respondents. In all nine men and 11 women were interviewed.

Caste / religion

It can be seen that four respondents belonged to the Bhoi community from Bhoiwadi, seven respondents belonged to the Maratha community (four from Ghagwadi, three from Katalwadi), four respondents belonged to the Kunbi community (one from Katalwadi and three from Brahmanwadi), one was from the Mali community (Brahmanwadi) and four were from the Boudh community.

Table 8 : The distribution of respondents per wadi

Name of the Wadi	Men	Women
Bhoiwadi	2	2
Ghagwadi	3	1
Katalwadi	1	3
Brahmanwadi	1	3
Boudhwadi	2	2
Total	9	11

Table 9 : The distribution caste/religion per wadi

Name of the Wadi	Hindu				Boudh
	Bhoi	Maratha	Kunbi	Mali	
Bhoiwadi	4	--	--	--	--
Ghagwadi	--	4	--	--	--
Katalwadi	--	3	1	--	--
Brahmanwadi	--	--	3	1	--
Boudhwadi	--	--	--	--	4
Total	4	7	4	1	4

The Educational background

Table 10 : The educational background of respondents per wadi

Name of the Wadi	Education			
	Illiterate	Primary	Secondary	High School
Bhoiwadi	1	--	3	-
Ghagwadi	1	--	2	1
Katalwadi	--	--	4	--
Brahmanwadi	--	1	4	--
Boudhwadi	--	--	3	-
Total	2	1	16	1

A majority i.e., 16 out of the 20 respondents have studied up to the secondary level. Only two of the respondents did not have any formal education. Only one respondent studied up to the higher secondary level, this means that except for two respondents the rest had access to education up to the higher secondary level.

The respondents belong to different age groups ranging from 16 yrs to 55 yrs. Of the 20 respondents, six belong to the 16-23 yrs. age group and six others to the 24-31 yrs. age group. Of the remaining, four belong to the 32-39 yrs. age group, two belong to the 40-47 yrs. age group and two belong to 48-55 yrs. age group. This means that the respondents were a mix of the younger and older generation - some who could relate to the times before the industrial belt came in and others brought up in the proximity of the industries.

Size of the family

A majority of them i.e., 16 out of 20 respondents have four-six members in the family. Only 1 respondent had 13-15 members in the family. One respondent had one - three members in the family and two had seven - nine members in the family.

Earning members

Of the 20 respondents eight had only one earning member, six respondents had two earning members and four respondents had three earning members and one respondent had four earning members.

Traditional occupation

Bhoi community - It is very interesting to see the traditional occupation of the respondents in all the five *wadis*. In Bhoiwadi fishing seems to have been the main occupation. Since Bhoi is a fishing community they stay closer to the creek and mainly depended on fishing.

Fishing was done in a particular way. The whole community would get involved in fishing. The men would go to the creek and catch fish. This particular community never fished in the sea. They would fish in that part of the creek where the rivers and canals entered the sea and seawater entered inland. Many had boats, and nets. They would enter the creek in groups early in the morning before sunrise and return after three to four hours. Then the community elders would pool in all the catch and divide it as per fishing assets and the number of family members. The actual selling of the fish was done by women. The women took their share of fish and sold it in the nearby villages. Sometimes they bartered the fish in exchange of grains. The profit generated was again pooled in and redistributed. Before the industrial belt was set up the community was able to survive solely on fishing as their source of livelihood.

It must be noted here that one person interviewed from Bhoiwadi did not mention any traditional occupation. He had no experience of family fishing or agriculture since his family did not follow a traditional occupation. He is just 23 yrs. old. This is very interesting to note as the other respondents from Bhoiwadi were all above 40 yrs. of age. That means the traditional occupation seems to be on the verge of vanishing.

Ghagwadi

Of the four respondents in Ghagwadi, three respondents mentioned agriculture as their traditional occupation. One respondent who is 18 yrs. old did not mention any traditional occupation nor did his family have any land.

Katalwadi

All the four respondents have mentioned agriculture as their traditional occupation. They all still do agriculture.

Brahmanwadi

In Brahmanwadi three respondents belonging to the Kunbi community have mentioned agriculture as their traditional occupation. They still follow this occupation. One respondent belonging to the Mali community did not mention agriculture as the traditional occupation.

Boudhwadi

Of the four respondents, three have mentioned agriculture that is tilling their own land or working as agricultural labourers as their traditional occupation. One respondent did not have any land. It is interesting to note that today none of them does agriculture or agriculture related work.

Land holding and land acquisition

The five *wadis* of Sonegaon though situated near the industrial belt did not lose much land. However, it is interesting to note the land holding pattern and the aspects of land acquisition.

Bhoiwadi

In Bhoiwadi only one respondent had four acres of land, he lost one acre under land acquisition to the Kokan Railway Scheme. He tills the other three acres now. The land lost was agricultural.

Ghagwadi

In Ghagwadi three respondents have land holdings of up to three acres. Each one tills the land. They cultivate rice once a year. None of them have lost any land under land acquisition.

Katalwadi

All four respondents own land ranging from one acre to four acres. They all cultivate it. None of the respondents have lost land in the land acquisition.

Brahmanwadi

Except for one respondent all three respondents own land, again ranging from one acre to four acres. They also have not lost land under land acquisition.

Boudhwadi

Three respondents do own land but only one respondent cultivates it. None of them have lost any land under land acquisition. But it should be noted that only one respondent at present cultivates the land. The land owned ranged from one acre to three acres.

Occupational status at present

industrialization has brought in a lot of change in the occupational status of the people in the *wadis*. It would be vital to know whether the respondents are working in the industries and also the kind of jobs they do. This is an important aspect to understand the respondents' stake in the industrialization process.

Bhoiwadi

Of the four respondents in Bhoiwadi, only one works in Excell Industry. He is a young a 23 year old person who is educated up to the 10th Std. He works as a welder in the industry. He is not sure about the permanency but calls himself a permanent contract worker. He is paid Rs.2000 per month. He gets the safety equipment. The industry also provides him canteen facilities at a subsidised rate. He is given 8¼% bonus and has access to loan facilities also. He also avails of the Provident Fund facility.

Ghagwadi

Of the four respondents of Ghagwadi, three work in the industry.

- a. The first is an 18 yr. old person who has studied up to the 12th std. He works in Gharda Chemicals Pvt. Ltd. as a Material Discharge and Loading person. He has been working for five months and is paid Rs.1200 p.m. He got the job on his own. He gets the safety equipment and canteen facilities. He has to pay Rs.100 p.m. to the canteen. He also gets bonus.
- b. The second respondent is a 21 yr. old who has passed the 10th Std. He is working in Sion Plastic for the last two years. He is on contract work and is generally involved in the finishing aspect of the product. He is paid Rs.1200 p.m. He uses a mask and hand gloves. He does not have canteen facilities. He got this job on his own.

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- c. The third respondent is a 25 yr. old who has passed his 10th class. He is working as a Machine Operator in Goodluck Nerolac Paint Company. He is a permanent worker working since the last two years. He got the job through an advertisement in the newspaper. He is paid Rs.3000 p.m. He gets all the safety equipment. The company provides him transport from home to the place of work. The industry provides a six-monthly medical check-up for the workers.

Katalwadi

In Katalwadi only 1 respondent works in the industry. He is a 35 yr. old person educated up to 10th Std. He has been working for 9 yrs. in Swass Non Lolics Private Ltd. He was appointed as a Machine Operator but is given any kind of work. He is given safety equipment. There is no canteen. He is paid Rs.3000/- p.m. He gets bonus and also has access to loan facilities.

Brahmanwadi

Of the four respondents one works directly in the industry and two others are involved in work around the industry.

- a. One respondent working in the industry is a 23 yr. old person, educated up to 10th Std. He has also done a course through the Industrial Training Institute (ITI). He is working in Goodluck Nerolac as a worker on contract basis for two months now. He is paid Rs.770 p.m. He gets all safety equipment. He cannot avail of the canteen or any other facility.
- b. One respondent is working as a driver in a company.
- c. One woman is working in the garden of a nearby industry. She is paid Rs.800 p.m. and is on contract basis.

Boudhwadi

Of the four respondents one woman respondent's husband works in the industry as a contract worker.

One respondent works in a cashew nut factory as a security guard. He is 28 yrs. old and educated up to the 10th Std. He is paid Rs.1500/- p.m. He has been employed for the last two months. He does not get any facilities.

Occupation other than industry and traditional occupation

Bhoiwadi - Of the four only one person owns a grocery shop in the *wadi* itself.

Katalwadi - One women respondent works as a domestic worker in the Excell Industry residential complex.

Boudhwadi - Of the four respondents one is a driver of an auto rickshaw and one more person takes up work of any nature independently.

Key events related to industrial development in the area

The respondents have mentioned different events signifying the impact of the industries on their lives and also the price they had to pay for being in the vicinity of the industry.

Bhoiwadi

Of the four respondents three have mentioned the death of fish on a large scale in 1999 in the creek. These dead fish floated near the edge. This happened due to the discharge of toxic effluents into the creek in large amounts. Bhoiwadi being a fishing community suddenly became unemployed. They could not revive the fishing after that.

One respondent mentioned one event where a buffalo died after drinking polluted water in Boudhwadi.

This single event of the fish dying seems to have changed the course of the people's lives in Bhoiwadi.

Ghagwadi

The key event mentioned by all the four respondents was the spoiling of the rice crop last season. The word used by them is burnt crop like burnt milk. They have also mentioned one river or stream suddenly getting polluted.

Katalwadi

In Katalwadi two people have mentioned the rice crop being spoilt as the key event. One person mentioned another incident where the children of Nutan Vidyalaya School in Sonegaon got affected by the sudden rise in air pollution like a gas leakage. One person did not recall any incident.

Brahmanwadi

Two people mentioned water pollution in the creek and streams. One person talked about animals dying due to drinking polluted water. One person talked about children being affected in the school by gas leakage.

Accountability of the MIDC and industries

The MIDC did not acquire any land in these *wadis*. The MIDC never interacted with these *wadis* before setting up the industrial belt. The village was completely in the dark about the kind of industries that would be set up in the vicinity. They did not connect the industries' growth to their lives till their livelihood got affected. The industries also did not approach the villagers or interact with them before setting up their plants. The village people had no idea about the discharge of effluents in the creek or in the streams or on land till their fish died and crops got affected.

All the villagers now know the names of all the industrial units; they can even identify the effluents released by the industry.

The direct effect of industrialization

The creek water getting polluted and the total absence of edible fish produce are mentioned as the direct effect.

Case Study - 2

Kotivili

Kotivili is a village situated near the creek. It is eight to ten km away from the industrial belt. It consists of 12 *wadis* or clusters. It is well endowed with nature. On one side there are mountains and jungles and on the other side there is a creek. At the same time the river 'Jagbudi' comes down the mountains and jungles and flows in to the creek. The village has the advantage of fresh water as well as creek water, which has led to the growth of both the fishing community as well as the agricultural community. This village has many horticulture farms. The land is fertile and there is a constant water source. The community here consists of largely the 'Kunbi' (agricultural community) and fisher folk (Bhoi) community. This village was not affected by the land acquisition problem but, was selected for the study because today all the *wadis* of this village are affected. Fishing as an occupation is at a standstill, horticulture and agriculture is on the decline. Nobody buys fish from the fisherwomen. The fish are contaminated and smell of chemicals. Since the year 1998, fishing has completely stopped. The Jagbudi River is now totally polluted and stinks. The land and trees have either got burnt out or have rotted. Altogether four representative *wadis* were selected for the study. Each *wadi* represents a particular caste group. 19 respondents were interviewed from this village in four *wadis*.

Distribution of respondents

Table 11 : The distribution of respondents per wadi

<i>Name of the Wadi</i>	<i>Men</i>	<i>Women</i>
Bhoivasti	4	2
Boudhwadi	3	--
Mohalla	3	2
Pashtewadi	3	2
Total	13	6

Of the 19 respondents, 13 are men and 6 are women.

Caste / religion

Table 12 : The distribution caste/religion per wadi

<i>Name of the Wadi</i>	<i>Hindu</i>				<i>Boudh</i>	<i>Muslim</i>
	<i>Bhoi</i>	<i>Maratha</i>	<i>Kunbi</i>	<i>Mali</i>		
Bhoiwadi	6	--	--	--	--	--
Boudhwadi	--	--	--	--	3	--
Mohalla	--	--	--	--	--	5
Pashtewadi	--	--	5	--	--	--
Total	6	--	5		3	5

It can be seen from the table that six respondents belonged to the Bhoi caste and were Hindus, five belonged to the Kunbi caste and Hindu religion, three belonged to the Boudh religion and five were Muslims.

Educational background

Table 13 : The educational background of respondents per wadi

<i>Name of the Wadi</i>	<i>Education</i>				
	<i>Illiterate</i>	<i>Primary</i>	<i>Secondary</i>	<i>High School</i>	<i>Graduation</i>
Bhoivasti	1	1	4	--	--
Boudhwadi	2	1	--	--	--
Mohalla	--	1	2	1	1
Pashtewadi	--	1	4	--	--
Total	3	4	10	1	1

The education level seems to be better in Mohalla and Pashtewadi with one respondent having done graduation in Mohalla. Four respondents have studied up to the secondary level and one up to the primary level in Pashtewadi. In Mohalla two have studied up to the secondary level. Of the three respondents interviewed from Boudhwadi two are illiterate and one has studied up to the primary level. The respondents from Bhoivasti also show that four are educated up to the secondary level, one up to the primary level and one is illiterate.

Age

Of the 19 respondents belonging to Kotivili 11 were above 40 yrs. of age with three respondents about 64 yrs. of age. This means that a majority of them had witnessed the transition from pre-industrial to industrial times. Of the remaining eight respondents four were between 32-39 yrs. and three were between 24-31 yrs. and one was between 16-23 yrs.

Size of the family

Of the 19 respondents 12 of them had 4-6 members in the family. Two respondents had 10-12 members in the family. Three respondents had seven nine members in the family. Only one respondent had one three members in the family.

Earning members

Of the 19 respondents seven had only one earning member, 10 had two earning members and two had no earning member.

Traditional occupation

Bhoivasti

Similar to the case of Sonegaon, Bhoivasti of Kotivili village consists of the Bhoi community engaged in the traditional occupation of fishing. The men folk traditionally would do the fishing together and then divide the fish amongst the families. Women bartered fish mainly for rice. Of the six respondents, four mentioned fishing as the traditional occupation, one of them owns a trawler and goes somewhere else and others bring fish from another place and sell it. Two of the respondents did not mention fishing as their traditional occupation. They were working and one woman member from each of these two families was an Anganwadi worker and the male members worked in the factories.

Pashtewadi

In Pashtewadi all five respondents mentioned agriculture as their traditional occupation. They still till their land and mainly depend on it for income. They all belong to the Kunbi caste group known for its agricultural background.

Mohalla

Mohalla consisted of the Muslim community. All five respondents interestingly mentioned agriculture and horticulture as their traditional occupation. All of them follow it even now and use it as the main source of income.

Boudhwadi

Of the three respondents from Boudhwadi one mentioned agriculture as the traditional occupation and the other mentioned agricultural labour as the traditional occupation. Only one respondent did not mention any traditional occupation.

Land holding and land acquisition

Bhoivasti

Of the six respondents from this *vasti* only one was a landowner. However, no land has been acquired by the MIDC.

Pashtewadi

All the five respondents owned land ranging from one acre to seven acres. None of them have lost their land due to industrialization.

Mohalla

The five respondents from Mohalla owned considerable land ranging from 15 acres to 50 acres. All of them till it. They use it for agriculture and horticulture. None of them lost their land to the MIDC.

Boudhwadi

Of the three respondents from Boudhwadi two owned plots of land of one acre each. One did not have any land. No body lost land as part of the land acquisition under the MIDC.

Occupation within the industrial belt

Bhoivasti

Of the six respondents only two respondents had family members working

in the industry. One respondent's brother took up contract work for the factories. Another respondent was employed as an E.T.P. operator in Cromtik India Ltd. manufacturing dyes. He has been employed for seven years. He worked as a security guard earlier. He is paid Rs.3700 per month. He also gets facilities like house rent and transport allowance. He was also provided with safety equipment. It is to be noted that he is educated up to the 8th Std. It is also interesting to note that he does not hold any land and does not have any traditional occupation.

Pashtewadi

Of the five respondents from Pashtewadi none of them or their family members was working in any factory from the MIDC area. It is interesting to note that all are still practising agriculture on their land and solely depend on it for their livelihood.

Mohalla

None of the respondents from Mohalla or their family members were working in any factory of the MIDC. All the respondents solely depended on agriculture and horticulture for their livelihood.

Boudhwadi

None of the respondents or their family members is working in any factory from the MIDC area.

Occupation other than in MIDC or traditional occupation

Bhoivasti

Of the six respondents two respondents had women working as Anganwadi workers. It is significant to note that both these families are the only families who do not follow any traditional occupation. They are dependent on jobs and also do not own land.

Pashtewadi

Only one respondent has a family member occasionally working on contract jobs.

Mohalla

Two respondents' husbands work as state government employees.

Key events related to industrial development in the area

Even in Kotivili each *wadi* or *vasti* has mentioned different key events

signifying the impact of industries on the life of the people.

Bhoivasti

Two respondents mentioned 14th May 1998 when several dead fish floated on the surface of the creek due to the excessive discharge of polluted water. This was the turning point in their life. It should be noted here that both of them are about 45 yrs. of age and depended solely on fishing as an occupation. Two women respondents have mentioned the pollution of the natural source of drinking water forcing them to seek some other source. The remaining two respondents have not mentioned any particular key event but general problems occurring in the community. It is relevant to note that both these respondents are working in the industry and depend more on these jobs than on agriculture.

Pashtewadi

All five respondents have mentioned the death of cattle like cows or buffaloes by drinking polluted water. All have personally lost cattle in this way. Another key event mentioned by all has been the pollution of well water and also the reduction in the fertility of the land they cultivate.

Mohalla

All five respondents have mentioned the discharge of polluted water in their agricultural land and spoiling their crop. They particularly mentioned that more polluted water/ chemical water is discharged during the monsoon season. This seems to have hit them very badly. It should be mentioned here that all the respondents here are dependent solely on agriculture and horticulture and own a very large land area.

Boudhwadi

All the respondents mentioned two key events, first the rusting and breaking of the pipeline carrying chemicals and other pollutants leading to the spoiling of the land, the ground water and the death of cattle. They have talked about pools of stagnant polluted water leading to the spread of diseases and health problems. The other key event mentioned has been a rise in thefts.

Accountability of the MIDC and industries

The MIDC did not acquire any land in Kotivili and its *wadis*. The MIDC or the industries near these *wadis* have never interacted with these villages. Indirect messages did reach them such as, promises of better jobs and facilities like schools, hospitals. All the *wadis* suddenly started interacting with the

industries when their livelihood was affected. The industries did not inform the villages/ *wadis* about the pipelines laid for carrying effluents nor about the route of the effluent discharged. The industries are now forced to take responsibility for the death of cattle and the loss of crops due to land pollution.

Case Study - 3

Asgani

Asgani is one of the neglected villages in the vicinity of the industrial development belt. It is 1.5 km away from National Highway No. 15. It is situated on the plateau above the hill. This village consists of nine *wadis* with a population of 1500. It covers an area of 650 hectares. It consists of both agricultural and non-agricultural land. The area also has forest area. There are around seven *wadis* of the Kunbi caste group. There is one big *wadi* of the Muslim community and one of the Boudh community. There is only one Brahmin family residing in this village. Most of the land is owned by a Brahmin landowner from another village.

The reason for selecting this village for the study was due to its proximity to an industry and also the active participation of the people in all the actions taken up against the industry.

This village has a committee consisting of all *wadi* members and headed by a Muslim person. This village also characterises the prominent problems of the Kunbi, the agricultural community. Around 27 respondents were interviewed from this village. The 27 respondents were from six *wadis*. Care was taken to give enough weightage to each *wadi* and also the gender.

Each *wadi* is represented by approximately five respondents. In all 13 men and 14 women were interviewed.

Caste / religion

Except for four respondents from Mohalla who were Muslims the other 23

Table 14 : The distribution of respondents per wadi

Name of the Wadi	Men	Women
Baitwadi	3	1
Kulewadi	3	2
Dhadwewadi	2	3
Padumalewadi	2	2
Naynakwadi	2	3
Mohalla	1	3
Total	13	14

respondents were Hindus belonging to the Kunbi caste. All the *wadis* have a majority of Kunbis.

Educational background

Table 15 : The educational background of respondents per wadi

<i>Name of the Wadi</i>	<i>Education</i>			
	<i>Illiterate</i>	<i>Primary</i>	<i>Secondary</i>	<i>High School</i>
Baitwadi	--	2	2	--
Kulewadi	2	1	2	--
Dhadwewadi	--	1	4	--
Padumalewadi	1	3	--	--
Naynakwadi	1	2	2	--
Mohalla	1	--	2	--
Total	5	9	12	1

Of the 27 respondents 12 (42%) have studied up to the secondary level. It is significant to note that no respondent has done graduation or above. Five respondents were also illiterate. Except for one male respondent the other four illiterate persons are women.

Age

Of the 27 respondents 42% were between 24-31 yrs., the young age group. Most of the others were within the age group of 32-47 yrs. Only a few (that is five respondents) were above 48 yrs. and up to 63 yrs. of age. This means that most of the respondents belonged to the younger age group.

Size of the family

Of the 27 respondents the number of family members ranged mostly from three to seven. Five respondents had more than ten members in their family.

Number of earning members

Of the 27 respondents 17 have only one earning member and six have two earning members. Only one respondent has six earning members in the family.

Traditional occupation

Baitwadi

All four respondents in Baitwadi mentioned agriculture as their traditional occupation. It should be noted that all the respondents belong to the Kunbi caste, which is an agricultural community.

Kulewadi

In Kulewadi all respondents mentioned agriculture as their traditional occupation. They also belong to the Kunbi caste.

Dhadwewadi

In Dhadwewadi three respondents mentioned agriculture whereas two respondents did not mention any traditional occupation.

Padumulewadi

Only two out of four respondents mentioned agriculture as their traditional occupation.

Naynakwadi

All 5 mentioned agriculture as their traditional occupation.

Mohalla

All 4 respondents did not mention any traditional occupation.

Land holding and land acquisition

The *wadis* of Asgani have a strong agricultural base. All the people had agricultural land and cultivated it. The MIDC has acquired a lot of land in this village. Asgani falls under the expansion area of MIDC thus the land has been acquired but industry is yet to come up. The land holding pattern and land acquisition pattern can be related in the following way:

Baitwadi

The land holding of four respondents of Baitwadi ranged from four acres to forty acres. All four respondents have lost their land to the MIDC. The land acquired by the MIDC ranged from two and a half acres to forty acres. Two respondents had mango trees on their land, the rest of the land was agricultural till acquired by the MIDC.

The land holdings were not always fully cultivated by the landowner. Parts of the land were tilled by small farmers called '*Kul*'. Some were registered as *Kul* and some were not registered as *Kul*.

Compensation

Baitwadi

All the respondents here have mentioned that Rs.600 per *guntha* was decided by the MIDC as compensation; however, the compensation was raised to Rs.1,200 per *guntha* after the villagers along with the NGO agitated against it. The negotiations were precluded by the registering of all unregistered '*Kul*' to avail compensation.

Kulewadi

In Kulewadi three out of five respondents lost their land to the MIDC. They had land holdings ranging from two acres to five acres. They lost most of the land. All respondents got a compensation of Rs.1,200 per *guntha*. Here also the '*Kul*' had to be registered to avail compensation.

Dhadwewadi

In this *wadi* two respondents lost their land to the MIDC. They owned one acre each, which was acquired by the MIDC rendering them landless. One respondent claimed that he did not receive any compensation.

Naynakwadi

All five respondents owned land ranging from one acre to five acres. Of this all lost half to two acres of land. Two people cultivated someone else's land as '*Kul*'. They all got a compensation of Rs.1200 per *guntha* after their struggle.

Mohalla

Two women respondents did know that their land had been acquired but were not sure about the area of the land. The other two lost two acres to twenty *guntha* to the MIDC and received compensation for it.

Expenditure pattern of compensation money received

In all the *wadis* the respondents who received compensation money for land acquisition by the MIDC spent it mainly on two things - building a house and marriages. Only two respondents said that they had invested in shares or saved the amount in a bank.

Respondent and family members working in the industrial belt

Baitwadi

Of the four respondents only three respondents are working in the industry. All three respondents have been working for seven years and are permanent

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employees. They are all in the age group of 25 to 45 yrs. and have studied up to 4th to 7th Std. The industries they are working in are Excell, Tata and MACB.

Dhadwewadi

Of the 5 respondents interviewed 4 are working in the industrial belt. They have been working there for 5-7 yrs. All are in temporary jobs with two on a contract basis. They are all in the age group of 25-32 yrs. They have studied up to 9th Std. / 10th Std.

Kulewadi

None of the respondents are working in the industrial belt.

Mohalla

None of the respondents are working in the industrial belt.

Naynakwadi

Only one respondent is working in an industry since one year on a temporary basis.

Padamulewadi

One respondent was working in the industrial belt. He is working for the last seven years as a helper in a drug company. He is 40 yrs. of age and has studied up to the 4th Std. Safety equipment and other facilities have been provided by the industry all of the respondents working in the industry claimed that they got all the safety equipment. They have canteen facilities and also get bonus. Some get transport to the working place, some do not.

Other occupations

Two respondents had shops near their *wadi* selling vegetables. Four respondents had family members working in Mumbai.

Key events related to industrial development in the area

All the *wadis* in this village have mentioned two prominent key events related to industrial development in the area. One major event mentioned happened four years back. Gharda Company picked up a few villagers and beat them up accusing them of theft. This seems to have affected all the *wadis* as 13 respondents from all *wadis* have mentioned this as a key event.

The other key event was the blast in the Gharda Company leading to the death of four workers belonging to the village.

Accountability of the MIDC and industries

The MIDC has acquired a lot of land from all the *wadis* in this village. There was heavy negotiation for the amount of compensation offered by the MIDC. The negotiation yielded results and the MIDC offered more money per *guntha*. They came for the meetings with the village to inform them about the land acquisition. They made promises that along with compensation every affected family would get jobs in the industry. They also promised to provide facilities like hospitals and schools.

Focus Group Interviews

The description of data gathered through focus group interviews will be discussed in this part.

In all, four focus group interviews were conducted. Two villages were selected for the focus group interviews. One was Sonegaon since it consisted of the fisher folk community depicting a unique set of problems. The other village was Asgani. The study had drawn a majority of the respondents from this village since it has many *wadis*. Asgani also is unique as it comes in the expansion area of the MIDC and also presents the struggle put up by people to assert their rights. In each village one group of men and one of women were taken by the researcher for the focus group interview. Each group consisted of a minimum of 12 individuals. The aspects covered in the focus group interviews were:

1. The traditional occupations of the *wadi* and the village.
2. The village composition.
3. The experiences related to the setting up of the MIDC and industrial belt.
4. Defining some of the concepts like sustainable development, accountability, participation and stake holding.

Sonegaon

The two focus group interviews were conducted in Bhoiwadi. All the group members belonged to the Bhoi community only.

Focus group interview of the men and women

Around 20 men and 15 women consisting of youths, adults and older people

were part of the focus group interviews; a brief description of the interview is as follows:

1. Traditional occupation of the Bhoiwadi community

The group mentioned fishing as the only traditional occupation followed by the community. The group members explained that they were engaged in a unique style of fishing as fishing was done at the exact point of confluence of the river, creek and sea. They also mentioned that around 25 to 30 unique species of fish were found in the creek. One of the aspects mentioned here was that the creek has been receiving a fair amount of fresh water let out by the Koyna Dam over many years. This had added value to the creek's capacity to sustain a variety of fish. Fishing was done by them in a characteristic way. The whole community went together for fishing, pooling in all their resources. The concept of a co-operative style of fishing has been followed by them for a long time. The fish produce collected was then distributed family wise as per the number of members and the fishing assets owned by the family. It was left to the women to sell fish in the nearby *wadis* and villages. Women either sold the fish or bartered the fish for food grains or other commodities.

2. The village composition

It emerged from the group interview that this village consists of six *wadis* and 700 households. The *wadis* have one majority caste based group. The *wadis* are clusters of houses geographically located away from each other. The Bhoivasti itself is located on a hillock within walking distance of the creek. It was said that though all the *wadis* share a good relationship with each other the problems of each *wadi* are solved by the *wadi* itself.

3. The experiences related to setting up of the MIDC and industrial belt / direct and indirect impact

Sonegaon was not directly part of the MIDC. No land acquisition took place. So the MIDC and the setting up of industries were seen as a distant occurrence. They felt they would get improved transport facilities and other facilities like schools and hospitals. Although industries were set up a long time back, the actual impact of the industries was felt by them in 1997. On two occasions hordes of dead fish floated on the surface of the creek. Both men and women had seen tankers coming and discharging liquid in to the creek but it was only after these incidents that the village people realized that the creek was getting saturated with pollutants and

would no longer be able to sustain any kind of aquatic life. This was acutely felt as the fish produce dwindled very rapidly and the meagre produce reeked of chemicals. The inferior species of fish, which was earlier thrown away, now had to be collected and included as part of their food. One aspect, which was brought out by the women, was that fish constituted a major part of their diet and now they did not get any fish even for family consumption.

Women narrated their experiences of selling the fish earlier. They felt they were independent, assertive and adventurous as they went from one village to another selling their fish produce. They had developed a good relationship with the village people and had developed bonds with regular customers. Now they were confined to their homes and had to work sometimes as agricultural labourers, which is not their forte. They felt that their loss of freedom and independence was tremendous and cannot be compensated.

4. Defining the concept of sustainable development, participation, accountability, stake holding

Both the groups of men and women strongly felt that they had stakes in the creek and it was like land for them. They felt neglected and cheated as they were not consulted by the MIDC or the industries while using the creek for discharging effluents. Their concept of stake holding was their right to use and develop the natural resources, which were traditionally a part of the village ecosystem.

Their concept of development was the development of infrastructure and better facilities for enhancing their traditional occupation. They felt that even now if the pollution of the creek stopped for some time the fish would revive as the fish from the sea would come back to lay eggs. This according to them could save them and bring in actual development.

Asgani

Two focus group interviews were conducted in Asgani. The group members belonged to the Kunbi community.

Around 15 men consisting of youth and adults assembled for the group interview. Similarly, around 15 women came for the focus group interview.

1. Traditional occupation

Both men and women are engaged in agricultural work. Much of their land has been acquired by the MIDC in the expansion phase however, they still cultivate it or wish to cultivate it since the industries have not yet been set up. They cultivate mainly rice. Women also participate equally in agricultural activities.

2. The village composition

They are badly affected by air pollution due to the chemical industries. Women talked about land pollution and the pollution of drinking water sources. They were provided with a water connection by the MIDC after much struggle, however, the connections were few and the frequency of water supply too scarce to fulfil their needs. Women complained about the lack of wood for fuel due to deforestation and the clearing of trees by the MIDC. They had to walk long distances to collect firewood, which has upset their routine.

3. The experiences related to setting up of MIDC and industrial belt / direct and indirect impact

Both groups talked about their struggle against the MIDC in getting better compensation for the land acquired. They were successful in getting a better deal due to the help of the NGO, Parivartan.

4. Defining the concept of sustainable development, participation, accountability, stake holding

Their concept of sustainable development was bringing in eco friendly agro based industries, which would boost the traditional occupations or create a subsidiary source of income. They also felt that developing a green belt prior to the setting up of industries is essential to check pollution.

(C): Response of MIDC, Representatives of Pollution Control Board and Industries

The interviews held with the MIDC, the industry representatives and PCB on the issue of accountability as seen by the MIDC, Industries and Pollution Control Board.

- 1. MIDC :** The interview with the MIDC representative revealed one single point that they were accountable only to the government and the industries. They said that the government is the ultimate authority in the case of land holdings and thus, the landowners in the village do not have any choice if their land is required for industrial development. They also said that the compensation given to the farmers was enough if compared to the income per annum from it. The MIDC representative felt that all the drinking water sources are owned by the government and now by them and thus, the village people do not have any stake in it. They felt that the creek is an ideal source for the discharge of treated effluent. They did not feel that the MIDC should own direct responsibility for the death of fish. They said that ideally only non-agricultural land is acquired and most of the land in the villages was either non-yielding land or grazing land, thus non-agricultural. The MIDC representative raised an important point while discussing accountability. They felt that their role was to acquire land and develop it for the industries and provide the required infrastructure for industries. Thus providing any facilities, even drinking water free of cost to the villages did not come in their list of responsibilities.
- 2. Industry :** Two people related to the industries were interviewed. One of them was the Executive Engineer and Project Manager when one of the biggest pioneering industries was set up in the industrial belt. The other was the Chairman of the Chemical Industries Association. The Executive Engineer raised a very ironic and insightful point. He said that the industries are set up in such an industrial belt because it is profitable. Lote-Parshuram Industrial Belt invited chemical industries by providing special incentives and also allotted pioneer status for the first industry. According to the respondent, the sole objective of setting up the industry was the cheap land and water sources and less interference. He mentioned that they did not see their immediate role in development of the area or people. According to him, the industries are not accountable to villages or people directly. About the issue of the provision of jobs to the villages or people, the respondent felt that this is not in the purview of their responsibility. A lack of education, work culture and skills are major hindrances in hiring the local population, placating and sympathizing with village people was the main motivation for providing a few jobs to the locals.

The provision of schools and hospitals for the village people was seen as charity and not as a responsibility. The issue of pollution did fall in the

purview of accountability and the respondent felt that strict measures should be applied in this aspect.

The Industrial Association representative also did not see any role of the industry in the direct development of villages. Improved infrastructure in the MIDC areas like roads, transport and an influx of migrant middle class population taking up residence there, providing jobs or means of livelihood were seen as major development indicators by the respondent. The pollution of water, land and air due to industries was seen as negligible and inevitable by the respondent. He also felt that people would develop gradual immunity to the polluted water. He, however, felt that the use of a proper effluent treatment plant is their responsibility and that they are accountable to the people if this plant is not built.

3. **PCB:** The Pollution Control Board representative expressed helplessness on the issue of accountability. He felt that the errant industries polluting land and water need to be closed down. He also expressed that only constant pressure from the village people can bring in more accountability from the industries and the Board. He also felt that the effluent polluted water being discharged in to the creek needs to be diluted and treated so that fish developed immunity and survived. However, he did not feel responsible if the quality of fish deteriorated.

Section 3 Highlights And Emerging Issues

Highlights

1. The respondents represented, in all, seven villages. In all, the number of respondents was 97. Each village consisted of various *wadis* characterized by one dominant caste group. The seven villages were Sonegaon, Kotivili, Asgani, Lote, Pirlote, Awashi and Lavel. Sonegaon and Kotivili represented issues related to the fisherfolk community. Lote, Pirlote and Awashi were the villages affected by the MIDC in the first phase whereas Asgani, Lavel were taken during the expansion phase of the MIDC.
2. Many of the respondents (80.3%) were Hindus. Around 10.3% were Boudhs originally part of the scheduled caste. 92% respondents belonged to the Muslim community. The 80.3% respondents Hindus were further represented by caste groups like the Bhoi, Kunbi, Marathas, Brahmins and other backward caste groups.

3. The age group of respondents varied from 16 yrs to 72 yrs. The respondents were fairly divided into various age groups. Respondents from the younger age group (16 yrs to 39 yrs) represented the present generation who were familiar with the after the MIDC chemical industrial belt was set up. Whereas the older age group (40 yrs to 72 yrs) respondents could relate to the time before the MIDC took over the land and set up the chemical industrial belt.
4. The educational background of the respondents indicates that although industrialization arrived in this area 15 years back the education scenario still remains grim with hardly anybody reaching the level of post graduation. Around 14.4% respondents are illiterate and another 14.4% respondents have studied only up to the primary level. A majority (60.8%) have studied only up to the secondary level. Industrialization has not contributed much towards the provision of better educational facilities or towards an increase in higher education facilities, which are affordable.
5. Traditional occupations, like fishing and agriculture, although disappearing are still followed by a majority of the respondents. However, the respondent's family seems to have combined other occupations like working in the industries or the setting up of small shops. It is significant to note that around 30% of the respondents do not follow any traditional occupation indicating a slow deterioration in the base required for traditional occupation.
6. Around 27% respondents have been absorbed by the chemical industries. They entered the industries through their own individual efforts and mostly work on contract jobs engaged in skilled or semiskilled work. All of them are male respondents except for one woman respondent working as a health worker in an industry related hospital. All of them are working in major industries like Gharda Chemicals, Rallies India, D'NOCIL and others. All the respondents belong to a younger age group (18 yrs to 40 yrs.) absorbed in the job just five to eight years back. Industrialization has not meant an increase in job opportunities. The data also indicates that the industries did not provide jobs as readily to the local people as expected by them. The absorption of people in the industries seems to be a recent phenomenon.
7. The average annual income of a majority of the families is not much (Rs.40,000 Rs.50,000). A majority of them have given the quantity of rice they produce as their annual income. The rice produce is again dictated

by season, land quality and other factors, which are unstable. One can say that industrialization has not led to a drastic increase in the standard of living or an increase in income.

8. Around 25% respondents own land and many of them have lost their land to the MIDC. All of them have agricultural land used mainly for growing rice or for horticulture. It should be noted that the Muslim community owned large tracts of land ranging from 10 acres to 70 acres. All the land acquired by the MIDC was agricultural and under cultivation.
9. The land acquisition process did not immediately yield the compensation amount for many respondents. There were problems like the issue of tenancy land where the owner has leased the land for cultivation for generations and now the tiller could not claim the compensation amount. The litigations for compensation for tenancy lands are still going on. The compensation amount in the first phase of the MIDC was very nominal (Rs.50 per *guntha*). However, the organized efforts and lessons learnt from the past led to negotiations and resulted in an increase in the amount of compensation given in the recent land acquisition attempts during the expansion phase of the MIDC. The amount offered recently was Rs.600 per *guntha* and was raised to Rs.1,200 per *guntha* after the struggle put up by the affected people.
10. The key events described by the respondents have brought out some interesting factors. Caste groups with similar occupations irrespective of villages have narrated similar events whereas in a particular village itself different *wadis* have narrated different events. This has led to fragmentation in the actions taken up by the villagers against pollution and other issues. The events suggest that the discharge of pollutants in natural resources like the creek, ground water, air has devastated the village ecosystem leading to the destruction of marine life in creeks - a major lifeline for the fishing community, the rotting of crops, spoiling of cultivable land and the destruction of all natural drinking water sources. The air pollution seems to have affected children and women leading to severe health problems. Cattle dying due to the consumption of polluted water have become a growing phenomenon.
11. All the respondents have clearly indicated that the MIDC and the industries have not shown much accountability. Accountability was expected in regard to many issues.

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- a) Provision and information about the type of industries being set up on the land acquired by the MIDC and the possible consequences for the village ecosystem.
 - b) The owning up of responsibility in fulfilling promises made to the people like the setting up of CETP, provision of job opportunities for the affected people, owning up to responsibility in the case of accidents.
 - c) The respondents also indicated a lack of accountability from the MIDC and the chemical industries where there is absolute disregard for different natural drinking water sources and other natural resources like agricultural land, creek, forest land and air.
12. Sustainable development was defined by a majority of the respondents as development, which leads to an improvement in infrastructure and services like transport, education and health without destroying the traditional style of living including the traditional occupation. Respondents felt that industrialization was always equated with all the above, but they did not expect the devastating impact of industrialization.
13. The respondents could see their role in development limited to the family level and the village level. They seem to be content with deciding the course of development at the village level only.
14. They defined their participation as attending meetings at the village level and joining agitations conducted by other organizations.
15. All the respondents felt that they were stakeholders not only of the land but also of the creek and natural resources. They felt that even after losing their land to the MIDC they had stakes in the types of industries to be set up on their land and the impact it had on their lives.
16. All the respondents have participated in one or the other form of protest against the industries. They have taken up issues like the death of cattle, pollution of agricultural land at the individual level. At the group level various similar caste groups like the Bhoi community from 42 villages have come together to take up the issue of the pollution of the creek. The NGO - Parivartan has also played an active role in holding public hearings where all the parties or stakeholders came on one platform and discussed the issues. However, the thrust has been mostly on getting

compensation or an increase in the amount of compensation. Issues like common property usage and its destruction e.g. the creek, grazing land, mangroves and also the common responsibility of all stakeholders in safeguarding the village ecosystem seem to have been missed out or disregarded.

17. The response of the MIDC very strongly indicates that their role is just the acquisition of land, the development and the upkeep of the infrastructure necessary for industries. They did not see their role in the development of villages or the local people once the land is acquired. They also did not perceive villages and villagers as stakeholders in the development of the area. Their focus was only on sustaining the industries.
18. The industry representatives clearly indicated that their presence in the particular geographical area was solely due to the availability of cheap land, water sources and fewer legal problems. They did not perceive any role in consciously bringing about development in the villages nearby. The provision of facilities like schools and hospitals were part of their charitable work and not responsibility. They only felt accountable in the case of the flouting of pollution control rules. They felt that industries need affordable CETP.
19. The pollution control board saw its role limited to enforcing of the laws and felt handicapped without much support from the industries. The peoples' agitation, they felt, can go a long way in the enforcing of pollution control rules.

Issues emerging from the study

1. The interviews with the villagers and the focus group discussion brought out a few aspects, which were subtle but significant indicators of marginalization occurring during the process of development and also the protests and negotiations used by people.
 - a) Women seem to be the single largest group marginalized in all areas. They were also major victims of the loss of their traditional occupation. It was mentioned in the focus group discussions by both agricultural based women and fisher women that the loss of land and loss of fishing were not major issues as compared to the loss of their self worth and self sufficiency. Both in agriculture and fishing, women were active participants in earning their living. industrialization has relegated them back to the kitchen and to the role of house makers.

Fisher women spoke of the loss of their decision-making capacity and also the loss of opportunities to associate with people in other villages. They missed their independent economic status and feared subjugation by men.

Women also suffered a lot as they had no choice of an alternative earning source in the industry. No women, except one, were absorbed in any industry. Many women did take up work as domestic workers in the industrial residential colonies but did not like or could not sustain themselves in it. They also did not have any say in the protests and negotiations struck up by villages as they were used by the villagers only as a mob.

- b) The other marginalized groups were the Dalits who were not even seen as an affected part of the population. They were small land holders or landless agriculture labourers. They also have lost their land or now have uncultivable land due to soil pollution. They have not come together as a group due to fragmentation and a lack of any single dominant issue connecting them. They cannot work as agricultural labourers and do not have enough education or skills to seek jobs in the industry. The family members are migrating and others are seeking petty jobs in nearby towns.
2. The second issue emerging out of the study has been the varying concept of development and accountability. There seems to be an implicit understanding in the villages that industries will automatically bring development. The bitterness and disillusionment and a sense of betrayal is very strong due to this understanding. The MIDC, industries and government do not seem to have the same idea. Their concept of development is not the development of the village but the development of industries. Nowhere has there been an attempt made by the MIDC, industries or the government to see their role in developing the villages or the area. It is assumed that if the industries develop, village development will follow.
3. The villagers, the industries, the MIDC, and the government have not considered the village ecosystem as also having a stake in the development process. Each traditional occupation, if brought together, forms a mosaic of the village eco-system where water, land and air are important ingredients for survival. Each occupational group has only looked at a part of the eco-system. Pollution of the creek, ground water pollution, soil pollution and air pollution all put together are major aspects responsible for the negative impact on the village people. However, industries have used all these, that is, water, land and air as major sources for dis-

charging effluents without much resistance, blatantly destroying the village eco-system.

4. The major struggle, the negotiations have been to seek compensation in monetary form. The industries have opted for these monetary options as they do not then remain accountable after paying compensation. This cycle needs to be stopped. The industries' accountability needs to be seen more holistically. The industries and the MIDC are accountable to the entire eco-system and social systems existing in the area. Safeguarding the natural resources and the provision of a healthy sustainable ecosystem is also the industries' responsibility. They have to see their stake holding in the development of the area, villages and local people.
5. The different occupational or caste groups though organised in their own caste groups, are working in fragments and achieving very little. All fragments need to be joined together into a well-informed, assertive organised group to seek a solution to prevent the situation from further deterioration and prevent a mess in the future.

Conclusion

Any development process is complex and multidimensional. The many parties involved in the process need to have a common vision or they function at counter purposes. The silent and invisible stake-holder is the ecosystem of the area, which sustains the stakeholders. Unless and until this ecosystem is not safeguarded and its destruction prevented, the stakeholders will not achieve much. Their very survival will be threatened. This study has brought out some pertinent facts that industrial development in itself cannot lead to sustainability. Industrial development can contribute to sustainable development only if the industries and the government recognise the rights and importance of the various stakeholders and decide the development process in unison.

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Appendix 1

Interview Guide

1. Name

2. Address

3. Age

4. Sex

5. Religion

6. Caste

7. Education

8. Number of Family Members

9. Occupation:

(a) Service

(b) Self-Employment

(c) Fishing

(d) Agriculture

10. Number of earning members

11. Annual family Income

12. Occupation

(a) Occupation in the Industry

(b) Traditional Occupation

(c) Other Occupation.

12(A) Occupation in the Industry

(a) Name of the Industry

(b) Products of the Industry

(c) No. of Yrs. working in this Industry

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(d) *Temporary/Contract basis - Permanent*

(e) *Type of work*

(f) *How did you get this job*

(g) *Remuneration*

(i) Daily Wages

(ii) Weekly

(iii) Monthly

(h) *Facilities provided at work place*

(i) Safety equipments

(ii) Canteen

(iii) Bonus

(iv) Loans

(j) *Facilities provided for the family*

(i) Health

(ii) Residence

(iii) Education

(iv) Transport

12(B) Other Occupations:

a) *Self-employment - Canteen*

(i) Shop

(ii) Vehicle

(iii) Service

b) *Labour domestic work*

(i) Gardening

(ii) Construction.

12(C) *Traditional Occupation*

(i) *Agriculture own/Tenancy*

(ii) *Agricultural labourer*

(iii) *Other traditional work*

13. **Land holding / Land acquisition / Compensation**

(a) *Land ownership /tenancy acres*

(b) *Annual Income Grains Amount (Khandi, Man)*

(c) *Land Acquired by MIDC /Govt. /Industry*

(d) *Compensation*

(i) *Decided amount*

(ii) *Paid amount*

(e) *Expenditure of paid compensation*

(i) *Purchased land*

(ii) *Purchased house / vehicle*

(iii) *Assets*

(iv) *Investment in banks*

(f) *Decisions with regard to the compensation amount*

(g) *Process of land acquisition*

(h) *Legal standing of the land*

(i) *Procedure of getting compensation*

14. **Accountability**

Government / MIDC / Industries

(A) *Legal Accountability*

(i) *Job for every affected family*

(ii) *Promise of not spreading pollution*

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(iii) *Information about the industries set up*

(B) Other issues of accountability

(i) *Provision of transport facilities*

(ii) *Provision of Health facilities*

15. Meeting of the promises / assurance

(i) *Response of Government/ MIDC/ Industry*

16. Efforts taken to get the promises fulfilled

(i) *Individual level*

(ii) *Group / Village level*

(iii) *Organisation / NGO Level*

17. Direct Impact of industrialization

(a) *Advantages of industrialization*

(b) *Disadvantages of industrialization*

(c) *Impact of industrialization*

(i) *Land / water / Agriculture / Fishing / Horticulture*

(ii) *Health / Environment / Education*

(d) *Indirect Impact (Social Impact)*

(i) *Social Problems*

(ii) *Insecurity*

(iii) *Others*

18. Keys events related to industrialization

(a) *The description of the event*

(b) *Date / Year*

(c) *Personal / Village / Area*

(d) *The people / Aspect affected*

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(e) *Consequences of the event*

19. Individual efforts taken

(a) *Group efforts taken*

(b) *Participation in efforts taken by others*

20. Concept of Stake holding/ Citizenship

(a) *Rights as a citizen / Voter (Family, Caste, Village)*

(b) *Responsibility as a citizen family community village*

(c) *Participation in decision making*

(i) Individual level

(ii) Village level

(iii) Family level

(iv) Government level

21. Concept of Sustainable Development

(a) *Goals and Development*

(i) *Macro level*

(ii) *Micro level*

(b) *Needs for Development*

(c) *Expectation from Development.*

i) *Employment*

ii) *Facilities /Infrastructure*

iii) *Standard of Living / Urbanisation*

iv) *Market availability*

(d) **Your experiences about the present industrial development.**

About PRIA

PRIA is a civil society organization, that undertakes development initiatives to positively impact the lives of the poor, marginalized and excluded sections of the society, by encouraging and enabling their participation in the processes of their governance. It strives for achievement of equity and justice, through a people centered approach, focusing on 'Citizens'- 'their participation and inclusion', 'awareness and empowerment' and 'their democratic rights'.

PRIA recognizes the value of people's knowledge, challenges traditional myths and concepts, raises awareness of people's rights and promotes experiential learning. It applies a multi-dimensional strategic approach to creating knowledge, training and capacity building of stakeholders, public education and policy advocacy and intervenes at various levels of the demand and the supply segments, to reach out locally, nationally and globally.

Operating under two broad themes 'Reforming Governing Institutions and Civil Society Building', PRIA's people centred interventions aim at promoting active participation of the poor and marginalized in the effective utilization of resources through local governance. It engages itself in strengthening of Panchayati- Raj Institutions and municipalities, promoting environmental and occupational health, facilitating a strong network of civil society organizations, promoting citizen leadership, monitoring policies and programmes of bilateral, multilateral and government agencies, to achieve an agenda of 'Governance where People Matter.'

PRIA proactively involves and engages a range of stakeholders including academia, media, donors, civil society organizations, trade unions, private business and government agencies in its efforts and provides a platform for a multi-stakeholder development approach.

PRIA is an International Centre for learning and promotion of participation and democratic governance.



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