

**Status of Urban Poor in Nagpur
A Benchmark Study**

**National Institute of Urban Affairs
New Delhi, India
Research Study Series
Number 89**

Research Study Series
Number 89

**Status of Urban Poor in Nagpur
A Benchmark Study**

Sponsored by
**Financial Institutions' Reform and Expansion (FIRE-D) Programme,
USAID, New Delhi**

This study was made possible through support provided by the office of RUDO, U.S. Agency for International Development under the terms of Grant No. 386-A-00-99-00075-00. The opinions expressed herein are those of the author and do not necessarily reflect the views of the U.S. Agency for International Development

**National Institute of Urban Affairs
1 & 2nd Floor, Core 4B, India Habitat Centre, Lodhi Road, New Delhi**

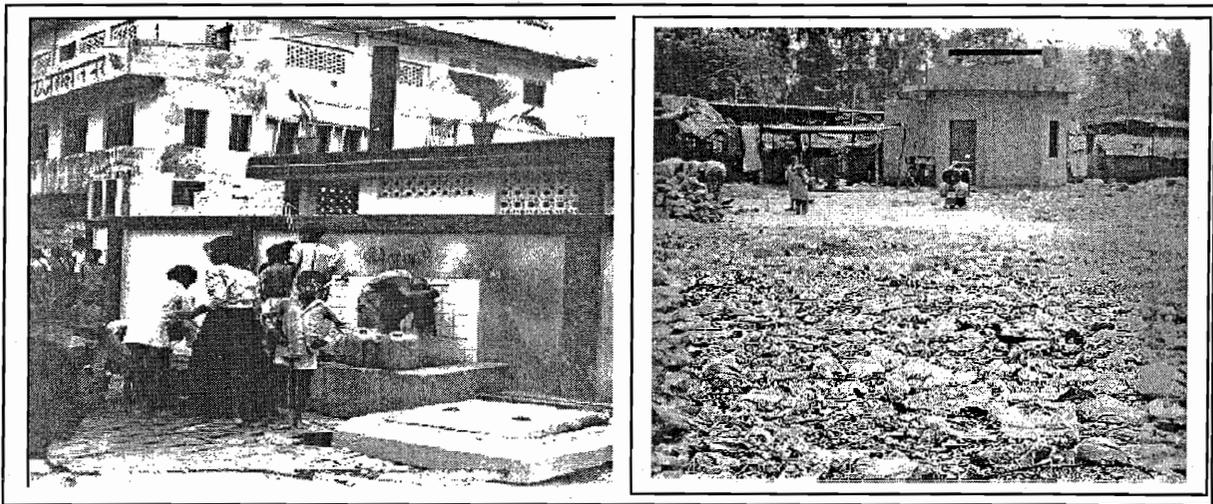
September 2001

BEST AVAILABLE COPY

Status of Urban Poor in Nagpur

A Benchmark Study

Final Report



Prepared by

National Institute of Urban Affairs

in collaboration with

Youth for Unity and Voluntary Action

under

Financial Institutions' Reform and Expansion (FIRE-D) Programme



National Institute of Urban Affairs

1 & 2 Floor, Core 4B, India Habitat Centre, Lodhi Road, New Delhi

September 2001

BEST AVAILABLE COPY

Preface

Inadequate investment in urban infrastructure and services in rapidly growing cities is the primary reasons for the current state of urban environmental degradation, the worst sufferers of which are the poor. Poor who generally live in informal, squatter settlements remain invisible in city service delivery plans due to the illegal nature of their dwellings. Poor quality environments add to their health burden and opportunity costs, reducing capacity of the poor to earn and break through the stranglehold of poverty. Poor being an integral part of the work force contribute significantly to the city economy and are entitled to live a life of quality and dignity. Better availability and access to basic services would not only improve the quality of their habitats but also improve the city environment as a whole.

The present research study was an attempt to understand the status of the urban poor in Nagpur city with regard to service provision and its influence on their health and productive capacity. The objective was to develop benchmark data that would enable city governments to not only identify inequities in service delivery and develop city action plans to integrate poor into the city system but to also assist them in monitoring the impact of various physical infrastructure projects on sustainable poverty reduction.

The study was undertaken in partnership with Youth for Unity and Voluntary Action (YUVA), Nagpur, that was responsible for the data gathering, data entry and preparation of the draft report. A team of investigators led by Mr. Datta Patil, with the support of Ms. Shilpa and Ms Priya from YUVA Nagpur put tremendous efforts in gathering data, development of analytical tables and writing of the draft report. Their significant contribution to the development of the Benchmark data is gratefully appreciated.

Sampling and data gathering instruments have been built upon the existing Multi Indicator Cluster Survey design and formats developed by UNICEF. Support of Dr. Balaji, Dr. Chandrashekharan and Dr. Jayachandran, UNICEF, Delhi in guiding the urban adaptation of the tool and providing training in sampling and use of the instrument is deeply appreciated.

At the National institute of Urban Affairs, the draft report was finalised by Ms. Renu Khosla, Associate Professor and Coordinator of the project, Ms. Promila Jain, Research Analyst and Ms. Indu Senen, Assistant Programmer. They made significant contributions in bringing out the final report of the study.

The study was undertaken as part of NIUA's activities under the Financial Institutions Reform and Expansion (FIRE) project. Mr. N. Bhattacharjee of RUDO-USAID, Mr. Lee Baker and Mr. Chetan Vaidya of TCGI-PADCO team of the project provided valuable suggestions during the preparation of the survey schedules and the report of the study.


Vinod Tewari
Director

September 2001

CONTENT

Preface	i
Tables (Text)	iv
Annexures	v
Abbreviations	vi
Executive Summary	vii
Benchmark Indicators	xiii
Chapter 1	
INTRODUCTION	1
Chapter 2	
THE BENCHMARK SURVEY OF THE CITY OF NAGPUR	3
Background	3
Objectives	3
Scope	4
Limitations	4
Methodology	5
Sampling	6
Chapter 3	
NAGPUR – A CITY PROFILE	11
Population	12
Education	12
Employment	12
Health	12
Infrastructure Facility	13
City Institutions Relevant to Study	14
Government Schemes	15
Integrated Low Cost Sanitation	16
Chapter – 4	
BASELINE SURVEY- IN THE CITY OF NAGPUR	17
<u>Section I:</u>	
Population of Urban Poor in Nagpur	17
Ownership of Land in Low-Income Settlements	18
Distribution of Poor Population in the City	18
Housing	19
Demographic Profile	20
Caste Profile	21

Education Profile	21
Economic Condition	22
Status of the Households	29
Gender Based Poverty	30
<u>Section II: Infrastructure Facilities</u>	31
Water	31
Bathing Space	35
Sanitation Facilities	36
Drainage Facilities	38
Solid Waste	39
Electricity	40
<u>Section III: Status of Women and Children</u>	43
Status of Women	43
Children 0-5 years	45
Status of Children (5-14 years)	49
Chapter 5	
ISSUES AND RECOMMENDATIONS	53
Urban Poverty Alleviation in Nagpur	53
Improving Access to Basic Services	54
Social Problems	55
At Household Level	55

Tables (Text)

Table 1: Gap Between Water Demand and Supply	14
Table 2: Infrastructure Facilities	15
Table 3: Population Pattern in different Years	17
Table 4: Number of Households and Population in the Surveyed Sample	18
Table 5: Population by Age and Sex	20
Table 6: Status Of Education (>=5 years population)	21
Table 7: Status Of Education (grade-wise) (>=5 years population)	22
Table 8: Distribution Of Households By Earning Members	23
Table 9: Occupation Status of Workers	24
Table 10: Average Income of the Households	25
Table 11: Distribution of Households by Income	26
Table 12: Expenditure Pattern of the Household	28
Table 13: Average Expenditure on Different Items	28
Table 14: Services Available in the Women Headed Households	30
Table 15: Source of Drinking Water	32
Table 16: Distance of water source	32
Table 17: Duration of Water Supply a day (In hours)	33
Table 18: Status of Water Consumption	34
Table 19: Availability of Bathing Space	35
Table 20: Distance for Community Toilet	36
Table 21: Surplus / Deficit Analysis Of Community Toilets	37
Table 22: Frequency of Cleaning Drains	39
Table 23: Expenditure on Electricity	41
Table 24: Supply of Electricity in a day	41
Table 25: Substitute of Electricity	42
Table 26: Age of Women at the time of First	43
Table 27: Place of Delivery	44
Table 28: Delivery Assisted By	44
Table 29: Drink Given During Diahorrea	47
Table 30: Status of Education (2-5Yr.)	48
Table 31: Children Enrolled In School	49
Table 32: Number of Children Attended School	50
Table 33: Child worker (paid + unpaid)	52
Table 34: Children Worked in the past one Week	52

Annexures

Annex 1

A-1

Annex 2

A-2 – A-8

Annex 3

A-9 – A-16

Annex 4

A-17 – A-25

Annex 5

A-26 – A-34

Abbreviations

ANC	Ante-natal Checkups
ARI	Acute Respiratory Infection
CMR	Child Mortality Rate
FIRE	Financial Institutions' Reform & Expansion
HH	Household
ICDS	Integrated Child Development Services
IMR	Infant Mortality Rate
lpcd	Litre per capita per day
MLD	Million Litre Daily
NIUA	National Institute of Urban Affairs
NMC	Nagpur Municipal Corporation
PHC	Primary Health Centre
PSE	Pre-school Education
SC	Scheduled Caste
ST	Scheduled Tribe
UFW	Unaccounted for Water
WHH	Women Headed Household
YUVA	Youth for Unity and Voluntary Action
EIUS	Environmental Improvement of Urban Slums

Executive Summary

Rapid urbanisation in the city of Nagpur has been accompanied by an escalation of spontaneous settlements that are home to nearly 40 percent of the city's population. Many pressing urban problems have got associated with this rapid urban growth, in particular lack of adequate basic services.

This study was an attempt to create benchmarks with regard to the status of urban poor people and the nature of services available in the settlements in which they live. It also attempted to study the effect of inadequate environmental infrastructure on the health and education status of the poor with the objective of determining city investment priorities.

The study is based on data generated from 1191 poor households from 30 low-income settlements chosen through the PPs sampling technique with reliability at 99%. Findings of the study are summarised here.

Population of Urban Poor in Nagpur

Nagpur has 338 notified low-income settlements, 65 unauthorized settlements accounting for 6.50 lakh urban poor or 42.4 percent of the city's population. In the decades eighties and nineties, Nagpur city has nearly doubled its population. Majority of poor in the city lived in squatter settlements on government land or semi-government land without legal ownership of land.

Half of the poor families in the city owned the house that they lived in. Homes were two room sets, either semi pucca or kutcha. Only one fifth of the homes were made with permanent materials. Average household size at 5.14 and the sex ratio at 963 females per 1000 males, was close to the city averages. Population was largely young with elderly among the sampled households only 3 percent of the total. Families were predominantly Hindus or Buddhists and belonged largely to the Scheduled Castes and scheduled tribes.

Education Profile of Poor

Literacy levels were high with 74 percent poor being literate. Male literacy figures were higher than female by nearly 18 percentage points. Only one third of all literate persons had studied till the primary grades. Grade 9 appeared to be the point at which girls dropped out of school, one year earlier than boys who tended to complete the tenth grade.

Economic Profile of the Poor

Work participation rate among the poor was 33.12 with men constituting three fourths of the total work force. A small percentage of children were also found to be at work (5.16) both in paid and unpaid employment. Since there is a lot of hidden employment among children, this percentage may be grossly under reported.

Only one fifth of all poor were in regular employment in clerical jobs in private office or teaching institutions. Others were either in casual or self-employment, the former largely being at construction sites or mills. Women were engaged in home-based industries contributed 28.25 percent to the total regular work.

Household incomes averaged at Rs.2819/- per month. Nearly 63 percent of households earned less than the official income poverty line even though the average income in the community was marginally higher than it. Most households in lower income ranges tended to be engaged in casual jobs or self-employment, with highly insecure incomes. Non-poor households that fell marginally above the official poverty line were a highly vulnerable transitional group that was at considerable risk of being shocked into poverty in the event of an economic or personal emergency or natural disaster. Poor environmental conditions resulted in lowered capacity to earn incomes making household vulnerable to health shocks.

Percentage of households accessing loans from formal institutions was low at about 18 percent due primarily to lack of information and inability to navigate bureaucratic procedures. Only 5 percent households had accessed loans for improving household basic services although all expressed a willingness to pay for the services.

Average monthly expenditure of poor households was estimated at Rs.2100 per month suggesting the possibility of savings. Household income was generally spent on consumption and survival needs of food and shelter, with food accounting for nearly 60 percent of the total household expenditure. Health care and education expenses were at 6 percent and about 4 percent of total household expenditure.

Gender Based Poverty

Average income of women headed households was Rs1424 per month, half the average household income among poor populations. Almost all women headed households were below the city poverty line. Even though these were the poorest households in the communities, none of their children were at work.

Infrastructure Facilities

Water

Nagpur' present availability of water is higher than its estimated demand. Poor households used a range of services for their water needs with nearly half the poor having individual tap connections and others used hand pumps, wells, tube wells, tankers, and community taps. Those with individual connections also used sanitary wells to supplement water requirement. Average distance of water source from the household was between 20-25 meters. On an average a family needed to take 15 trips a day to collect water, each trip taking about 5 minutes.

Water was supplied quite regularly with an average of 6 hours a day. Data indicates that although average water supply to poor settlements was close to the norm at 171lpcd, amounts consumed varied across zones. Leakage in areas with high levels of water supply was common, with the poor themselves recommending that the Corporation pays attention to management of existing water resources and improving distributional equities.

Bathing Space

Women and children generally bathed inside homes while men bathed outside and all houses indicated that they had marked out a bathing corner inside their homes. However, bathing areas were not connected to any outside drainage channels.

Sanitation Facilities

Majority of poor households (79%) have access to latrine facilities with nearly 60 percent owning individual toilets. One fifth of all poor defecated in the open and an equal number using community toilets. Among households that were dependent upon community toilets, few used these regularly due to lack of adequate water supply, distance from households that ranged between 20-25 meters and poor maintenance of the complexes.

Number of toilet seats varied between 2 and 8 in community toilets with those for women being consistently less than that for men.

Most parts of the city were without underground drainage. Inside community drains were largely open and in poor condition. Municipal sweepers visited these communities about once in three months. Areas

were devoid of dustbins and over half the households threw waste either in the garbage dump or drains or in open spaces.

Electricity

Nearly 85 percent of selected settlements had access to electricity, both metered and un-metered. Nearly 59 percent households had individual connections. Un-metered connections were largely accessed from neighbours on a shared basis or tapped directly from the pole. Households with metered connections generally paid between Rs.50 and Rs.150 per month in electricity costs.

Status of Women

Most girls in these settlements were married young and had on an average 2-3 children. They accessed health care services during pregnancy extensively with a majority of deliveries taking place in hospitals, largely government run. Of all live births, 90 percent children had survived though one in every five was born underweight.

Health Practices

Fifty percent of women reported washing hands before and after cooking, eating, feeding children etc. About 67 percent washed hands after defecation but only 23 percent washed hands after disposing child stool. Reasons for not washing hands related to scarcity of water.

Status of Children under 5 years

Less than fifty percent of children were fully immunized. Fifteen percent children had been completely missed for immunization. Fever and cough was the most common health problem among children followed by diarrhoea due to poor sanitation and hygiene and lack of clean drinking water. Almost one-third children received no treatment during diarrhoea, with over half the children being given reduced fluid intake because of traditional beliefs. Fifty one percent children were also found to attend a preschool centre. No sex bias was evident in the enrolment pattern.

Nearly 97 percent of children were enrolled at schools with a fairly low drop out rate. Most were in government schools although 21% were also enrolled in private schools. More boys than girls were enrolled, and attended regularly. Not more than 10 percent however, completed high school education. Reasons for lack of enrolment/participation varied with gender. For girls, common reasons were: need to help at home; low

importance attached to girl's education because of perceived low returns in such investment, negative socio-cultural attitudes and hidden costs to education that poor were unable to afford.

Children at Work

Nearly nine percent children, both boys and girls, were found to be working. Of these 13 percent worked in paid employment outside the homes. Others were in unpaid work or home based occupations with a majority working for nearly 10 hours every week.

Issues and Recommendations in Urban Poverty Alleviation in Nagpur

Legal tenure

Urban poverty in Nagpur, like other big cities is less a poverty of income and more a lack of basic services, shelter, opportunities and choices. Illegal nature of stay of poor in settlements, on land to which poor are not 'entitled' defines the nature of living in squatter areas and the type and quality of services provided by city managers. Granting pattas or tenure rights will enable people to invest in their own housing. This would need to be accompanied by reforms in the existing Municipal Act.

Redefining Poverty as Vulnerability

In the city of Nagpur not all people who stay in poor settlements are income poor. In order to ensure that all vulnerable groups among the poor are targeted for development intervention, the city needs to redefine poverty and adjust its poverty line or create a band above the poverty line to include the transitional poor into the programme net.

Addressing Income Poverty

Challenge of urban poverty reduction lies in improving incomes of the poor, enabling them to access a range of quality services including appropriate shelter. Income earning opportunities in the city need to be identified. The poor, in particular women, must be linked to the city's market economy and braced with skills, appropriate technology and affordable credit for improving their incomes.

Improving Access to Basic Services

A critical need for urban poor in Nagpur is for household level physical infrastructure. While a majority of families have access to household taps and toilets, those without access to individual services is still quite large. Need to target these settlements /families among the poor are essential.

Environmental Sanitation

Poor environmental sanitation is another major problem that needs to be addressed. City needs to review coverage under its sewerage system, especially its outreach in poor communities. Systems in partnership with people need to be worked out for solid waste disposal. Options for community contracting may be explored. Sanitation must become a social movement, obligating every individual family, community to ensure proper hygiene and cleaner environment.

Opportunities for Education

A concerted campaign towards withdrawing children from work and mainstreaming them with education needs to be launched. Early childhood education programmes must be initiated in the community to give children a head start in life.

Social problems

Increasing trend of women headed households in the city must be examined and support nets created to enable these women to manage on their own.

Building Social Capital and Partnerships at the City level

Communities in the city need to be organized into cohesive structures and enabled to engage with the local governments to demand their rights in the city. Improving sensitivity in the local bodies towards urban poor and their needs would enable better targeting of services in these areas. Reaching out to the poor in Nagpur requires efficient systems of governance of poverty alleviation and service delivery programmes in the city.

Benchmark Indicators

The research project was designed to provide a better understanding of the problems of urban poor settlements and people in Nagpur. The benchmark table below gives the status of urban poor with regard to basic services in the city.

Social and Cultural Indicator		
A Social/ cultural/ religious identity		
a.1	Number of poor settlements in the city	408 (in year 2000)
a.2	Percentage of poor in the city, in 1999 as per city's own estimate	About 40.00
a.3	Percentage of schedule caste among the poor	40.00
a.4	Percentage of schedule tribes among the poor	16.54
B Status of women		
b.1	Sex-ratio among the poor (female '000 male)	963
b.2	Percentage of illiterate women (+ 5 years of age)	27.05
b.3	Percentage of women completed less than 5 years of schooling (+5 years of age)	34.21
b.4	Percentage of women in workforce	16.22
b.5	Percentage of female headed households	7.00
C Status of children		
c.1	Percentage of Child population among the poor (0-14yrs.)	31.27
c.2	Average number of children (0-14 yrs.) per family	1.61

Health

c.3	Incidence of diarrhoea among children	25.25
c.4	Percentage of children suffering from Acute Respiratory Infection (ARI)	34.73
c.5	Percentage of income spent on health care	5.15
c.6	Percentage of HHs that have incurred debt for health care	14.35

Education

c.7	Percentage of school age children (5 – 14 years)	23.37	
c.8	Percentage of children enrolled in school compared with total number of school age children	91.66	
c.9	Percentage of children dropouts	Male	4.0
		Female	4.0

Child Labour

c.10	Percentage of child workers (paid & unpaid) in the age group 5-14 years.	8.63
------	--	------

Economic Indicators**A Economic status**

a.1	Percentage of HHs with income below the official state poverty line (Rupees 540/- per capita for a family with 5.14 persons) living in low income settlements	63.39
a.2	Percentage of HHs whose income is between (Rs 2776-4164) or the transitional poor (income between poverty line and 1.5 times poverty line) living in the low income settlements	20.65
a.3	Percentage of HHs with high dependency ratios (>5 members of family)	36.86

B Employment		
b.1	Percentage of persons in self employment	31.53
b.2	Percentage of persons in casual employment	47.27
b.3	Percentage of HHs with more than one earning member	47.00
b.4	Percentage of female headed HHs with main earner in regular employment	20.00
b.5	Percentage of female headed HHs with main earner in self employment	25.33
b.6	Percentage of female headed HHs with main earner in casual employment	50.67
Land and Housing Indicators		
A House/ shelter type		
a.1	Percentage of pucca houses	22.17
a.2	Percentage of HHs in rented accommodation	18.56
Water Supply & Sanitation Indicators		
A. Water		
a.1	Percentage of HHs with individual water connections	45.84
a.2	Percentage of HHs using community sources of water	54.16

a.3	Percentage of HHs getting water more than average time (7 hours) a day	32.16
a.4	Average number of users per community water tap	17
a.5	Percentage of HHs able/willing to pay for water connection/ monthly tariff	All
B. Toilet Facility		
b.1	Percentage of households having individual toilets	59.53
b.2	Percentage of households using community toilets	17.97
b.3	Percentage of households using shared toilets	1.34
b.4	Percentage of households defecating in the open	21.16
C. Community toilets		
c.1	Number of settlements served by community toilets.	18 out of 30 settlements (60%)
c.2	Average number of persons per community toilet seat	8
c.3	Average distance of community toilet (meters)	20-25
c.4	Percentage of community toilets poorly maintained and/ or lacking water	100

D Drainage		
d.1	Average area of the community covered by open drain (by resource map)	About 50%
d.2	Average area of the community covered by covered drain (by resource map)	Between 15 to 20%
d.3	Average frequency of drain cleaning	Once in three months
E Waste disposal		
e.1	Average frequency of garbage collection	Once a month
Health Indicators		
A Reproductive and Child Birth		
a.1	Percentage of children with low birth weight (2.5 k.g. & below)	56.38
a.2	Percentage of deliveries attended by trained persons	79.22
a.3	Percentage of women accessing ANC/ RCH and other services	74.68

CHAPTER 1

Introduction

Increased urbanization has meant greater population pressure on limited city resources and a widening of the gap between demand and supply of basic services. Without adequate investments in city infrastructure, this gap has translated into spontaneous and under served settlements in cities housing the poor or those unable to afford better quality housing.

In 1990, at least 600 million people in the urban areas of the developing world were living under life- and health threatening conditions and cities were facing up to the many pressing urban problems associated with rapid urban growth – limited access to water supply, housing, pollution and solid waste management.¹

Although developed nations were more urbanized in terms of the percentage of population that lived in cities, rate of urban growth was far higher in developing nations.² And therefore while cities became vibrant, dynamic and productive economic centres, inequity and vulnerability in them increased along with a rapid informalization and heightened social deprivation of people.

Urbanisation in India has resulted in the mushrooming of informal settlements, housing nearly 40 percent of any city's population – a proportion that is deemed to be poor. Household density in these low-income settlements has reached incredulous proportion of 1000 households/hectare, particularly in large cities. Formal sector being unable to absorb the large magnitude of people that look for employment in cities has pushed more and more people into the unregulated/illegitimate informal sector, with a definite feminisation of work force and more children living and working on the streets.

In 1992, the Rio Summit for the first time focussed upon environmental degradation and social problems that stemmed from lack of access to basic services in cities. Called the Brown Agenda, the Rio declaration attempted to address problems of pollution and environmental hazards in cities accruing from lack of drinking water, poor environmental sanitation and solid waste management and an absence of sewerage and drainage.

Maharashtra, with the highest rate of urbanization in the country also has the highest standards of health, literacy (including female literacy) and economy.³ Creditworthy as these achievements may be, they have not shielded it from the negative impacts of urbanization. It still has to deal with problems of poverty, particularly the social, political and economic vulnerability of those with low incomes. Rapid urbanisation in the state has manifested in the creation of new urban centres and made more complex the existing cities. Neo-liberal policies of the state too, have been seen to

¹ The sanitation gap: Development's deadly menace, Akthar Hameed Khan, The Progress of Nations 1997.

² Building a healthy city, a practitioners guide, WHO, Geneva, 1995.

³ Socio-economic survey of Maharashtra, 1997-98; Govt. of Maharashtra

mainly affect the poorest leading to further *impoverishment*. Policies of the state on the other hand have been unable to build the economic and social capacities of people and reform the existing framework to nurture these capacities.

This accelerated pace of urbanisation however has also not been matched with corresponding urban planning and investment in the state. The result has been an ever-growing class of urban poor, engaged in a perennial struggle for foothold in these cities. Despite the poor offering cheap, informal labour to service the cities they have remained largely invisible in city resource allocations.

Recognising the problems of poor in the cities, the nation has pledged to uphold their rights at various international forums. Intervention programmes have been undertaken to integrate the poor into the city fabric and enable them to participate in its governance and allocation of resources. There have been moves to grant them tenure, basic amenities in accordance with their priorities and needs, shelter that is affordable and employment opportunities. The process however, has been quite slow and imbalanced.

Principles of equity dictate that infrastructure and basic services such as drinking water and toilets be available to every poor household, water supply must be of adequate duration, quality and quantity, households must be linked to city sewerage and networked to paved pathways, electricity and street lighting is provided to ensure safety and security. Framework of urban intervention must therefore, address issues of equity in provision of environmental infrastructure and governance.

This study was an attempt to examine the availability of environmental infrastructure in the city of Nagpur in the urban poor settlements and its impact on the vulnerability and health of people with a view to define city investment priorities. Based on a set of indicators the study has sought to develop a profile of poverty in the city and identify stress areas that need to be addressed. It has provided a benchmark against which the impact of interventions may be measured. It has made recommendations with regard to improving access of services to the poor.

Chapter 2

The Benchmark Survey Of The City Of Nagpur

Background

The Nagpur Municipal Corporation (NMC) has undertaken a water supply project for augmentation of its water distribution system called "Improvement of Distribution system: Phase II" located within the context of FIRE II project, which aims at establishing a framework for the efficient delivery of urban environmental infrastructure, with particular emphasis on improving the basic services of the urban poor communities. The project is being implemented on behalf of NMC by the Maharashtra Jeevan Pradhikaran (MJP), a state level water supply and sewerage board. In addition, NMC has proposed the first phase of a water supply project for augmentation of existing systems and provision of new facilities to cater to the present and future requirements of Nagpur city. The project envisages enhancement of coverage of the water supply network in several parts of the city through construction of service reservoirs and extension of the distribution chain. It is estimated that the project will benefit 320,000 people in six of the seven zones of the city. As a part of the proposed project, NMC has identified several poor settlements for purposes of strengthening their distribution network.

With a view to assessing the impact of this project on completion, a benchmark study has been undertaken to gather baseline information of the proposed beneficiary group.

Objectives of the study

Overarching objective of the study was to develop a baseline on the status of availability and access of the poor to infrastructure facilities in the city.

Under this general objective the specific aims of the study were:

- to collate information on the present health status of urban poor;
- to assess the access and availability of basic services in low income settlements with regard to infrastructure in general and water and sanitation in particular;
- to understand people's perceptions about availability and access to basic services;
- to understand links between availability of infrastructure and health status of urban poor through the data generated;
- to recommend strategies for a demand driven program that would improve access of the urban poor to basic services .

Scope of the study

The benchmark study is based on data generated from nearly 1200 households in 30 poor settlements across the city of Nagpur.⁴

Steps that were followed in undertaking the Benchmark study were:

- Finalisation of a list of poor settlements in which the study was to be undertaken through a process of sampling and information analysis;
- Baseline survey of identified sample households in these areas;
- Understanding people's perspectives and concerns using participatory learning and action (PLA) tools;
- Analysing data generated through this process and preparation of the report;

Limitations of the Study

The study had sought to overlay the primary data gathered over city level data. Much of the city data was however, not available in a comprehensive manner, particularly the city maps, therefore mapping low-income settlements was not possible. It was also difficult to make comparisons between city level information and data obtained from the study within the prescribed time frame.

Framework of analysis: Building a Healthy City

A healthy city is one that is continually creating and improving its physical and social environments and expanding those community resources, which enable people to mutually support each other in performing all the functions of life and in developing to their maximum potential.

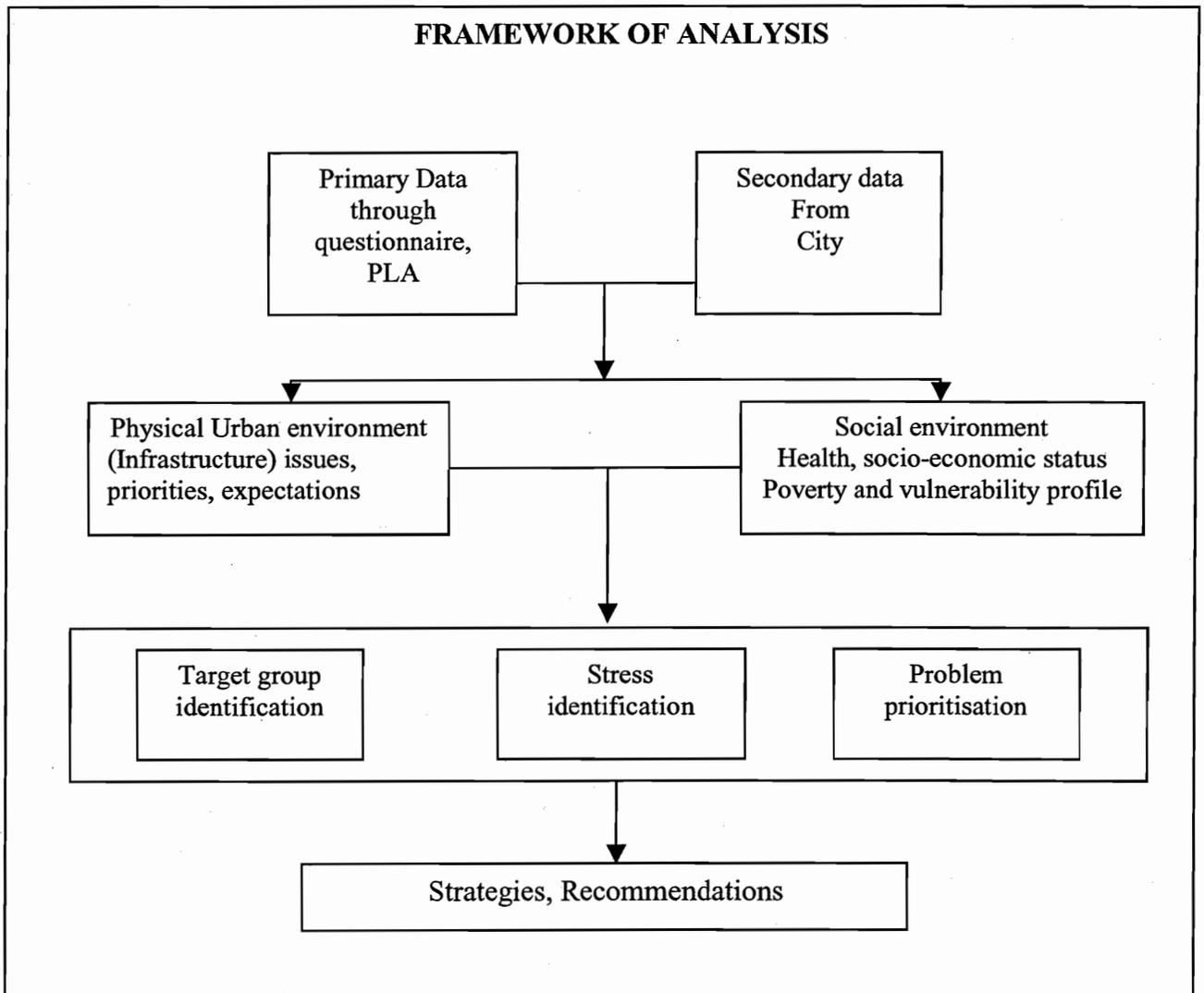
The study uses the concept of the healthy city, in looking at the adequacy and accessibility of basic infrastructure and its impact on poverty and vulnerability.

Public health approaches have shifted from a belief that the major factor in improvement in health is not advances in medical care and technology but certain, social, environmental and economic changes. The emphasis in this concept is on positive health - the total well being of the individual - mental, social, and physical - and not merely the absence of disease. Focus is therefore on nurturing factors that enable urban inhabitants to function and prosper as opposed to projects that merely eradicate health problems. An indicator of this shift is the renaming of Public Health Engineering to Environmental Engineering that seeks to emphasize improved urban

⁴ Criteria decided by NIUA during TOR finalisation and project negotiations.

environment. It acknowledges and attempts to address direct and indirect implications of lack of adequate environmental infrastructure on the health and economic activity of citizens.

This study has examined the issues of infrastructure in relation to health, exploring the links between the two on counts of access, availability, affordability and awareness.



Methodology

Selection of households and settlements for the baseline survey has been done through a mixture of statistically valid sampling techniques. Data gathering

instruments are a mix of survey and use of participatory learning and action (PLA) tools.

S.No	Activity	Methodology
1.	Sampling of 30 poor settlements from 408 settlements in the city of Nagpur	Probability Proportional to size (PPS) sampling
2.	Data collection:	
	Primary data	Survey instrument for capturing socio-economic, demographic, dwelling unit characteristics, status of infrastructure, access to health facilities and status of vulnerable groups. PLA Tools to gather information on perceptions, aspirations, access, gaps, and solutions.
	Secondary data	Collection of records, reports and material from NMC, State departments particularly education and health and Census data
3.	Data entry and analysis	Database tools Analytic framework
4.	Zonal mapping	Superimposition of primary, secondary data and analysis.

Sampling

Probability Proportional to Size (PPS) sampling methodology was used to ensure validity of data and its representative-ness and hence applicability to the entire city's poor population or the universe of the study. The Sampling framework used is described below:

Fig 1: Sampling Framework:

- *Selection of poor settlements in the zone;*
- *Selection of clusters within large settlements;*
- *Selection of households within settlements*

NMC has divided the city into 11 zones. 408 low-income settlements⁵ are located within these 11 zones, of which 30 were selected using the PPS technique. (Fig. 2)

⁵ Master list of poor settlements , Integrated Poor settlement Development Corporation, Oct. 1998.

Step

Fig. 2: Technique of PPS Sampling used

- Preparation of a list of poor settlements (ascending order) by zone (including number of households in the poor settlement)
- Adding the cumulative number of households as a new column in the table.
- Generating a random number (z), selecting the value of cumulative households that corresponds to (z).
- Determine the value of the constant (k) = Total number of households/ number of poor settlements to be sampled (in this case 30).
- The first poor settlement to be chosen was Z. The second poor settlement Chosen was where the households corresponded to Z+K. The third Z+K+K and so on.

A similar method was used for selecting of households.

Minimum size of each poor settlement was set at 250 households. In case of larger settlements (e.g. Bhankhede with over 2500 households), the settlement was subdivided into clusters of 250 households and one cluster selected for further identification of households. Where the number of households in the poor settlement was less than 250, the settlement was combined with the next poor settlement on the PPS sample.

Physical survey to determine spatial coverage, geographic boundaries and actual number of households was undertaken. Listing of households with name of the head of the family was undertaken.

Within each poor settlement, 40 houses were selected once again using the PPS sampling technique for detailed enumeration. Forty households each in 30 poor settlements across the 11 zones were selected for the baseline survey.

Every tenth house within the selected poor settlement has been permanently flagged for future reference.

Data collection

Primary data collection was done through baseline surveys and PLA instruments.

The survey instrument⁶ for the baseline study was adapted at NIUA from the Multi Indicator Cluster Survey formats developed by UNICEF and was translated into Marathi by YUVA for data collection.

The areas of information collection were:

- Demographic profile;
- Socio-economic profile;
- Availability, access and quality of infrastructure;
- Status of health and education of children below 5 years; and between 5 and 14 years with regard to child labour;
- Women in the age group 15 to 49 on issues of reproductive health and childcare.

Indicators for Analysis:

Indicators for	Specific status	Indicator used
Socio - Economic status	General status	Literacy in poor settlements
		Occupation status
		Availability of assets
		Housing condition
		Income/expenditure of the HHs
		Status of credit facility
		Children attending school in the age group of 5 to 14
		Rate of drop out of children in this age group
		Prevalence and percentage of child labour
Infrastructure status	Water supply	Sources for drinking water
		Distance of water source

⁶ Provided by NIUA.

Indicators for	Specific status	Indicator used
		Time spent in fetching/ filling water
		Number of trips for water
		Duration of water supply
		Per capita consumption of water
		Demand supply gap
	Sewage and sanitation	Status of toilets in households
		Population defecating in the open
		Availability of community toilets
		Status of community toilets
		Waiting time required in toilet use
		Condition of toilets
		Distance of toilets from households
		Maintenance and cleaning of toilets
		Availability of bathing spaces
	Solid and liquid waste	Waste disposal practice
		Frequency of cleaning of garbage dump
		Provision of garbage bins
		Presence of drains
		Cleaning of drains
		Use of drains as dump sites for garbage or defecation
	Electricity supply	Availability of metered connection
About f tapped or illegal connection		
Payment for tapped /metered connections		

Health status	Children below 5 years	Status of immunisation
		Disease pattern, frequency of occurrence, treatment pattern
		Education – type of learning centre, whether organised /unorganised etc.
	Status of women 15-49 years	Age at first marriage
		Age at first pregnancy
		Total number of pregnancies
		Status of delivery
		IMR, MMR
		Check-ups during pregnancy
		Place of delivery
		Assistance during pregnancy
		Hand washing and other behavioural practices

During community meetings and focus group discussions, PLA tools were used to gather information on:

- Profiles of the poor settlement;
- Perceptions, issues, aspirations with regard to health & infrastructure;
- Accessibility and availability of services at the household level;
- Problem prioritisation

The following PLA tools were used for the purpose- Chapattis or venn diagrams, seed techniques, seasonality mapping, time line, and trends analysis.

PLA data was also used to substantiate information collected through the surveys.

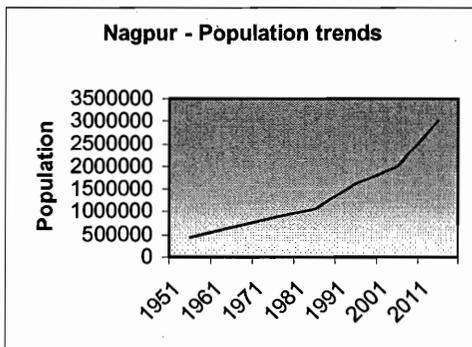
Chapter 3

Nagpur - A City Profile

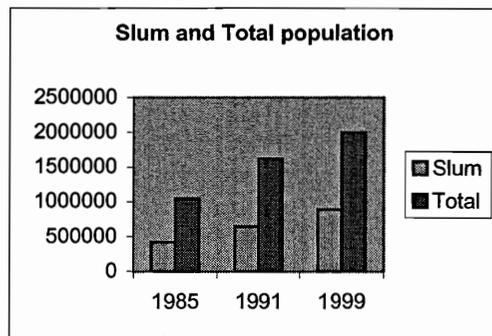
Founded in the 18th century by Bhakt Buland, a Gond king, who wanted to recreate Delhi, Nagpur has had a chequered history passing from the Gonds to the Marathas and then to the British. In 1861, Nagpur was made the capital of the Central Provinces. The advent of the *Great Indian Peninsula Railway* (GIP) in 1867 spurred its development as a trade centre. After Indian independence, Nagpur became the capital of the Madhya Bharat state. It was passed on to its present home, the state of Maharashtra only in 1960. Its demographic profile is given below.

Location	21 09' N, 79 09 E
Altitude	247.5 (305 meters above sea level), 900-1000 feet
Area	217.16 sq. Kms.
Rainfall	1.242mm

Nagpur is literally located in the centre of India, is the capital of the Vidharba region and the district headquarters. Situated on the Deccan plateau, Nagpur has the pride of place of being the second capital of Maharashtra - and the winter home to the legislative assembly.



Source : Census of India, 1991.
Maharashtra Jeevan Pradhikaran
(projections for 2001, 2011)



Source : Nagpur poor settlement
development corporation report, 1985,
Status of Water Supply, Statistical Volume
1999, NIUA

Population

In the fifty years following independence, the population of the city has become 6 times what it was in 1951, standing at approximately 2.0 million and is projected to grow to 3.0 million by 2011⁷. It witnessed a sharp growth in the decade 1981-91 possibly due to its increasing political ascendancy as the seat of the winter legislature. Nagpur was also the only fast growing urban centre in Western Maharashtra during this period.

According to the 1991 census, its population density stands at 7272 persons per sq. km. There has been no increase in its municipal limits in the last decade.

The first round of registration and "authorization" of poor settlements took place between 1982-85 noting 409 poor settlements. No population data is available prior to this period. Population in these poor settlements is approximately 40percent of the city's total population. In the decade 1991-1999, the rate of growth in poor settlements' population⁸ was 27percent, twice the rate of growth of the city population at 14percent.

Education

Literacy rate of Nagpur city is fairly high at 88.24 (1991). Non-formal education and Central/ State level schemes have contributed to the growth in literacy amongst women. Apparent coverage of *Anganwadis* and primary education facilities is however, low⁹. While there are several crèche options for the middle class and upper income groups, facilities such as *balwadis* are missing for the poor. There are only a few technical and industrial training institutes in the city.

Employment

Workforce participation rate for Nagpur city was about 29 for the year 1991, about two-thirds being marginal workers¹⁰. Approximately 60 percent of the working population is employed in the unorganised sector i.e. in construction, vegetable and fruit vending, driving handcarts, auto-rickshaws etc. Women work as domestic helpers or work in home based enterprises.

Health

Health services in the region are provided through the Municipal Corporation and other government and government aided institutions such as Zilla Parish ads. No

⁷ Maharashtra Jeevan Pradhikaran, Nagpur

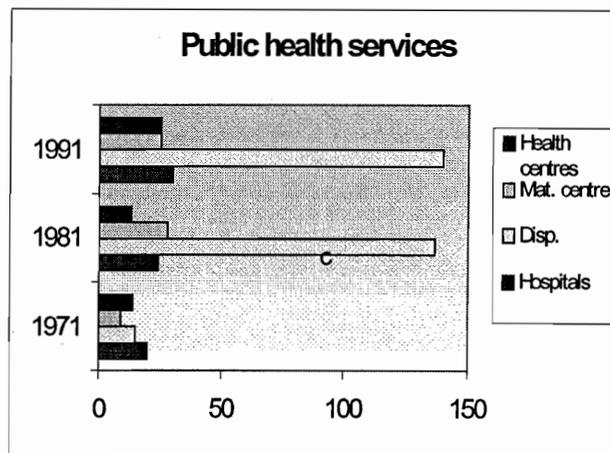
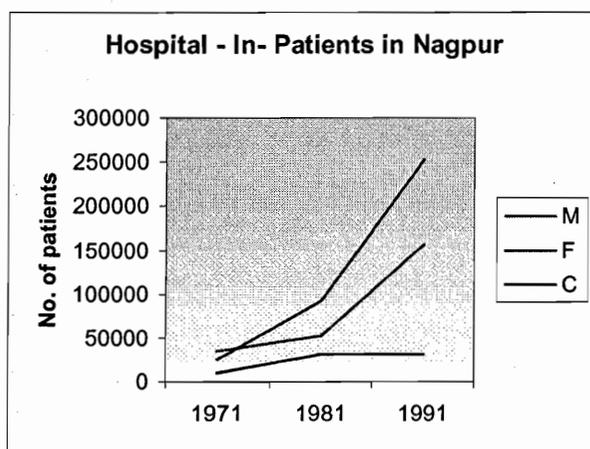
⁸ Based on the estimated population for both poor settlement as well as total population.

⁹ YUVA Field experience

¹⁰ Nagpur City Perspective Plan, YUVA, 1995

health programmes specifically target the city, although several state and national programs on AIDS, tuberculosis, leprosy, immunization etc. are on the ground.

There has been a 17 percent decrease in the rate of deaths due to illness and health related problems between 1971 and 1991¹¹. However, there has been an increase in deaths due to heart disease, accidents and suicides – all indicators of urban stresses.



Health facilities have increased dramatically in the period 1971 to 1981, most significant increase being in the dispensaries that were established by the government to meet health needs of the people. This period also saw an increase in the number of maternity hospitals from 9 to 28 thereby ensuring greater coverage, in particular in the number of women in-patients. However, this data presents city aggregates and the status of urban poor on health indicators may actually be very low.

Infrastructure Facility

Water supply

City of Nagpur receives its entire water requirement from surface sources.¹² Water is provided from the Pench project and the Kanhan River. It is treated with alum and chlorine with the quality being monitored by the NMC. Three water treatment plants exist with an installed capacity of 430 MLD. Average city supply is estimated at 370 MLD¹³.

Per capita norm for water supply for Nagpur (as decided by the city) is 175 lpcd. Demand for the city according to these norms has been estimated at 368 mld, less than the total supply of water available to the city, indicating that city has surplus water supply. Per capita supply too has been indicated as above the proposed norms by 1lpcd by this estimation.

¹¹ Data from Health Department, NMC.

¹² Status of Water Supply, Statistical Volume, Table A-7, Metropolitan cities, NIUA, 1999

¹³ Status of Water Supply, Statistical Volume, Table A-7, Metropolitan cities, NIUA, 1999

Table 1: Demand Supply gap¹⁴

Unaccounted Water (UFW)	Supply of excess Water (MLD)	Per capita (excess) water supply (lpcd)	Status
0%	2	85.5	Excess
15%	-53.5	-2.54	Shortfall
30%	-110.4	-5.25	Shortfall

These estimations however have not taken note of unaccounted water due to transmission losses as a result of poorly maintained and "over-age" pipelines. If unaccounted for water (UFW) norm of 15%¹⁵ is included in the estimation then the supply per capita is reduced to 85.5lpcd. Some estimates put the UFW at 30%, further sharpening the gap between demand and supply.¹⁶

Water supply estimates are however averages and do not report inequity in distribution among upper and lower income communities and across zones.

Solid Waste Management

In the last few years, NMC has undertaken a series of measures aimed at improving solid waste collection, its transportation and disposal. It has contracted private sector firms to collect and transport waste from two zones i.e. 1 and 4 of the seven sanitary zones in the city since 1996. Coverage amongst the poor settlements is however not known.

City Institutions Relevant to Study

Nagpur Municipal Corporation (NMC)

Nagpur Municipal Corporation is responsible for building and maintaining the city infrastructure including that for health and education. NMC's mandate includes provision of infrastructure facilities only in the authorized 326 poor settlements.

Slum Development Corporation

SDCO is a department of the NMC, which works exclusively on issues related to slums. Created in 1972, the SDCO is in charge of infrastructure and basic amenities in slums –

¹⁴ Norms used for per capita present supply lpcd = 176, demand = 175

¹⁵ Status of Water Supply, Statistical Volume, Table A-4, Metropolitan cities, NIUA, 1999

¹⁶ Nagpur city perspective plan, YUVA, 1995.

water, drainage, sewerage, and sanitation. Their principal role is the implementation of projects and schemes such as SJSRY, NSDP, ILCS, provision of photo passes, etc. in low-income settlements.

Maharashtra Jeevan Pradhikaran (MJP)

A state level water and sewage authority whose principal charge is water supply to villages within the district. It is engaged in phase II of the FIRE project, in the construction of reservoirs and feeder mains and distribution lines in the city.

Nagpur Improvement Trust (NIT)

NIT is the planning body for the city. NIT is among the largest public landowners in the city. It is responsible for area planning, beautification of the city, creation and maintenance of gardens, lakes etc. There is a move to merge the planning functions of the NMC and NIT and create a planning board in order that there may be more synergy to city planning. Since NIT is among the larger landowners, they are also responsible for leasing, renting land and granting tenure rights to poor settlement dwellers.

The German Technical Co-operation (GTZ)

GTZ is a partner of the Nagpur Municipal Corporation. Their principal objective is to provide technical and financial assistance to NMC. They are presently creating a database of the city. GTZ is also phasing out its operations in the city.

Government schemes

Slum Improvement Program (1972 to 1994)

Slum Improvement Program main objective is to bring basic infrastructure into the city's poor settlements. Water supply, provision of latrines, sewer lines, roads, drainage and street lighting at a cost of Rs.982.55lakh has been spent on this (table 2).

Table 2: Infrastructure Facilities

Year	Sewer Line (in kms)	Storm water drainage (in kms)	Roads and paving (in kms)	Water supply	Community toilets (number of seats)	Electricity poles (no. of poles)
1995	16722.25	3332.20	34396.79	1552.2	981	10
1996	4938.09	1232.95	23806.36	4852.8	367	21
1997	4278.79	1810.22	67980.59	4828.0	125	4
1998	9329.7	3673.60	63590.76	1618.4	382	-
1999	1723.25	392.75	15116.62	546.8	127	-

Source: SDCO, 2000

Since the Nagpur Municipal Corporation provides basic amenities in only authorized poor settlements, the unauthorized poor settlements remain un-served through this programme and resort to alternative means and fend for their own infrastructure.

Even in the authorized poor settlements, infrastructure provided has not been upgraded or systems for their maintenance created.

In Shrawasti Nagar near Indore cluster (cluster 27), residents complained of leakages in pipelines - leading to sewage mixing with

Integrated Low Cost Sanitation

Under the "toilet for every house" vision of the Government of Maharashtra, the NMC has constructed 7,500 individual toilets in all zones across the city. Individual ferrocement toilets are being provided to individual households against a payment of Rs.365 per toilet.

Pay and Use toilets

With the support of HUDCO and the state government, the NMC is building 51 community toilets. These will be owned by the NMC and sub-contracted to organizations such as Sulabh to be operated on a pay and use basis.

Other schemes for urban poor include the Swarna Jayanti Shahari Rozgar Yojna (SJSRY), National Slum Development Scheme (NSDP) and provision of housing etc. that are centrally sponsored schemes with a mix of loans and grants for urban poverty alleviation.

Poverty alleviation programmes however, appear to be setting the poor apart from the rest of the city by treating their problems in isolation. For as long as solutions for "slums" are treated as different - "low cost", "experiment", "alternative" - from solutions for the city, issues of access, affordability and maintenance of poor settlement infrastructure will continue to remain, despite capital investment in improving, upgrading or providing new infrastructure.

At the root of any infrastructure interventions therefore will be, how services to the poor are going to be made an integral part of services provided by the city, how equitable the distribution will be and what will be the level of ownership and participation of residents in planning, implementation, maintenance and operation of services.

Chapter - 4

Baseline Survey- In The City Of Nagpur

This section of the report examines the primary data that was gathered as part of the benchmark survey.

Section I:

Population of Urban Poor in Nagpur

Nagpur's 338 notified low-income settlements, 65 unauthorized settlements and 5 settlements or low-income settlements that were cleared recently, accounted for 650 million urban poor or 40 percent of the total urban population of the city (1991). Estimated percentage of people living in these communities in 1999 stood at 42.4 percent and was expected to grow at a much faster rate in the future.

Since the relocated 5 settlements were only recently shifted, all 408 low-income settlements were included for purposes of sampling and analysis in the report.

Table 3: Population Pattern in different Years

Year	Total Population (In'000)	Population of Low-income settlements (In'000) *	% of low-income settlements Population to total Population
1981	1050	-	-
1991	1625	650	40.0
1999	2100	890	42.4

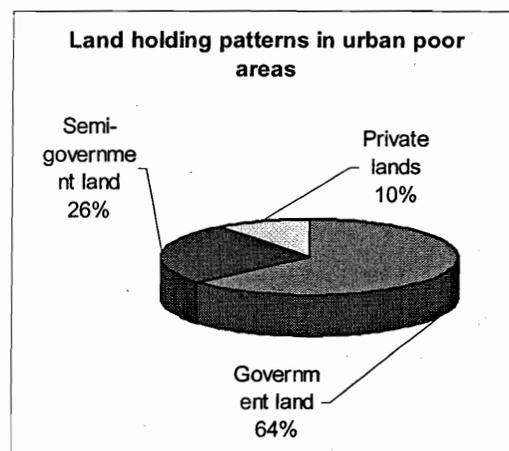
* Estimated by the city itself.

Source: Status of Water Supply, 1999 Statistical volume; National Institute of Urban Affairs

Data indicates that in the last two decades Nagpur city has nearly doubled its population. While comparative figures are not available for the poor for the same reference period, population of the poor has shown an increase of nearly 30 percent in the last decade.

Ownership of Land in Low-Income Settlements

Majority of selected settlements were squatter settlements where people did not have legal land ownership. Most of these settlements were on government land or semi-government land with a small percent on private land, where land ownership rested with the landlord. Many of the settlements had been in existence for several years and people residing there considered themselves as legal owners as they had been officially registered by the NMC under their slum listing and were entitled to infrastructure services from the Corporation.



Distribution of Poor Population in the City

The baseline survey at Nagpur was expected to cover 1200 households in 30 low-income settlements dispersed over 11 zones of the city. Of the total 1200 only 1191 households provided complete information and could be used for analysis. In addition, secondary data at the city level was examined for comparisons with the survey results. Table 4 below gives the dispersion of low-income settlements and populations covered in the different zones as part of the present study.

Table 4: Number of Households and Population in the Surveyed Sample

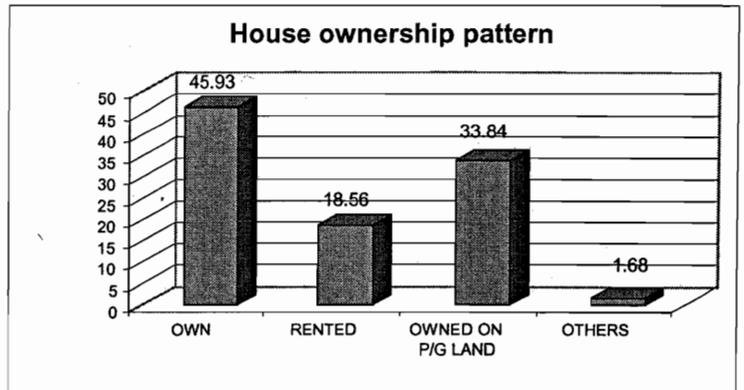
Zone	Low-income settlements	Households	Population surveyed	Family size
1	1	40	206	5.15
2	2	77	367	4.77
3	2	80	343	4.29
4	2	80	370	4.63
5	2	80	435	5.44
6	4	157	838	5.34
7	6	239	1352	5.66
8	4	158	828	5.24
9a	2	80	416	5.20
9b	2	80	373	4.66
10	3	120	592	4.93
Total	30	1191	6120	5.14

Source : Primary Survey ,2000 , YUVA

Housing

Most of the sampled population did not have legal ownership to the land on which they had their shelters, which really is a critical concern in Nagpur. Demand for 'patta' has become a recurring issue between the local authorities and the poor. A deep sense of insecurity prevails vis-à-vis tenure among the residents.

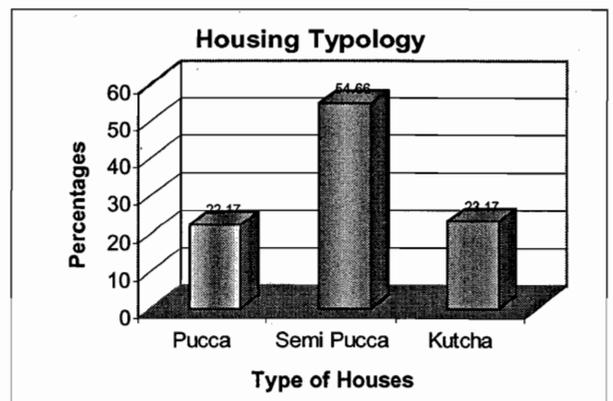
Families that owned their house in notified settlements constituted the major proportion of the total households (about 46%). One-fifth people lived in rented accommodation, paying rents that varied between Rs100 to Rs.500 per month. Only a few households paid over this amount as rent. Tenant households were more frequently noted in zones 3,5 and 6. Another 33.84 percent households said they were owners of the shelters but were aware that they did not have legal right to the land or had built their shelters on private land.



Settlement Density

Due to non-availability of data, it is difficult to estimate the exact density in these settlements, however, densities seems to be extremely high in most of the inner city communities and possibly lower on the city fringes. Most households lived in two room sets, with an average 2.57 persons per room. Fewer rooms in the house led to increased density within the house.

Of the total sample, over half the population was found to be living in semi-pucca houses where roofing material was made from Mangalore tiles, tin sheets or bamboo and walls constructed from half burnt bricks or lime mortar. Nearly one-fourth houses were kutcha and temporary structures made out of plastic and shingle roofing. Pucca structures being indicators of higher economic status of households were merely 22.17 percent.



Reasons for people living in temporary constructions were lack of tenure and resultant insecurity vis-à-vis long term stay in the settlement because of which people hesitated to invest in housing up-gradation, low levels of income with a major share of income

being used for consumption purposes and lack of access to affordable credit with easy pay back options.

Size of the Household

Average household size of urban poor households was found to be 5.14, near the city average of 5.17 in 1991. Since recent data on household size was unavailable it was not possible to assess if overall city household size had reduced. Percentage of households with 4 to 5 members made up almost 63.14 percent of all households with the rest (36.86 %) having more than 5 members in the households.

Demographic Profile

Distribution of population by age groups in the low-income communities are detailed in Annex 2. Sex ratio in the communities was 963 females per 1000 male, better than the national average (923 per 1000 males) suggesting that there is less gender discrimination among poor households or use of antenatal sex determination techniques.

Nearly 44 percent population was found to be below 19 years of age and an equal percentage was within the age group 20-49 years, implying that the population was largely young and in the reproductive age group. Specific problems of children, adolescents and young adults are likely to therefore demand special attention among the poor. Elderly among the sampled households comprised only 3 percent of the total, possibly because of low life expectancy among poor households, or due to the fact that older people tended to stay back or return to their native villages after they were no longer economically active. Since the very young children i.e. less than 15 years and the elderly were unlikely to be wage earners dependency ratio was high at with over one third of households (34 %) having a high dependency ratio at 1:3.

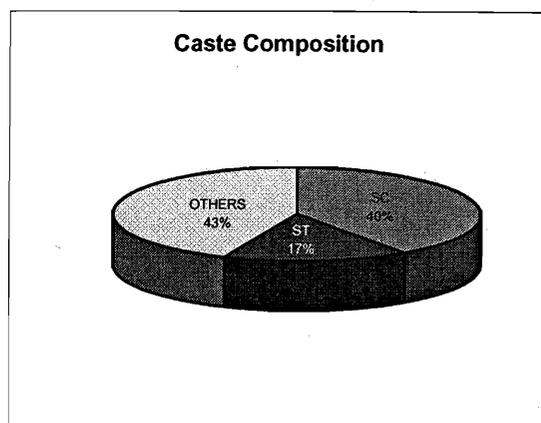
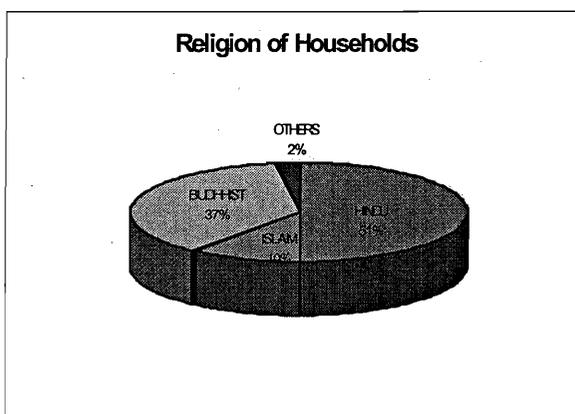
The population profile was young, largely in the prime productive age group and participating in economic activities.

Table 5: Population by Age and Sex

Age group	Male	Female	Total
0-19	43.75	42.21	42.99
20-49	43.71	43.97	43.84
50-65	10.10	11.19	10.64
65+	2.44	2.63	2.53
Total	100.00	100.00	100.00

Caste Profile

Urban poor communities in Nagpur city are predominantly Hindus and Buddhists. Muslims comprise only one tenth of the population and were concentrated in zones 5,6 and 7. Jain, Christian and Sikh were also found in the city, albeit in negligible proportions.



Nearly 40 percent of urban poor communities belonged to the Schedule Castes and 11 percent to the schedule tribes (11%) indicating that almost half the urban poor groups belong to vulnerable sections.

Education Profile

Table 6: Status Of Education (>=5 years population)

Status	Percentage		
	Male	Female	Total
Literate	82.51	64.80	73.77
Illiterate	11.12	27.05	18.98
only mother tongue	5.51	7.05	6.27
Don't know	0.86	1.11	0.98
Total	100.00	100.00	100.00

Literacy levels were found to be high among the city's poor (74%), although lower than the city average at 85.15 percent. A small percentage of children had attended schools where they learnt the mother tongue. Their addition to the overall literacy figures pushed the literacy rate to 80.04 percent, an increase of nearly 6 percent.

Gender Differences in Literacy Rates

Male literacy rates were higher than female literacy rates by nearly 18 percentage points (Annex 2). No gender difference in literacy rates was noted in Muslim dominated zones 5,6 and 7. With nearly 19 percent illiterate persons and almost one-

third among the women being uneducated (female illiteracy: 28.15%) investment in education would have to be an essential component of any intervention program in the city.

Table 7: Status Of Education (grade-wise) (>=5 years population)

Grade	Male	Female	Total
1 - 5	33.93	34.21	34.05
6 - 8	21.67	23.42	22.44
9 -10	26.04	26.55	26.27
11-12	10.55	7.55	9.22
Graduate	5.27	4.93	5.12
Post Graduate	1.06	0.77	0.93
Don't know	1.47	2.57	1.96
Total	100.00	100.00	100.00

One third of all educated persons had studied till the primary level and an equal number had studied up to the eighth and tenth grades. Over 6 percent were Graduates/ Post graduates.

Grade 9 appears to be the filter at which girls begin to drop out of school prior to the school board examinations. Before dropping out more girls tended to complete all grade levels. An un-stated reason, which did not come out even during PLA exercises, but is common across the country was, that this being the age at which puberty is attained, parents prefer to withdraw the girls from school both to get them married or safeguard them against sexual abuse. Sometime social and cultural compulsions add to the reasons for girls being out of school.

For boys, grade 10 acted as the critical point for dropping out, possibly due to difficulties in managing the board exams. Besides, communities perceived that education, though important, did not really lead to more opportunities or jobs in the formal sector owing to the large number of educated unemployed.

Economic condition

In almost all households (98.57 %) at least one member was employed in regular or casual work with income that contributed to the household budget. A very small percentage (1.43%) of households had no form of employment either because the household comprised only the elderly who had retired or unable to work, or because they were women headed. Over half the households were single earner families, about one third were two earner families and almost one fifth of the households

(16.62%) had more than three earners in the family, maximum number of earners being 9. Dependency ratio was calculated at 1:3 with each earning member supporting about 3-4 family members.

Table 8: Distribution Of Households By Earning Members

Number of Earning Members in the Household	Number of households	Percentage
0	17	1.43
1	619	51.97
2	357	29.97
3	130	10.92
4	48	4.03
5	14	1.18
6	3	0.25
7	1	0.08
8	1	0.08
9	1	0.08
Total	1191	100.00

A total of 2033 respondents were engaged in income generation. With a work participation rate of 33.21 as compared to the rest of the city (22.55), more poor people needed to be at work. Men constituted three fourths of total work force in the communities (Table 9) with the remaining one-fourth being women.

A small percentage of children were also found to be at work, i.e. 5.16% (n=105) both in paid and unpaid employment (Annex 5). Since there is a lot of hidden employment among children, this percentage may be grossly under reported and probably the reason for no child workers among the women headed households.

Table 9: Occupation Status of Workers

Occupation	Male	Female	Total	Percentage
Self Employed	532	109	641	31.53
Regular Employed	294	79	373	18.35
Casual Employed	685	276	961	47.27
Others	35	23	58	2.85
Total Worker	1546	487	2033	100.00
%	76.05	23.95	100.00	

Majority of workers were in casual employment or self-employment. Regular employment in public / private sectors was reported by only 18.35 percent of the economically active households. Other sources of income (3.01%) were pensions, interests on savings, etc. Casual employment was generally at construction sites or in mills, contributing to 34 percent of the total casual employment. Self-employed persons were either vegetable sellers or Thela pullers. Women engaged in home-based industries constituted 33.81 percent of the total self-employed workers. Regular employment in clerical jobs in private office or teaching institutions contributed 28.25 percent to the total regular work.

Income of Households

Household incomes ranged between Rs.100 to over Rs.10000 per month per household, an average of Rs.2819/- per month. Over 52 percent of households earned less than the average income with the rest earning more. With the per capita poverty line for the State of Maharashtra being estimated at Rs.540 per month, all households appear to be above the income poverty line using the average income of the household. However, by a very small margin (average per capita income based on a family size of 5.14 works out to Rs.2776).

Table 10: Average Income of the Households

(In Rupees)

Number of Earning Members in the Household	Number of households	Income	Average Income
1	619	1,343,118	2,169.82
2	357	1,106,306	3,098.90
3	130	538,613	4,143.18
4	48	242,449	5,051.02
5	14	76,721	5,480.07
6	3	26,200	8,733.33
7	1	10,300	10,300.00
8	1	6,350	6,350.00
9	1	7,900	7,900.00
0	17	0	0.00
Total	1191	3,357,957	2,819.44

This has serious implications for poverty alleviation programmes in the city. City of Nagpur needs to redefine poverty in terms of services' poverty rather than income poverty.

Disaggregated income data at the household level however, indicates that nearly 63 percent of households fall below the poverty line, with the remaining 37 percent having incomes over the defined poverty line. Most households falling in the lower income groups were engaged in casual or self-employment, where income levels were highly insecure.

There is a need to build a dynamic information system that can identify families that are moving in and out of poverty and target these for support services.

Services related emergencies that pull households into poverty need to be identified and buffers created against households slipping into poverty.

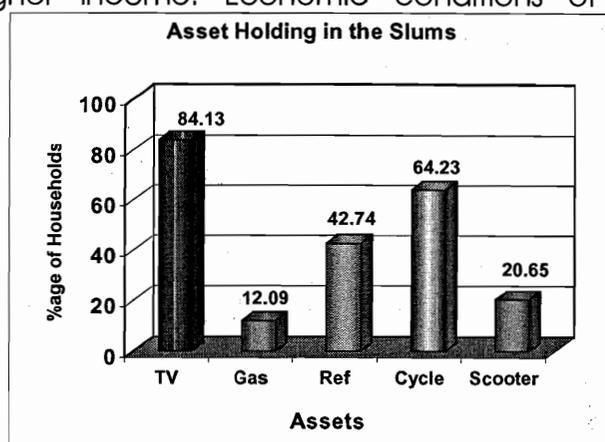
Non-poor households that fall marginally above the official poverty line constitute a highly vulnerable transitional group that is at considerable risk of being shocked into poverty in case of any economic or personal emergency or natural disaster. Very often poor environmental conditions lead to lower capacity to earn incomes making household vulnerable to health shocks. While planning for services in urban poor settlements it is important that such families be supported through adequate safety nets and credit assistance.

Table 11: Distribution of Households by Income

Income Range (in Rupees)	Number of Households	Percentage
No Income	20	1.68
Upto 1000	107	8.98
1001-2000	448	37.62
2001-2776	180	15.11
2777-3000	113	9.49
3001-5000	206	17.30
5001-10000	97	8.14
10000+	20	1.68
Total	1191	100.00

Ownership of Assets

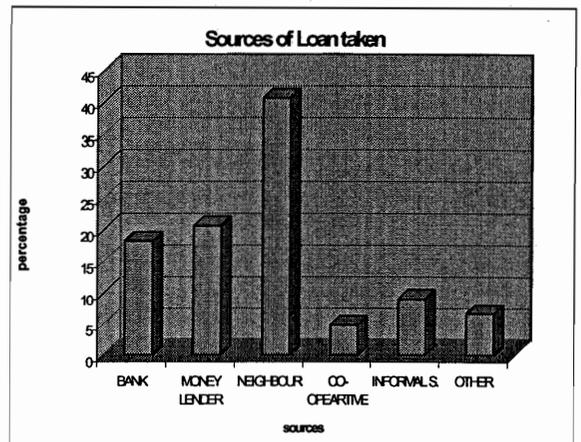
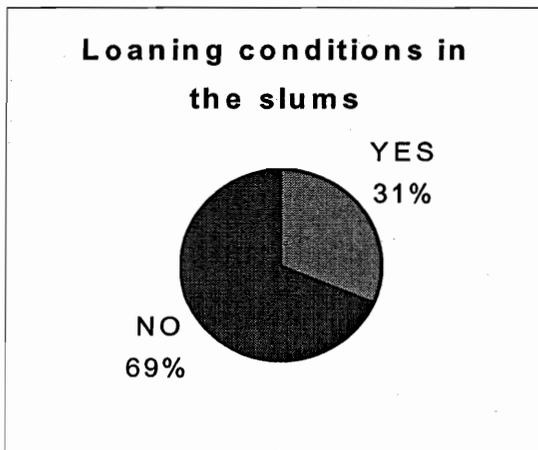
Households remain poor when they lack productive assets that can help them to improve their output and generate higher income. Economic conditions of households were analysed by looking at their asset profile. PLA tools were used to determine asset availability. A significant proportion of families (84.13%) owned television sets. Other assets owned were gas, refrigerators, cycles and scooters. Least number of households owing televisions was noted in zones I and 4 (Annex 3). While large proportion of households were found to possess cycles or even refrigerators, only a small percent (12.09%) had acquired gas connections.



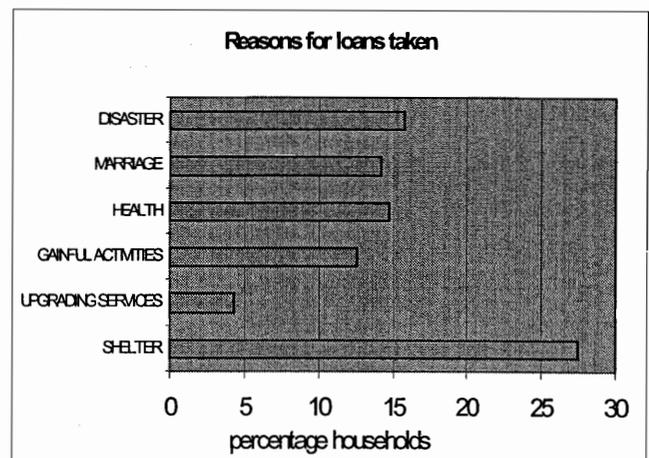
A clear gender bias in asset ownership is visible with assets procured tending to include luxury items rather than improved technologies that can reduce drudgery of women's work. Even motorcycle ownership was higher (20.65%) than gas possession. Transport means are largely available to men only, enabling them to get to and from their places of work with few women using these assets for improving their incomes or productivity.

Access to Credit

About one-third households indicated that they had taken loans for shelter upgradation or personal emergencies. As people are often reluctant to disclose their debt liability, percentage of poor having accessed credit may possibly be higher. Loans are generally sourced from informal sources, primarily neighbours or other family members (42%) or private moneylenders (20%). Percentage of households accessing loans from formal institutions such as banks remains low at about 18 percent, reasons being a lack of information and overwhelming procedures that require basic literacy skills.



Families sought credit for shelter repair, rebuilding or upgrading the structure (24%). Others accessed loans for social purposes such as marriages, festivals or disasters (14%). Only 5 percent households had taken loans for improving their access to basic services such as adding taps, toilets or improvement of drainage and sanitation facilities.



More people in zone 7 had opted for credit in comparison to others, due to their very low monthly incomes.

Expenditure Pattern

Average monthly expenditure of poor households was estimated at Rs.2100 per month suggesting that there was the possibility of formal savings among the poor. Household expenses ranged between Rs.100 to over Rs.5000 per month. Nearly 40 percent households spent between Rs.1001 and Rs.2000 per month, and 31 percent between Rs.2001 and Rs.3000. At the two extremities were 4.11 percent families who reported monthly expenditure over Rs.5000 every month and 0.8 percent who spent less than Rs.500 per month.

Table 12: Expenditure Pattern of the Household

Expenditure (in Rupees)	Number of Households	Percentage
<=500	9	0.76
501-1000	73	6.05
1001-2000	472	39.55
2001-3000	370	30.98
3001-5000	218	18.30
5000+	49	4.11
Total	1,191	100.00

Majority of household income was spent on consumption and survival needs of food and shelter, with food accounting for nearly 60 percent of the total household expenditure.

Table 13: Average Expenditure on Different Items

Item	Number of households	Expenditure (in Rupees)	Average Expenditure (in Rupees)
Rent	236	144,460	612.12
Food	1191	1,493,140	1253.69
Clothing	1112	173,643	156.15
Education	733	90,241	123.11
Health	1005	145,891	145.17
Basic Services	105	9,480	90.29
Others*	783	443,230	566.07
Total	1191	2,500,085	2099.15

Note: Others includes Marriages, Disasters and other social obligations

Expenditure on food for 26.53 percent families ranged between Rs.500 and Rs.1000 per month. Only 0.5 percent families said they spent about less than or equal to Rs.100 on food.

Health care costs nearly 84 percent families a 6 percent of their income, with an average expenditure on health being Rs.145 per month. Health expenses ranged between Rs.100 and Rs.1000 per month per family with about 2 percent households spending over Rs.500 per month.

Variation in health expenditure across zones was examined with a view to correlate it with the quality of habitat in these communities. Zones 6, 7, and 9 were stress zones for health, and health costs were high ranging between Rs.200 and Rs.500 per month. These are also zones with poor quality water supply and sanitation facilities that are responsible for a majority of illnesses.

Clothing expenses, like health, were an average Rs.156 per month, comprising nearly 7 percent of total expenditure. Most respondent (68.17%) spent between Rs.100-Rs.500 on clothing with 0.18 percent spending more than Rs.1000 per month.

Education is obviously low priority among the poor when viewed through the expenditure lens. At 3.61 percent of total household expenditure it averaged at Rs.123 per month with nearly half the respondents spending between Rs.100 to Rs.500 per month on children's education. Possibly as primary school education is normally provided free of cost, expenses could be low. However, as an equal number (nearly 46 percent) households spent less than Rs.100 per month on education, it means that education intervention must be given special attention in any poverty alleviation programme. Only about 6% households spent between Rs.500-1000 per month on sending their children to school.

Expenditure on basic services, which is an important focus area of the study, was found to be low on the list of household expenses. Of the very few households (10.08 percent) who responded to this question indicated that they spent only 0.38 percent of their total monthly income on accessing basic services, which were normally available or accessed free of cost. Average expenditure on buying/using physical infrastructure in these communities was less than Rs.100/ per month, ranging between less than Rs.50 (56 %) and Rs.200 (6 %).

Status of the Households

Most households were male headed (67.20%), where the man was either heading a nuclear unit or living along with married sons and their families or other relatives suggesting that the others were Women-headed households. However, using the operational definition of women headed households as those where there are no adult males or where the woman is the primary earner, 6.29 percent of households were found to be women headed. For the remaining we assume that women were sufficiently empowered to represent themselves as heads of households.

Gender Based Poverty

Among the women headed households (WHH) 38.7 percent were either widows or separated from their husbands and living independently and the remaining had men who were unemployed due to variety of reasons. (Annex 3).

Average income of women headed households was Rs1424 per month, half the average household income among the poor populations in the city. Only about 13 percent of women were found to be earning over Rs.2000 per month. Almost all women headed households were however below the city poverty line except in case of a few sex workers, who earned over Rs.8000 per month, suggesting a need to focus on this group in poverty alleviation programmes. Even though these were the poorest households in the communities, none of their children were at work.

Service availability in the women headed households in comparison to the rest of the sample was less as can be seen in the following table. Fewer WHHs had individual taps or toilets and more were dependent upon public taps or resorted to open defecation.

Table 14: Services Available in the Women Headed Households

Services		Samples' Average	City's Average
Water	Individual Tap	36.00	45.84
	Public Tap	45.33	33.25
Sanitation	Individual Toilet	57.33	59.53
	Open Defecation	25.33	21.16

Section II:

Infrastructure Facilities

Status of infrastructure services in urban poor communities has been examined in this section.

Water

Nagpur's present availability of water is higher than its demand. As mentioned earlier, NMC is responsible for providing and maintaining city services. According to a recent survey undertaken by NIUA¹⁷ total demand for water in the city was 368 MLD, whereas the supply was 370 MLD per day, an excess of 2 MLD. Based on these estimates the per capita supply was calculated at 176 lpcd that is more than the city norms set by Nagpur at 175lpcd. However, there is great inequity in the quantity and quality of supply. Some of the variables are discussed below.

Source of Water Supply

Poor households depended on public stand posts, hand pumps, private/shared tap or individual piped supply for their water needs. Piped water supply was either through individual connections or accessed through the municipal water pipe line passing by the community or from local factories. Survey data notes that 46 percent of sampled households had access to individual tap water supply while others depended upon sources of questionable quality such as hand pumps or wells and tube wells. Other sources include tanker supply to the settlements by the local governments. About one third household's (Table 15) used community/public water sources. Availability of private taps was highest in zone 7 and 1. Zone 7 also had large number of community stand posts and also personal hand pumps that they were using to supplement household water supply that was insufficient. Dependence on community sources was highest in zone 10 (Annex 4) where individual taps were fewer. In zones 8 and 5 households relied on sanitary wells to supplement their water requirement. In Zones 2 and 8, people have bored personal hand pumps and hence rarely use public stand posts.

¹⁷Status of Water Supply 1999 Statistical Volume, NIUA

Table 15: Source of Drinking Water

Source	Number of Households	Percentage
Individual Tap	546	45.84
Public Tap	396	33.25
Shared Tap	22	1.85
Sanitary Well	55	4.62
Tube well with Motor	11	0.92
Hand pump	86	7.22
Tanker/ Truck	17	1.43
Others	58	4.87
Total	1,191	100.00

Distance of Water Source

Closer the source of water greater is the access with subsequent impact on health behaviour. Table 16 indicates percentage of households by reported distance from the water source.

Average distance of water source from the household ranged between 20-25 meters with time spent on water collection per trip being less than 5 minutes. Since most families needed to make at least 15 trips a day for water, (varying between 7 - 19 per day) time spent on collecting and storing water was 75 minutes per day depending upon the load on one tap, pressure of water etc.

Table 16: Distance of water source

Distance (meters)	Number of Households	Percentage
<5	574	48.19
6-10	102	8.56
11-20	263	22.08
21-30	69	5.79
31-50	76	6.38
50+	94	7.89
Not answered	13	1.09
Total	1,191	100.00

Access to water supply was best in zone 7 where not only did the largest proportion of households use taps as a source of water but these were also located spatially close to their homes. In contrast, in zone 8 and 9b while people had access to taps, their distance from homes was much farther. Although in Zones 2 and 5, hand pumps or sanitary wells were the primary drinking water sources, these were available close to the homes and people did not have to travel far to fetch water.

Duration of Water Supply

Water was supplied quite regularly in these settlements (Annex 4). Supply in zones 7,8 and 2 were practically round the clock according to 17 percent families. Nearly 68 percent households reported supply between 1 to 5 hours daily. In a few zones, supply reported was between 6 to 10 hours a day, albeit only 10 percent households reported this figure. On an average poor areas receive about 7 hours of water supply daily. Zones 6 and 9b were water deficient areas, primarily because of busted pipelines or low pressure.

Table 17: Duration of Water Supply a day (In hours)

Water supply per day (In hours)	Number of Households	Percentage
1-2	387	32.49
3-5	421	35.35
6-10	115	9.66
11-20	65	5.46
20+	203	17.04
Total	1,191	100.00

Consumption of Water

In the present study amount of water used per household was estimated using a household measure; number of 15 litre buckets of water used on an average by a family every day. Data indicates that although the average water supply to poor settlements is close to the norm at 171 lpcd, amount used by families varied from zone to zone (Table 18).

Table 18: Status of Water Consumption

Zone	Water used (Bucket of 15 litres)	Water (in litres)	Per capita water used
1	26	390	76
2	41	615	120
3	39	585	114
4	40	600	117
5	20	300	58
6	54	810	158
7	118	1770	345
8	99	1485	289
9a	50	750	146
9b	23	345	67
10	77	1155	225

While zones such as 7, 8 and 10 received and used more quantity of water than the average city norms, families in zones 5, 9b and 1 used less than half the per capita per day average city supply. Of the zones that were using large amounts of water, Zone 7 was also where maximum number of personal taps had been provided. Zone 7 was located in the city fringes, more in the nature of villages that had been integrated into the city boundaries rather than congested slum like settlements. In zone 5 most households depended on a well for their supply with hardly any taps were available both at the community or household level. This zone was supplied potable drinking water through tankers, which was highly insufficient. People had no option except to fulfil only urgent consumption needs for drinking and cooking. Demand for water supply inevitably heightened during summer exacerbating problems and resulting in enormous health stresses to the poor.

Data must however, be read with caution, as water consumption estimation technique used in the present study is likely to include water that people draw from their own hand pumps or wells and not just that supplied by the city in order to meet household needs. Quite often bathing or washing clothes and utensils happens at the public stand post or well and amount of water used cannot be estimated. Amount of water used by families will also depend upon storage space and containers available at home.

Not many complaints about quality of water were noted except in zones 3,8 and 10, despite the fact that these were zones with high levels of water supply.

Leakage in areas with high levels of water supply was common, with the poor themselves recommending that the Corporation improve its operations and management.

Evidently Nagpur does not have serious problem with respect to water supply. Attention needs to be focussed on management of existing water resources and improving distributional equities.

“Now most of us can afford taps. Water from community taps is often polluted. Also taps get stolen and there is unnecessary wastage of water.”

A resident; Gaddigaum 1, FGD

Bathing Space

Poor bathe either inside their own houses, in makeshift enclosures outside their dwelling or at public stand posts, river, canals etc. Women and children generally bathe inside their homes while men tend to bathe outside. Although separate bathing spaces are not built within the homes, areas are earmarked for the purpose that may or may not be connected to an outside drain.

Table 19: Availability of Bathing Space

Option		Number of households	Percentage
Yes		1084	91.02
	Inside	1063 (98.06)	-
	Outside	21 (1.94)	-
No		89	7.47
Not Answered		18	1.51
Total		1191	100.00

Nearly all households indicated that they had marked out bathing space within the house. However, most often these spaces are not connected to any community drains and water collects in stagnant pools outside the homes or has to be drained away from pits that have been dug out in the lanes outside ever few days. Community drains wherever available are unconnected to underground sewerage resulting in huge pools of stagnant water at one end of the communities threatening the health of the poor.

Sanitation Facilities

In densely populated urban areas open defecation is no doubt a serious environmental sanitation and hygiene problem. Worse is its health, social and psychological consequence. Poor usually use open grounds, strips along the riverbanks and railway tracks for defecation and some time they have to cope with penalty and other punishments. Women are the biggest sufferers, as they have to wait for darkness of the night to relieve themselves in open spaces.

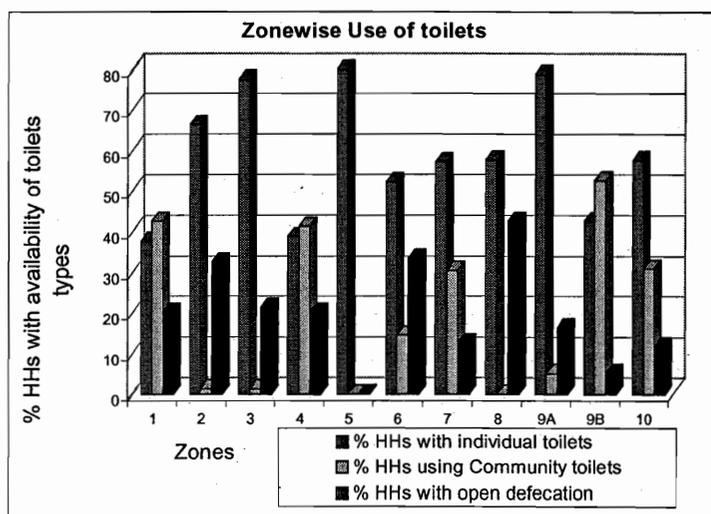
Individual toilets were found in most of the zones, but community toilets are fewer in number in zones 2,3 and 8. Most of the people used open space for defecation in these zones. Zones 2,3 and 8 were thus deemed to be stress zones, where more toilets were required either individual or community depending upon people's ability to save up for a private latrine or space within the community.

Table 20: Distance for Community Toilet

Distance (in meters)	Number of households	Percentage
< 5 MTS.	6	2.80
5-10 MTS	14	6.54
10-15 MTS	19	8.88
15-20 MTS	14	6.54
20+ MTS.	161	75.23
TOTAL	214	100.00

Access to community toilets was seen in terms of distance from households. Community toilets were generally between 20-25 meters from homes for nearly 75 percent of families.

Besides being far, insufficient seats in these toilets meant that all were unable to use the toilets when needed or during peak morning hours. Users had to wait for over 20 minutes just to use the facility in the morning.



As per norms a toilet seat was to be provided for every 50 persons under the EIU programme. Numbers of seats in community toilets were found to range between 2 to 8 with a few (14%) having more than 16 seats. In zones 2,3 & 9a average number of persons per seat was less than the recommended norm, forcing people to resort to open defecation.

Number of seats in women's toilets was consistently less in almost all zones whereas children, particularly young including boys tend to use the women's section with their mothers.

Other reasons for lack of use included; poor maintenance because of which several toilet complexes were unusable. Besides, toilets were not provided with dustbins, particularly in the ladies section showing a lack of gender sensitivity among planners.

Most of the households have an individual toilet constructed under an NMC scheme.

A resident of Bhivsenkhori poor settlement

“Yes, there was a scheme for building individual toilet some years ago, but due to scarcity of water, the scheme was not successful”.

A resident of poor settlement

Table 21: Surplus / Deficit Analysis Of Community Toilets

Zone	Number of seats of community toilets			Population	1 toilet seat cater to
	Male	Female	Total		
1	17	12	29	206	7
2	1	1	2	367	184
3	1	1	2	343	172
4	33	33	66	370	6
5	0	0	0	435	n.a.
6	23	22	45	838	19
7	71	67	138	1352	10
8	0	0	0	828	n.a.
9A	4	4	8	416	52
9B	43	39	82	373	5
10	36	34	70	592	8

Drainage Facilities

In most part of the city has no underground drainage service. Drains within the communities too are shallow, generally open where garbage and wastewater mix and flows over the kutchra pathways creating highly unsanitary conditions. Lack of drainage facility is most prominently noted in zones 7 and 10 and least frequency in zone 8 & 6.

Zone 7 & 4 are provided with open drains running alongside the homes. While proportion of covered drains is high in zones 8 & 6.

Most drains are unconnected to a sewerage system resulting in unhygienic habitats due to water logging within the communities. Existing drains were in poor condition due to lack of maintenance, with the situation worsening during rains, which Maharashtra has in plenty. Low lying areas were prone to water logging, with houses getting flooded. Often people had to move out of their homes and shift to higher /dry grounds.

People also do not have a sense of collective responsibility for drain maintenance. Garbage disposal in the drains is common. A slaughter house in one of the community has added to the problem with open drains being filled with blood.

Most of the poor settlements have no proper drainage lines. In some dwellings water enters inside the premises during monsoons. Water logging and muddy patches are a common problem. Situations like this affect the sanitation of our areas, which in any case is hazardous, leading to spread of various infectious diseases.

Municipal sweepers rarely visit poor communities that are also devoid of dustbins where solid waste can be collected for disposal.

Table 22: Frequency of Cleaning Drains

Frequency	Number of Household	Percentage
Daily	62	6.33
Twice a week	29	2.96
Weekly	47	4.80
Fortnightly	71	7.24
Monthly	74	7.55
Once in two months	61	6.22
After three months	550	56.12
Not answered	86	8.78
Total	980	100.00

More than 55 percent people indicated that drains were not being cleaned regularly. In fact these were cleaned once every three months. Very few reported that these were cleaned more often than that. Some people indicated that they paid private sweepers to get the drains in front of their shelters cleaned. Most were dependent on the municipal sweepers.

Solid Waste Disposal

Improving environmental health in poor settlements is a formidable challenge. It is necessary to clean up and dispose of the waste and garbage before it starts degrading. Since people generally do-not separate waste because of lack of information, the need to initiate an awareness programme becomes critical.

Transects through the communities showed heaps of garbage lying uncollected in front of houses, most of the wells were seen to be used as dustbins and all open drains were clogged due to garbage.

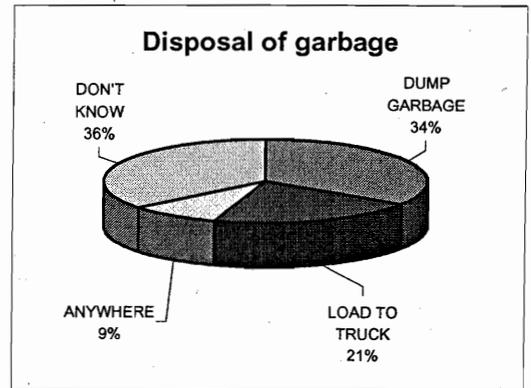
Very few poor settlements were provided dustbins for dumping household waste. More than 50 percent households threw the waste either in the garbage dump or used drain or wherever they felt like. Only about 22 percent households said that the sweeper collected the waste from their homes.

Drains were used primarily for dumping garbage in two zones; 7 and 10. In the rest of the zones waste disposal practices were generally uniform with about 34 percent reporting collection by sweeper and an equal number (36%) complaining that

sweepers did not come regularly to their communities and they had to dump the waste at the nearest dumping ground.

Disposal was most irregular in all communities with 13 percent households indicating that waste was removed from their communities once a month.

“There is an urgent need to provide dustbins within the communities to improve the disposal system. The technical aspects such as location and design of the dustbins are also critical.”



‘We have scheme for common toilet, individual toilet and water tap but the issue of sewer line remain unanswered’

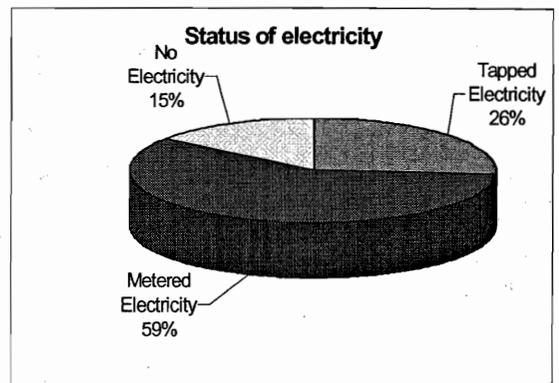
A resident of the poor settlement

City of Nagpur is in urgent need of a programme for management of both solid and liquid waste. This must be planned in partnership with people, with communities linked onto existing city sewerage systems by augmenting capacities of city infrastructure. Systems for operation and maintenance need to be set up front at the community level to increase citizen responsibility and ownership. Areas where communities demonstrate willingness to participate and pay for good quality services need to be offered community contracts for waste management as both income-earning opportunities as also for improving overall sanitation in the community. ‘Health Improvement’ campaigns in

communities can serve as advocacy tools for changing People’s waste disposal behaviour.

Electricity

Electricity is an important service, known to improve the quality of lives of people in cities by offering them physical security and improving economic and educational opportunities. Nearly 85 percent of selected settlements had access to electricity (metered and un-metered). Of all households with un-metered connections, about 47 percent were drawn from neighbours on a shared basis and



27 percent were tapped directly from the pole. Nearly 59 percent households had individual connections.

Proportion of separate connections was more in zone 7 followed by zone 6, and less in zones 1 and 2. In zones 7 and 8 proportion of shared connections was quite high.

Table 23: Expenditure on Electricity

Monthly Expenditure (in Rupees)	Number of Households	Percentage
<100	272	38.58
101-200	265	37.59
201-300	76	10.78
301-500	33	4.68
500+	7	0.99
Not answered	52	7.38
Total	705	100.00

Payment for Electricity

Households with metered connections (40%) paid on an average Rs.50 to Rs.150 per month in electricity costs. About 38 percent paid higher costs that ranged between Rs.100 to Rs.200 per month. Only about 1percent households paid more than Rs.500 per month. Those who tapped electricity directly from the pole paid nothing as reported by 65 percent households. Remaining operated on an entirely different tariff zone that was determined by the local tout.

Supply of electricity in these settlements was not a problem in any season and more than 80 percent respondents claimed to have supply for 20-24 hours a day and seven days a week. Rest of the households received between 5-20 hours supply daily.

Table 24: Supply of Electricity in a day

Supply (in hours)	Number of Households	Percentage
<10	5	0.71
10-20	6	0.85
21-23	236	33.48
24	372	52.77
Not answered	86	12.20
Total	705	100.00

PLA tools identified several problems with regard to electricity usage:

- Dangerous conditions of electric poles and wires that passed over the shelters
- Inequity in supply across different zones
- Unaffordable electricity costs

Among households with no electricity connection, use of kerosene lamps was high at 58 percent. Proportion of households using kerosene lamps was highest in zone 10 and 3 indicating that these households had not drawn electricity either directly or indirectly for their use.

Use of kerosene for illuminating homes increases vulnerability to fire hazards particularly as most shelters are built from combustible materials.

Table 25: Substitute of Electricity

Option	Number of Household	Percentage
Lantern	3	1.88
Kerosene	92	57.50
Candle	2	1.25
Not Answered	63	39.38
Total	160	100.00

Although the study did not collect information on willingness to pay, the fact that some poor households were in fact paying for the electricity they used, though not to the electricity board, indicates that there is capacity to pay for such an important service.

Since a large number of poor draw electricity illegally, a system for legal supply would reduce leakages enabling the municipalities to recover costs of transmission.

SECTION III:

Status of Women and Children

Status of Women

Among the poor women are generally considered to be doubly vulnerable, because of their subordinate position in the society and lack of opportunities. Being exclusively responsible for household chores, lack of basic services at the community level influences women more severely. However, because of their voice-less-ness and invisibility their needs and priorities are often ignored or marginalized. Their health and educational status vis-à-vis the rest of the city and among the poor themselves is often low reducing their productivity.

Women are generally more susceptible to life threatening diseases that are common in poor communities of cities. Single largest cause of their mortality is due to complications during pregnancy and childbirth that is partly because of a lack of knowledge and decision making powers. Maternal deaths also result from poor health that begins before birth, grows worse through adolescence and becomes critical at the time of pregnancy. Poor diets of women mean that most are anaemic during pregnancy. Anaemia increases vulnerability to haemorrhage leading to death. Mothers over 35 years with more than four births are particularly high-risk cases. Early marriage and early pregnancy compound these problems. Pregnancy is a serious health risk to women under age 18 years.

Several indicators have been used to understand the status of women between the age group of 15 and 49 years among the urban poor settlements of Nagpur. Data with regard to their health, nutrition and education status is analysed for 1160 women excluding unmarried women of this age group.

Table 26: Age of Women at the time of First

Age	Marriage		Pregnancy		Delivery	
	Number	Percent	Number	Percent	Number	Percent
<15	85	7.33	0	0.00	0	0.00
15-19	699	60.26	561	54.31	540	53.68
20-25	344	29.66	427	41.34	425	42.25
26-30	32	2.76	41	3.97	39	3.88
30+	0	0.00	4	0.39	2	0.20
Total	1,160	100.00	1,033	100.00	1,006	100.00

About 60 percent women were married between the ages of 15 and 19 years. About 30 percent married between 20 and 25 years and a small percentage (3 %) married after the age of 26 years. Since 50 percent women also delivered their first child within one year of marriage, most babies were born to young mothers. Most abortion cases were also reported in the youngest age cohort of 15-19 years. Average number of children per woman was 2-3 (46%) with rest having two or less than two children.

While poor households accessed maternal care services extensively number of families using childcare services were fewer. About 86 percent expectant mothers availed antenatal services. Fourteen percent were unable to avail this service due to inadequate infrastructure or non-availability of services in some poor settlements. As a result incidence of tetanus immunization is high in most zones.

Table 27: Place of Delivery

Place	Number of Women	Percent
Govt. Hospital	101	65.58
Pvt. Hospital	13	8.44
Home	26	16.88
Don't Know	14	9.09
Total	154	100.00

In the last one-year about 66 percent women used government hospitals for delivery under supervision of qualified doctors. Nearly 17 percent of births took place at home, mostly in zones 7 & 8, zones in the periphery of the city and at a distance from the hospitals. Very few i.e. about 8 percent households have had children born in private hospitals, the latter being preferred as they were seen to provide better quality services.

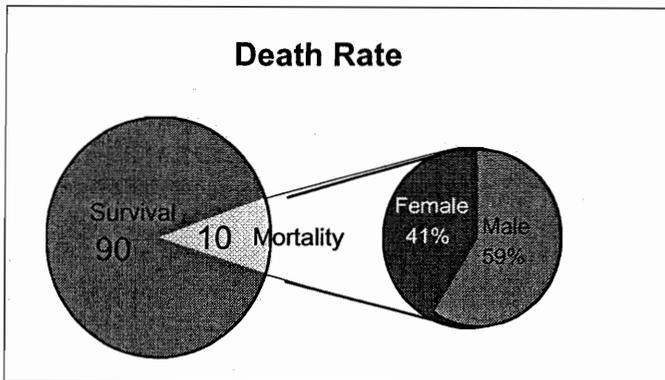
Table 28: Delivery Assisted By

Person	Number of Women	Percent
Doctor	120	77.92
ANM/Nurse	2	1.30
Dai	9	5.84
Relative/Friend	9	5.84
Total	154	100.00

Nearly 79 percent of births were by trained person (doctors and nurses) across all zones. Only 10 percent deliveries were managed by a 'Dai' or relative. Lack of knowledge led to complications in delivery. Without adequate transport at the doorstep, mothers remained at risk during delivery.

Mortality

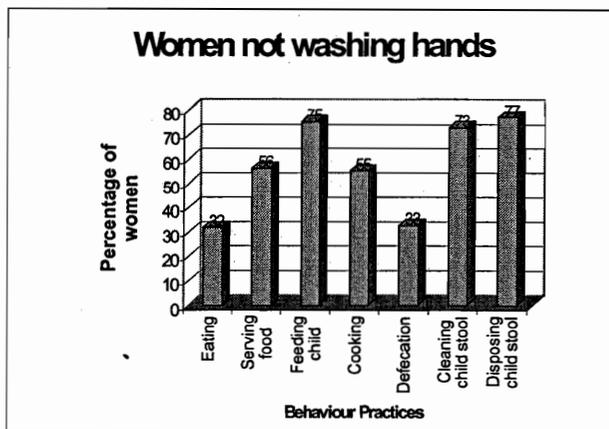
Of the total live births 90 percent children have survived, with 10 percent dying under the age of 14 year of life. The proportion of male is more than the female. Fourteen still birth (10%) were reported in the year before the survey.



Babies with 2.5 kilograms or more at birth are considered healthy. About 21 percent infants had a birth weight less than 2.5 kilograms with zone 7 having the maximum incidence of low birth weight babies and zone 2 the lowest.

Health Practices

Health practices such as hand washing and taking bath were observed during the survey. More than half the poor women washed hands before and after activities such as cooking, eating, feeding children etc. About 67 percent washed their hands after defecation but only 23 percent washed hands after disposing child stool. Reasons for not washing hands related to scarcity of water. Taking bath is another activity, which is not very common among the poor.



Children 0-5 year

Children under five years are especially vulnerable to their environments. Low birth weight due to inadequate nutrition of the mother, deliveries by untrained attendants in unhygienic surroundings, delayed breast feeding and weaning and lack of immunization result in failing to child survive long years of life.

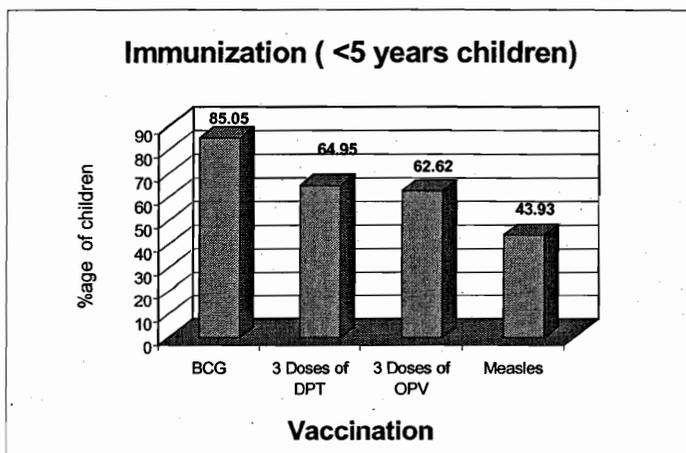
National Health Policy is a commitment to attain "Health for all" by the year 2000 AD. To achieve the objective of the policy, the Government of India launched a comprehensive family welfare programme that targets health and related services to high-risk, vulnerable groups of women and children. Programmes aim at reducing IMR

and maternal mortality rates, improving access to health services, particularly reproductive child health services such as ante natal, natal and post natal care and promoting appropriate feeding and weaning practices. As part of the survey, data was gathered on immunization and health problems among children.

Immunisation

All children need to be fully immunized before the age of one year with BCG, three doses of OPV and DPT and measles vaccine. Children with measles vaccination are generally presumed as fully immunized. Immunisation status of 214 children in the age group 0-2 years was analysed from the records, whereas the number of children in the age group 0-2 years in the sample was 369 as the others did not respond to the question.

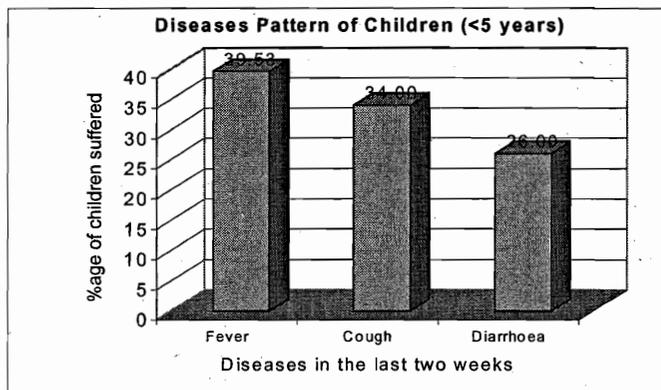
Nearly 85 percent had received the BCG vaccination (normally given soon after delivery) and 65 percent, the three doses of DPT and OPV. Only about one fourth of all surveyed children in the age group 9-12 months had been administered Vitamin A supplementation with measles or separately. Communities with access to Anaganwadis had a better record of immunization. No sex differences in Immunisation coverage were noted. Declining incidence of vaccinations as the children grow is indicative of the lack of priority parents assign to getting their children immunized.



Significant number of children had been completely missed for immunized, in spite of a national polio eradication drive. To this if the no response category is included under the assumption that these were unimmunized or partially immunized children, the percentage may be much higher.

Health Problems among Children

Children below the age of five years are susceptible to various kinds of diseases. Proportion of child deaths caused by various kinds of illness is often high in poor areas. Data on health problems among 602 children has been examined in this study.



Diarrhoea is the most common problem in such settlements due to poor sanitation and hygiene and lack of clean water. Over one-fourth children were found to have suffered from diarrhoea in the two weeks preceding the survey, with highest incidence being recorded in zone 7 and the lowest in zone 1. Since these zones usually use water from individual or public taps and have personal toilets supplied by the local body, high incidence of diarrhoea is indicative of poor quality of water. One-third people in these zones were defecating in the open, a possible reason for high diarrhoeal episodes.

An average Indian child experiences three to four episodes of some form of respiratory infection, often influenza and common cold virus. Mild infection becomes severe due to inhospitable environmental conditions prevalent in these settlements - malnutrition, overcrowding and indoor air pollution. The result is acute respiratory infection. As much as about 34 percent children are suffering with cough or rapid breathing in the surveyed sample. This developed perhaps due to Vitamin A deficiency and delayed initiation of infant breast-feeding.

Wide variation across zones was noted. As against 35 percent in zone 7 the incidence was merely 3 percent in zone 1 and could be due to the high density in these communities and air pollution.

Incidence of fever was high in zones 10 & 8 as compared to zones 1 & 4. Jaundice is also due to poor quality of water. So are skin diseases. Incidence of these however, was quite low in the surveyed communities.

Health Care Services

Diarrhoea that causes dehydration due to rapid loss of water and salt can become life threatening among small children if not managed properly. Acute diarrhoeal infections place the child in a cycle of ill health that interrupts learning and reduces the ability to work to the optimum capacity. Frequent illnesses also increase costs to a family on health care.

Table 29: Drink Given During Diarrhoea

Option	Breast Milk	Other Milk	ORS Packet	Water with milk	Water Alone	Gruel
Yes	48.03	28.95	20.39	25.66	34.21	35.53
No	34.21	35.53	39.47	23.03	21.71	25.00
Don't Know	17.76	35.53	40.13	51.32	44.08	39.47
Total	100.00	100.00	100.00	100.00	100.00	100.00

As many as 33 percent children received no treatment during diarrhoea. Others were given ORS supplementation (20%), continued breast milk (48%), other supplements (29%) and water (34%). Clearly the quantity of fluid intake was reduced for 53 percent children because of traditional beliefs. While for 10 percent children liquid intake was increased for an equal percentage (9%) fluids were completely stopped.

'Women neither tell about pregnancy up to four months nor take required care. The infant is not fed for the first three days and only honey and water given to the newborn. It is our practice and culture.'

A resident; D.P. Signal

Lack of knowledge is the primary reason for the improper management of health problems. Failure to seek medical advice when symptoms are mild, transforms them into severe conditions leading to the deaths of children. Generally children are attended to by private doctors in the settlements, that too when the problem becomes severe, since they are unable to note the early symptoms of the disease.

Status of Preschool Education

Early childhood stimulation has significant impact on the developing child both in improving the capacity to learn as also their social and emotional adjustment in society. Besides enhancing language skills and listening comprehension it's most significant contribution is in increasing enrolment and school participation. Anganwadis under the Integrated Child Development Services (ICDS) programme and the National Education Policy provide early childhood development services in poor settlements of cities.

Data on participation in preschool education programmes was reported by 335 children from among the 508 in the sample in this age group (2-5 years). About 51 percent children were found to attend a preschool centre.

Table 30: Status of Education (2-5Yr.)

Centre Attended	Children	Percent
Yes	171	51.04
No	131	39.10
Don't Know	33	9.85
Total	335	100.00

Of those who were going to a centre, nearly half attended private/NGO run Balwadis and only about 23 percent went to the ICDS Anganwadi and a small percentage (5%) went to Nurseries attached with government schools. Rest (nearly 16%) preferred private schools.

While enrolment rates were high, attendance was not so regular. Nearly 15 percent children on an average remained absent from these centres regularly due to sickness, lack of supervision and insistence by parents on regular attendance and distance of Balwadis from homes. No differences were noted vis-à-vis enrolment of boys and girls.

Substantial variation in enrolment was seen across the zones with enrolment rates highest in zone 7 and lowest in zone 5. Zone 5 lacked any kind of preschool service and hence the poor enrolment. Other reasons for low enrolment were:

- Poor physical infrastructure facilities in the learning centres;
- Rigid caste and class differential among beneficiaries;
- Lack of community participation and contribution;
- Unsatisfactory staff position;
- Poor quality of PSE component, devoid of plays material and learning equipment.

Status of Children (5-14 years)

Education

Despite the National Education Policy envisaging free and compulsory education for children there is considerable variation in reaching the goal across cities and states.

Table 31: Children Enrolled In School

Enrolment	Male	Female	Total	%age
Yes	611	565	1176	96.71
No	17	23	40	3.29
Total	628	588	1216	100.00

Primary school completion and gross enrolment ratios are two widely used indicators of education progress. Data from 1216 respondents was analysed. Of all children in the school going age group about 4 percent had never enrolled at school due to a range of reasons that also vary with gender. For girls common reasons were: need to help at home; low importance attached to girl's education because of perceived

low returns in such investment, negative socio-cultural attitudes and hidden costs to education that poor were unable to afford.

Table 32: Number of Children Attended School

Type of Schools	Number of children	Percent
Local Body Urban	315	26.79
Government School	531	45.15
Private School	247	21.00
Non-formal School	5	0.43
Balwadi/ Anganwadi/ Pre school	11	0.94
Don't Know	67	5.70
Total	1,176	100.00

Despite the fact that most government schools were over crowded with poor infrastructure, most children were enrolled here, as these are generally free. Schools run by local bodies also enrolled about 27 percent children from poor settlements and 21% were enrolled in private schools.

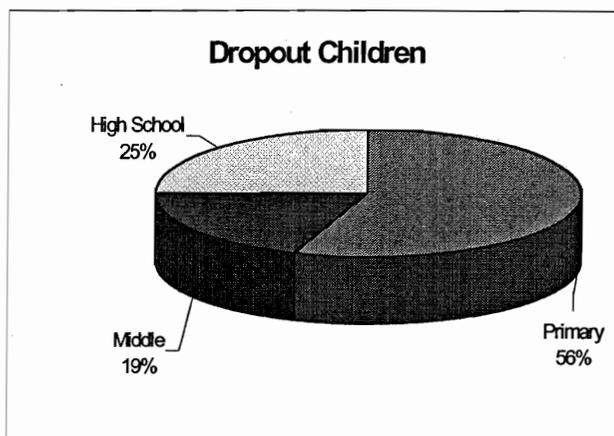
Nearly 97 percent children, more boys (50%) than girls (47%) were enrolled at school. Drop out rate was fairly low at 4 percent. Almost half the children however tended to drop out of school after completing the primary grade; largely in zone 8. Not more than 10 percent children completed high school education and illiterate children in the age group 6-14 years were about 10 percent.

Data has also been collected on attendance patterns from recall and the number of children who had attended school in three days prior to the survey was noted. Nearly 96 percent children attended school regularly. Almost all children in zones 1 & 9b were attending schools. In contrast, in zone 7 proportion of children at school, both among boys and girls was lower. Low attendance rates were due to: disinterest in studying and household responsibilities. Boys said that that education was irrelevant and did not equip them for formal employment. Also due to greater availability of opportunities for children to earn and supplement income in the economy, children dropped out of school, particularly in case of boys. In case of girls their need to share in the household tasks, where both parents were working was the main reason for their dropping out.

In order to improve access to education among never enrolled or to bring back those having dropped out of the system, the state government has set up alternative non-formal centres with flexible timings that allow working children to resume education. Participation in non-formal education programmes was not significant (only 5 cases)

were reported in our survey in this age group as people prefer to send their children into formal schools.

Of all children who dropped out of school about 56 percent dropped out at the primary stage, 25 percent at the high school level and 19 percent at the middle level. Incidence of girls dropping out of is higher by ten percentage points (nearly 55%) more in comparison to boys (45%). Most girls dropped out by the fourth standard, the stage deemed appropriate for them to study up to.



Inadequate infrastructure, schools located in congested areas, cramped classrooms, very little open space in schools to feel free and play were other reasons for dropouts.

Children at Work

Child labour has been recognised as a most serious and pervasive problem of children in India. It robs them of that phase of life that is most crucial for their healthy emotional, physical and mental development. There are strong indications that number of working children is increasing day by day in urban areas, the apprehension being based on the trends witnessed in the growth of the urban informal sector employment. Child labourers suffer multiple deprivations. They are over worked and deprived of their rights to health, education and childhood. As a result, they grow up to be illiterate, unskilled and often irresponsible adults, perpetuating the poverty cycle.

Child labour results from socio-economic and political factors including deliberate exploitation, harmful cultural traditions and gender related discrimination. While these basic causes push children to work, failure of homogenous communities and of extended family support systems are contributing factors. Yet it is not true that all the people in abject poverty are pushing their children to work; nor is it true that all children who work belong to families in abject poverty.

Data on working children between the age group of 5-14 years working in home based trades or paid employment outside homes was gathered as part of the survey. A working child was defined as a child between the ages of 5 and 14 years who earned and/or contributed to the income of the household through their work.

Of the 1216 children in the 5-14 year age group, 105 (8.63%) were found to be working. Of these 13 percent worked in paid employment outside the homes. Both boys and girls were engaged in work (boys: 52 %, girls 48%); percentage of girls in paid

employment was more than that of boys, who were more often engaged in home based activities, largely unpaid labour.

Table 33: Child worker (paid + unpaid)

Sex	Number of children	Percent
Male	55	52.38
Female	50	47.62
Total	105	100.00

Zones 7 and 9a, despite high levels of literacy, reported the highest percentage of working children in unpaid work than in zone 3 & 1. But along those working children in different zones, higher percentage of them, both male & female are found working in zone 7 & 9b.

“ Child labour Act, 1986 prohibits employment of children under age fourteen in hazardous occupation and limits working hours of children to 36 per week”.

We work for the sake of earning. We do not get proper remuneration for our work. We have to put up with insults from everybody. We have no status.

Most working children (about 69%) worked for nearly 10 hours or more a week. Very few (10%) worked 11-20 hours a week. About 2 percent reported to have worked between 31-50 hours, which is against the child labour Act, 1986.

Table 34: Children Worked in the past one Week

Hours	Number of children	Percent
<=10	72	68.57
11-20	10	9.52
21-30	1	0.95
31-50	2	1.90
Don't Know	20	19.05
Total	105	100.00

Missing Children

A gap between the total number of children and those enrolled at school or at work suggests that there is a group of nowhere children who are neither at school nor at work. These children, if also unsupervised can be easily sucked into crime or be abused. Childcare programmes and promoting basic education must be emphasized under development programmes in the city.

Chapter 5

Issues and Recommendations

The project was designed to provide a better understanding of the problems of urban poor settlements and people in Nagpur. Based on the data gathered a variety of conclusions have been reached. While there are no easy links between "knowledge" and "action", to solve the many problems that have been noted in the study would demand a concerted endeavor in partnership with the Local government, the people and all key stakeholders and actors. The first step towards building this partnership is to identify the nature and dimensions of the problem in the city. Based on the data gathered some conclusions have been arrived at some recommendations are made.

Urban Poverty Alleviation in Nagpur

Legal tenure

Urban poverty in Nagpur, like other big cities is less a poverty of income and more a lack of basic services, shelter, opportunities and choices. Illegal nature of stay of poor in settlements, on land to which poor are not 'entitled' defines the nature of living in squatter areas and the type and quality of services provided by city managers. Granting pattas makes the difference to a settlements being deemed as an under serviced area or not. It also influences people's sense of ownership and investment in up-gradation of their own environment. Tenurial rights or granting of patta however has both political and legal implications. An enabling environment needs to be created within the city through appropriate reforms in the Municipal Act to enable people to be settled on the sites where they have been staying for several years. It must clearly indicate sites that are marked for relocation. The Act needs to ensure appropriate measures to prevent displacement of the poor during the process of settlement/relocation and to provide security to poor who live in these settlements as tenants.

Redefining Poverty as Vulnerability

In the city of Nagpur not all people who stay in poor settlements are income poor. In order to ensure that all vulnerable groups among the poor are targeted for development intervention, the city needs to redefine poverty and adjust its poverty line. While revisiting the definition of poverty that accrues from inadequate shelter or services or opportunities and choices needs to be captured. Poverty line needs to be adjusted against the price index of the city and should be able to capture its dynamic nature by creating a band that captures the transitional group of poor who are easily shocked into poverty in case of emergencies, can be included in the local development agenda.

Addressing Income Poverty

Challenge of urban poverty reduction also lies in improving incomes of the poor, enabling them to access a range of quality services including appropriate shelter. While incomes in the city are not below the poverty line, they are obviously insufficient for the poor to move into better quality habitats. Income earning opportunities in the city would need to be identified. Linking the poor to the city's market economy and to augment both skills and technology would be desirable. Improving access of the poor to credit would go a long way in enabling the poor to find lump sums for their housing up-gradation or increasing incomes.

Gender Based Economic Opportunities

In this context gender based income earning opportunities would need to be explored. Women who are often at the low end of the employment chain in the informal sector suffer a range of deprivations, in particular denial of entitlements such as maternity leave, pension, medical insurance etc. To optimize their productive capacities, they would require technological, credit and training support. Support services such as crèches and schools and household infrastructure would enable them to find more time for income earning. Credit worthiness of women would need to be enhanced with the support of NGOs.

Improving Access to Basic Services

A critical need for urban poor in Nagpur is for household level physical infrastructure. While a majority of families have access to household taps and toilets, those without access to individual services is still quite large. Need to target these settlements /families among the poor are essential.

Environmental Sanitation

Poor environmental sanitation being a major problem in poor areas of Nagpur, the city needs to review coverage under its sewerage system, especially its outreach in poor communities. Systems in partnership with people need to be worked out for solid waste disposal. Options for community contracting may be explored.

Opportunities for Education

A concerted campaign towards withdrawing children from work and mainstreaming them with education needs to be launched. This may be managed in partnership with appropriate authorities.

Social problem

The community relating to alcoholism, domestic violence and abuse need to be addressed. Increasing trend of women headed households in the city must be examined and support nets created to enable these women to manage on their own.

Building Social Capital and Partnerships at the City level

Communities in the city need to be organized into cohesive structures and enabled to engage with the local governments to demand their rights in the city. Space would need to be created for such an interface. This would ensure critical needs of stakeholders are addressed in the city plans and feedback loops are created that increase accountability of local administration towards the poor.

Changing attitudes

Improving sensitivity in the local bodies towards urban poor and their needs would enable better targeting of services in these areas. Capacity building programmes for field facilitators and local administration workers is essential.

Efficient Governments

Reaching out to the poor in Nagpur requires efficient systems of governance of poverty alleviation and service delivery programmes in the city. Spatial information with respect to location of the poor and data regarding service levels in each city and each household need to be collected and built into a management information system that would enable planners and policy makers at the local level to identify the nature of problem and find appropriate solutions.

At household level

Apart from making available services at the household level, it is important to build knowledge among the people on appropriate health practices. Healthy practices would reduce the health burden of the poor, improve their productive capacities and allow them to build savings that can eventually be translated into creating household assets.

Sanitation practices in particular need to be the focus of attention. Till such time individual toilets are made available to the poor, people need to learn to use community toilets instead of resorting to open defecation. However, systems for maintenance of toilets need to be designed in partnership with people to ensure that they are usable and safe. Sanitation must become a social movement, obligating every individual family, community to ensure proper hygiene and cleaner

environment. For that educational campaign is likely to bring greater motivation among people.

With high levels of unimmunized children, an understanding of cultural taboos/ misconceptions and dispelling fears will help ensure that no child suffers from preventable diseases.

Early childhood education programmes must be initiated in the community to give children a head start in life. These create an interest among children for school participation that help children and families to extricate themselves from the stranglehold of poverty. In particular attention must be paid to education of girls.

Several countries in the world have been successful in substantially reducing the incidence of child labour. Having ratified the convention on the Rights of the child, India's major challenge now is to enforce those rights. Despite pervasive poverty, child labour can and must be eliminated. With high incidence of child labour in the city, there is a need to begin by recognizing children as children not providers. To combat child labour, government and civic bodies need to consolidate structures, functions and resources in keeping with the ethical principles. Advocacy to promote child labour elimination must be based on these principles.

Women's groups need to address the issues of status of women and become aware of their rights. Universal education, job opportunities for women and freedom of movement are important in improving the status of women.

Urban poverty alleviation in the city as in the rest of the country calls for an integrated approach in the backdrop of a broad policy framework that responds to the range of needs of the poor, and creates an enabling environment for such an integrated effort. A meaningful economic and social development framework that allows poor to improve their dwellings and living environments as also live a life of quality and dignity is essential for a sustainable endeavour.

ANNEXURES

List of Annexures

Annex 1

Table 1.1: Distribution of Household by Occupancy	A.1
Table 1.2: Distribution of Household by Type of Structure.....	A.1

Annex 2

Table 2.1: Distribution of Population by Age and Sex.....	A.2
Table 2.2: Distribution Of Household By Religion	A.3
Table 2.3: Distribution Of Household By Cast.....	A.4
Table 2.4: Status Of Education By Sex (>5 Years).....	A.5
Table 2.5: Status Of Education (>5 Years Population)	A.6
Table 2.6: Status Of Education by Grade - > 5 years (sex wise)	A.7
Table 2.7: Status Of Education by Grade - > 5 years	A.8

Annex 3

Table 3.1: Occupational Status of the Workers.....	A.9
Table 3.2: Distribution of Household by Income	A.10
Table 3.3: Distribution of the Household by Holding Assets	A.11
Table 3.4: Households Accessed Loan	A.11
Table 3.5: Purpose of Loan.....	A.12
Table 3.6: Distribution of Household by Expenditure Range.....	A.12
Table 3.7: Expenditure On Food by Household	A.13
Table 3.8: Expenditure On Clothing by Household	A.13
Table 3.9: Expenditure On Education by Household	A.14
Table 3.10: Expenditure On Health by Household.....	A.14
Table 3.11: Expenditure On Basic Services by Household.....	A.15
Table 3.12 : Status of Women Headed Household.....	A.16
Table 3.13: Income Status of the Woman headed Household.....	A.16

Annex 4

A. Water

Table 4.1: Source of Drinking Water.....	A.17
Table 4.2: Supply of Water per Day (in hours).....	A.18
Table 4.3: Distance of Water Source (In meter).....	A.18

B. Bathing

Table 4.4: Availability of Bathing Space.....	A.19
Table 4.5: Location of Bathing Space	A.19

C. Toilet

Table 4.6 : Availability of Toilet Facility	A.20
Table 4.7: Accessibility of Toilet Facility by Household.....	A.20
Table 4.8: Distance of Community Toilet	A.21

D. Drainage

Table 4.9 : Distribution Of Household By Drainage Facility	A.22
Table 4.10: Type of Drain	A.22
<u>E. Solid Waste</u>	
Table 4.11: Waste Cleared By	A.23
Table 4.12: Frequency of Garbage Dump Cleaned	A.23
<u>F. Electricity</u>	
Table 4.13 : Status of Electricity	A.24
Table 4.14: Source of Un-metered Electricity	A.24
Table 4.15: Substitute of Electricity.....	A.25
Annex 5	
<u>A. Women (15-49 age group)</u>	
Table 5.1: Age Of Women (at 1st Marriage)	A.26
Table 5.2: Age of Women (at 1st Delivery)	A.26
Table 5.3: Number of Deliveries (in last one year).....	A.27
Table 5.4: Place of Delivery (in last one year)	A.27
Table 5.5: Number of Delivery Assisted by (in last one year)	A.28
Table 5.6: Weight of Child at Birth (in grams)	A.28
<u>B. Children (0 – 5 years)</u>	
Table 5.7 : Children Suffered With Diaphorrea (In Last 2 Weeks)	A.29
Table 5.8: Children Suffered with Cough	A.29
Table 5.9: Children Suffered With Fever.....	A.30
Table 5.10: Quantity of Fluid Given During Diaphorrea	A.30
Table 5.11 : Number of Children Attended Training Centres	A.31
Table 5.12 : Kind of Learning Centres	A.31
<u>C. Children (5 - 14 years)</u>	
Table 5.13: Number of Children Enrolled in School	A.32
Table 5.14: Number of Children Currently Attending School (Grade wise).....	A.32
Table 5.15: Number of Children Dropped out	A.33
Table 5.16: Status of Working Children	A.34

Annex 1

Table 1.1: Distribution of Household by Occupancy

Zone	Owned	Rented	Owned on Govt/Pub land	Others
1	3	5	31	1
2	41	12	20	4
3	30	30	20	0
4	5	9	66	0
5	48	28	2	2
6	64	51	39	3
7	150	41	45	3
8	113	7	37	1
9A	6	16	58	0
9B	12	11	55	2
10	75	11	30	4
Total	547	221	403	20
%	45.93	18.56	33.84	1.68

Table 1.2: Distribution of Household by Type of Structure

Zone	Pucca	Semi Pucca	Kutcha	Total
1	1	21	18	40
2	18	33	26	77
3	25	49	6	80
4	15	42	23	80
5	47	29	4	80
6	53	89	15	157
7	44	137	58	239
8	20	79	59	158
9A	3	74	3	80
9B	7	48	25	80
10	31	50	39	120
Total	264	651	276	1191
%	22.17	54.66	23.17	100.00

Annex 2

Table 2.1: Distribution of Population by Age and Sex

ZONE	0-4		5 to 14		15 to 19		20 to 34		35 to 49		50 to 65		65+		TOTAL	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
1	12	8	26	19	7	9	32	38	9	10	13	15	5	3	104	102
2	18	19	42	40	22	25	56	44	31	28	16	19	5	2	190	177
3	16	9	27	43	28	21	42	49	34	27	18	18	1	10	166	177
4	19	14	33	38	21	22	52	56	34	33	17	20	5	6	181	189
5	21	17	63	36	33	19	54	64	39	31	23	22	7	6	240	195
6	39	33	90	92	54	52	119	100	63	73	50	43	17	13	432	406
7	88	85	135	126	86	63	188	187	112	89	63	94	17	19	689	663
8	48	46	111	107	46	51	97	100	80	67	38	25	3	9	423	405
9A	23	17	39	48	22	26	60	63	32	32	22	27	3	2	201	215
9B	17	15	37	39	23	25	53	57	30	28	17	26	4	2	181	192
10	38	29	44	48	36	26	100	93	46	51	38	27	9	7	311	281
TOTAL	339	292	647	636	378	339	853	851	510	469	315	336	76	79	3118	3002
%	10.87	9.69	20.75	21.19	12.12	11.29	27.36	28.35	16.36	15.62	10.10	11.19	2.44	2.63	100.00	100.00

Table 2.2: Distribution Of Household By Religion

ZONE	Hindu	Islam	Christian	Sikh	Buddhist	Jain	Others	Total
1	32	0	0	0	7	0	1	40
2	45	2	0	0	30	0	0	77
3	37	0	1	0	42	0	0	80
4	8	0	0	0	68	0	4	80
5	41	35	0	0	0	2	2	80
6	107	38	0	0	10	1	1	157
7	136	43	3	1	49	0	7	239
8	131	2	0	0	16	0	9	158
9A	19	1	0	0	87	0	4	111
9B	13	0	0	1	58	0	1	73
10	25	4	1	1	63	0	2	96
TOTAL	594	125	5	3	430	3	31	1191
%	49.87	10.50	0.42	0.25	36.10	0.25	2.60	100.00

Table 2.3: Distribution Of Household By Cast

ZONE	SC	ST	None of the above	Total
1	13	12	15	40
2	33	9	35	77
3	43	9	28	80
4	68	4	8	80
5	0	3	77	80
6	17	14	126	157
7	55	104	80	239
8	25	23	110	158
9A	95	6	19	120
9B	55	10	15	80
10	70	3	7	80
TOTAL	474	197	520	1191
%	39.80	16.54	43.66	100.00

Table 2.4: Status Of Education By Sex (>5 Years)

ZONE	Literate		Illiterate		Only mother tongue		Don't know		Total	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1	72	55	12	24	7	15	1	0	92	94
2	133	86	28	59	11	13	0	0	172	158
3	131	121	16	45	3	2	0	0	150	168
4	128	117	20	41	14	17	0	0	162	175
5	190	129	17	39	12	10	0	0	219	178
6	347	258	27	82	16	33	3	0	393	373
7	474	349	75	165	47	50	5	14	601	578
8	305	207	63	139	4	12	3	1	375	359
9A	153	141	19	43	0	8	6	6	172	198
9B	126	127	10	35	27	13	1	2	164	177
10	234	166	22	61	12	18	5	7	273	252
TOTAL	2293	1756	309	733	153	191	24	30	2779	2710
%	82.51	64.80	11.12	27.05	5.51	7.05	0.86	1.11	100.00	100.00

Table 2.5: Status Of Education (>5 Years Population)

Zone	Literate	Illiterate	Only mother tongue	Don't know	Total
1	127	36	22	1	186
2	219	87	24	0	330
3	252	61	5	0	318
4	245	61	31	0	337
5	319	56	22	0	397
6	605	109	49	3	766
7	823	240	97	19	1179
8	512	202	16	4	734
9A	294	62	8	12	356
9B	253	45	40	3	341
10	400	83	30	12	525
TOTAL	4049	1042	344	54	5489
%	73.77	18.98	6.27	0.98	100.00

Table 2.6: Status Of Education by Grade - > 5 years (sex wise)

ZONE	1 to5		6 to 8		9 to 10		11 to 12		Graduate		Post Graduate		Don't know		Total		Total schoolin g
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
1	36	28	15	15	21	13	4	7	2	5	0	0	1	2	79	70	149
2	48	34	29	27	37	26	21	5	6	1	1	0	2	6	144	99	243
3	41	33	20	32	38	34	21	14	11	6	2	3	1	1	134	123	257
4	46	53	27	21	49	44	15	10	5	6	0	0	0	0	142	134	276
5	57	49	51	27	55	33	23	10	9	10	1	3	6	7	202	139	341
6	130	103	71	60	92	84	42	17	18	14	5	1	5	12	363	291	654
7	166	151	129	91	135	100	46	30	28	23	9	1	8	3	521	399	920
8	140	78	79	66	62	54	19	9	6	5	1	1	2	6	309	219	528
9A	46	44	24	35	53	45	18	14	7	3	2	0	3	8	153	149	302
9B	50	42	33	36	36	43	18	13	11	3	2	1	3	2	153	140	293
10	70	51	52	46	59	41	31	18	26	20	3	5	5	3	246	184	430
TOTAL	830	666	530	456	637	517	258	147	129	96	26	15	36	50	2446	1947	4393
%	33.93	34.21	21.67	23.42	26.04	26.55	10.55	7.55	5.27	4.93	1.06	0.77	1.47	2.57	100.00	100.00	

Note: 344 Persons knows only mother tongue also included in the grade distribution

Table 2.7: Status Of Education by Grade - > 5 years

ZONE	1 - 5	6 - 8	9 -10	11-12	Graduate	Post Graduate	Don't know	Total
1	64	30	34	11	7	0	3	149
3	74	52	72	35	17	5	2	257
4	99	48	93	25	11	0	0	276
5	106	78	88	33	19	4	13	341
6	233	131	176	59	32	6	17	654
7	317	220	235	76	51	10	11	920
8	218	145	116	28	11	2	8	528
9A	90	59	98	32	10	2	11	302
9B	92	69	79	31	14	3	5	293
10	121	98	100	49	46	8	8	430
TOTAL	1496	986	1154	405	225	41	86	4393
%	34.05	22.44	26.27	9.22	5.12	0.93	1.96	100.00

Note: 344 Persons knows only mother tongue also included in the grade distribution

Annex 3

Table 3.1: Occupational Status of the Workers

Zone	Self Employed			Regular Employed			Casual Employed			Others Employed			Total Workers		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	22	2	24	10	4	14	17	22	39	4	0	4	53	28	81
2	37	5	42	24	10	34	43	26	69	0	1	1	104	42	146
3	20	3	23	28	8	36	37	16	53	1	1	2	86	28	114
4	37	7	44	15	7	22	42	16	58	1	2	3	95	32	127
5	48	3	51	20	5	25	36	8	44	2	2	4	106	18	124
6	85	23	108	33	4	37	70	9	79	7	1	8	195	37	232
7	129	29	158	74	12	86	126	48	174	6	9	15	335	98	433
8	58	10	68	21	5	26	133	46	179	1	2	3	213	63	276
10	38	8	46	42	16	58	70	30	100	10	3	13	160	57	217
9a	30	17	47	8	3	11	73	31	104	0	1	1	111	52	163
9b	28	2	30	19	5	24	38	24	62	3	1	4	88	32	120
Total	532	109	641	294	79	373	685	276	961	35	23	58	1546	487	2033
%	34.41	22.38	31.53	19.02	16.22	18.35	44.31	56.67	47.27	2.26	4.72	2.85	100.00	100.00	100.00

Table 3.2: Distribution of Household by Income

Zone	Upto 1000	1001-2000	2001-3000*	3001-5000	5001-10000	10000+	No Income	Total	%
1	3	17	9	6	4	0	1	40	3.36
2	2	25	24	19	5	1	1	77	6.47
3	14	27	23	8	5	0	3	80	6.72
4	10	27	25	11	5	2	0	80	6.72
5	3	28	17	17	13	2	0	80	6.72
6	15	51	35	31	19	1	5	157	13.18
7	29	92	41	43	21	4	8	238	19.98
8	7	63	53	26	7	2	2	160	13.43
9a	11	32	19	7	5	0	0	74	6.21
9b	2	43	16	21	3	1	0	86	7.22
10	11	43	31	17	10	7	0	119	9.99
Total	107	448	293	206	97	20	20	1191	100.00
%	8.98	37.62	24.60	17.30	8.14	1.68	1.68	100.00	

*Per capita poverty line for the State of Maharashtra being estimated at Rs.544 per month, so the total household income is Rs. 2796/- (544 x 5.14).

Table 3.3: Distribution of the Household by Holding Assets

ZONE	No. of Bastis	TV	Gas	Ref	Cycle	Scooter	Total Household Surveyed
1	1	33	7	24	35	6	40
2	2	73	14	55	68	27	77
3	2	62	2	54	7	2	80
4	2	36	11	21	13	4	80
5	2	79	0	74	77	33	80
6	4	148	32	108	112	45	157
7	6	180	23	74	135	43	239
8	4	146	10	26	128	17	158
9A	2	76	7	21	72	16	80
9B	2	63	1	23	59	12	80
10	3	106	37	29	59	41	120
TOTAL	30	1002	144	509	765	246	1191
	%	84.13	12.09	42.74	64.23	20.65	100.00

Table 3.4: Households Accessed Loan

Zone	Yes	No	Total	%
1	12	28	40	30.00
2	29	48	77	37.66
3	20	60	80	25.00
4	15	65	80	18.75
5	24	56	80	30.00
6	33	124	157	21.02
7	87	152	239	36.40
8	50	108	158	31.65
9a	21	60	81	25.93
9b	32	47	79	40.51
10	51	69	120	42.50
Total	374	817	1,191	31.40
%	31.40	68.60	100.00	

Table 3.5: Purpose of Loan

Zone	Shelter	Upgrading Services	Income Generating Activities	Health	Marriage/ Social Functions	Disaster	Others	Total
1	2	0	2	0	2	2	4	12
2	13	1	5	3	2	3	7	34
3	4	2	4	3	2	1	3	19
4	5	0	3	2	4	0	0	14
5	9	0	3	1	6	3	3	25
6	10	0	8	7	3	5	8	41
7	22	10	13	14	17	14	18	108
8	18	1	7	12	14	10	0	62
9a	3	0	5	4	4	6	0	22
9b	6	3	1	7	4	3	15	39
10	12	4	3	10	6	15	13	63
Total	104	21	54	63	64	62	71	439
%	23.69	4.78	12.30	14.35	14.58	14.12	16.17	

Table 3.6: Distribution of Household by Expenditure Range

Zone	<=500	501-1000	1001-2000	2001-3000	3001-5000	5000+	Total
1	0	6	16	11	4	3	40
2	0	6	33	24	12	2	77
3	3	8	41	15	10	3	80
4	2	8	26	33	11	0	80
5	0	2	21	36	18	3	80
6	1	7	52	44	45	8	157
7	1	23	99	66	40	10	239
8	0	1	67	68	18	4	158
9a	1	5	29	24	20	2	81
9b	1	3	41	23	9	2	79
10	0	4	47	26	31	12	120
Total	9	73	472	370	218	49	1,191
%	0.76	6.13	39.63	31.07	18.30	4.11	100.00

Table 3.7: Expenditure On Food by Household

ZONE	< 100	100-500	500-1000	> 1000	Total
1	-	3	15	22	40
2	-	3	24	50	77
3	1	9	26	44	80
4	-	1	35	44	80
5	-	-	11	69	80
6	-	5	37	115	157
7	2	68	72	97	239
8	3	35	32	88	158
9A	-	3	13	64	80
9B	-	6	21	53	80
10	-	20	30	70	120
TOTAL	6	153	316	716	1191
%	0.50	12.85	26.53	60.12	100.00

Table 3.8: Expenditure On Clothing by Household

ZONE	< 100	100-500	500-1000	> 1000	Household (Responded)	Total
1	23	12	2		37	40
2	25	49	3		77	77
3	36	37	3		76	80
4	21	52	3		76	80
5	18	49	3		70	80
6	48	99	5		152	157
7	67	137	3		207	239
8	15	135	6	1	157	158
9A	9	69	2		80	80
9B	33	40	1		74	80
10	19	79	7	1	106	120
TOTAL	314	758	38	2	1112	1191
%	28.24	68.17	3.42	0.18	100.00	

Table 3.9: Expenditure On Education by Household

ZONE	< 100	100-500	500-1000	> 1000	Household (Responded)	Total
1	17	10	1	-	28	40
2	27	20	-	-	47	77
3	19	21	6	-	46	80
4	13	20	4	-	37	80
5	16	28	5	-	49	80
6	45	59	4	-	108	157
7	90	55	3	-	148	239
8	46	55	1	-	102	158
9A	9	44	-	-	53	80
9B	28	16	-	-	44	80
10	28	26	17	-	71	120
TOTAL	338	354	41	-	733	1191
%	46.11	48.29	5.59	-	100.00	

Table 3.10: Expenditure On Health by Household

ZONE	<=50	51-100	101-200	201-300	301-500	500+	Household (Responded)	Total
1	23	14	0	1	0	0	38	40
2	25	24	8	5	1	1	64	77
3	18	17	32	5	3	2	77	80
4	28	16	15	4	2	0	65	80
5	17	9	15	6	6	1	54	80
6	42	58	36	3	9	6	154	157
7	80	59	26	6	9	3	183	239
8	37	45	37	7	5	3	134	158
9A	5	26	34	9	1	0	75	80
9B	32	35	3	2	0	2	74	80
10	34	19	21	5	3	4	86	120
TOTAL	341	322	227	53	39	22	1004	1191
%	33.96	32.07	22.61	5.28	3.88	2.19	100.00	

Table 3.11: Expenditure On Basic Services by Household

ZONE	<=50	51-100	101-200	201-300	301-500	500+	Household (Responded)	Total
1	6	4	0	0	0	0	10	40
2	4	4	1	0	0	0	9	77
3	6	5	0	0	0	1	12	80
4	7	2	1	0	0	0	10	80
5	0	0	0	1	2	0	3	80
6	6	10	2	0	1	0	19	157
7	10	1	0	1	0	0	12	239
8	22	7	1	0	0	0	30	158
9A	3	0	0	0	0	0	3	80
9B	1	0	0	0	0	0	1	80
10	2	6	2	0	1	0	11	120
TOTAL	67	39	7	2	4	1	120	1191
%	55.83	32.50	5.83	1.67	3.33	0.83	100.00	

Table 3.12 : Status of Women Headed Household

Status	Number	Percentage
Household don't have male members	29	38.67
Household having male members	46	61.33
Total	75	100.00

Table 3.13: Income Status of the Woman headed Household

Range	Number of Household	Percentage
<=500	11	14.67
501-1000	20	26.67
1001-1500	22	29.33
1501-2000	12	16.00
2001+	10	13.33
Total	75	100.00

Annex 4**A. Water****Table 4.1: Source of Drinking Water**

Zone	Individual Tap	Public Tap	Shared Tap	Sanitary Well	Tubewell with Motor	Hand pump	Tanker/ Truck	Others	Total
1	13	20	0	0	0	2	0	5	40
2	32	0	2	5	1	36	0	1	77
3	41	26	5	5	0	0	0	3	80
4	39	36	3	0	0	0	0	2	80
5	29	16	0	27	7	1	0	0	80
6	96	44	3	0	0	4	0	10	157
7	125	89	2	2	1	4	0	16	239
8	57	49	3	11	2	35	0	1	158
9a	27	43	1	0	0	2	0	7	80
9b	53	12	2	0	0	2	0	11	80
10	34	61	1	5	0	0	17	2	120
Total	546	396	22	55	11	86	17	58	1,191
%	45.84	33.25	1.85	4.62	0.92	7.22	1.43	4.87	100.00

Table 4.2: Supply of Water per Day (in hours)

Zone	1-2	3-5	6-10	11-20	20+	Total
1	5	27	1	4	3	40
2	29	14	0	0	34	77
3	35	11	2	30	2	80
4	4	21	20	15	20	80
5	22	29	3	0	26	80
6	93	43	13	6	2	157
7	56	95	30	2	56	239
8	53	57	10	3	35	158
9a	15	49	9	2	5	80
9b	48	28	2	0	2	80
10	27	47	25	3	18	120
Total	387	421	115	65	203	1,191
%	32.49	35.35	9.66	5.46	17.04	100.00

Table 4.3: Distance of Water Source (In meter)

Zone	<5	6-10	11-20	21-30	31-50	50+	Not answered	Total
1	16	5	8	6	2	2	1	40
2	33	8	32	4	0	0	0	77
3	43	8	8	4	11	6	0	80
4	40	5	35	0	0	0	0	80
5	29	2	21	18	6	4	0	80
6	104	17	18	4	3	6	5	157
7	135	21	57	11	7	3	5	239
8	50	10	53	4	9	31	1	158
9a	28	14	18	10	18	19	0	107
9b	55	1	8	4	16	22	1	107
10	41	11	5	4	4	1	0	66
Total	574	102	263	69	76	94	13	1,191
%	48.19	8.56	22.08	5.79	6.38	7.89	1.09	100.00

B. Bathing

Table 4.4: Availability of Bathing Space

Zone	Yes	No	Not Answered	Total
1	38	2	0	40
2	72	4	1	77
3	68	12	0	80
4	71	7	2	80
5	75	0	5	80
6	143	11	3	157
7	225	13	1	239
8	139	15	4	158
9A	68	11	1	80
9B	79	0	1	80
10	106	14	0	120
Total	1084	89	18	1191
%	91.02	7.47	1.51	100.00

Table 4.5: Location of Bathing Space

Zone	Inside the premises	Outside the premises	Total
1	34	4	38
2	66	6	72
3	68	0	68
4	71	0	71
5	75	0	75
6	139	4	143
7	223	2	225
8	136	3	139
9A	67	1	68
9B	78	1	79
10	106	0	106
Total	1063	21	1084
%	98.06	1.94	100.00

C. Toilet

Table 4.6 : Availability of Toilet Facility

ZONE	YES	NO	TOTAL
1	33	7	40
2	53	24	77
3	78	2	80
4	35	45	80
5	71	9	80
6	147	10	157
7	199	40	239
8	98	60	158
9A	74	6	80
9B	77	3	80
10	74	46	120
TOTAL	939	252	1191
%	78.84	21.16	100.00

Table 4.7: Accessibility of Toilet Facility by Household

Zone	No of HHS	Toilets Exclusively For HHs		Community Toilets		Open Defecation	
		Number	%	Number	%	Number	%
1	40	15	37.50	1	2.50	8	20.00
2	77	51	66.23	-	-	25	32.47
3	80	62	77.50	1	1.25	17	21.25
4	80	34	42.50	33	41.25	16	20.00
5	80	61	76.25	-	-	-	-
6	157	83	52.87	23	14.65	53	33.76
7	239	138	57.74	73	30.54	30	12.55
8	158	96	60.76	-	-	70	44.30
9A	80	66	82.50	4	5.00	13	16.25
9B	80	34	42.50	42	52.50	4	5.00
10	120	69	57.50	37	30.83	16	13.33
Total	1191	709	59.53	214	17.97	252	21.16

Note: Sixteen households are using shared toilets.

Table 4.8: Distance of Community Toilet

ZONE	< 5 MTS.	5-10 MTS	10-15 MTS	15-20 MTS	20+ MTS.	TOTAL
1	-	-	1			1
2	-	-	-	-	-	0
3	-	-	-	-	1	1
4	-	-	4	2	27	33
5	-	-	-	-	-	-
6	1	2	3	-	17	23
7	2	8	5	7	51	73
8	-	-	-	-	-	-
9A	-	-	-	-	4	4
9B	2	3	5	4	28	42
10	1	1	1	1	33	37
TOTAL	6	14	19	14	161	214
%	2.80	6.54	8.88	6.54	75.23	100.00

D. Drainage

Table 4.9 : Distribution Of Household By Drainage Facility

Zone	Yes	No	Not answered	Total
1	37	2	1	40
2	77	0	0	77
3	75	5	0	80
4	79	1	0	80
5	78	2	0	80
6	119	37	1	157
7	145	90	4	239
8	149	9	0	158
9a	80	0	0	80
9b	63	16	1	80
10	78	41	1	120
Total	980	203	8	1,191
%	82.28	17.04	0.67	100.00

Table 4.10: Type of Drain

Zone	Covered	Uncovered	Both	Not answered	Total
1	4	5	28	0	37
2	20	21	35	1	77
3	39	1	35	0	75
4	45	34	0	0	79
5	6	1	70	1	78
6	72	2	43	2	119
7	84	43	15	3	145
8	113	35	0	1	149
9a	60	0	20	0	80
9b	4	23	34	2	63
10	8	30	38	2	78
Total	455	195	318	12	980
%	46.43	19.90	32.45	1.22	100.00

E. Solid Waste

Table 4.11: Waste Cleared By

Zone	Sweeper	Thrown In Drain	In Dump	Thrown Anywhere	Total
1	9	1	5	25	40
2	13	8	11	45	77
3	15	2	30	33	80
4	7	2	52	19	80
5	16	4	14	46	80
6	69	10	13	65	157
7	84	33	48	74	239
8	2	1	6	149	158
9a	5	-	2	73	80
9b	5	-	7	68	80
10	40	12	8	60	120
TOTAL	265	73	196	657	1191
%	22.25	6.13	16.46	55.16	100.00

Table 4.12: Frequency of Garbage Dump Cleaned

Zone	Daily	Weekly	Once a Week	Fortnight	Once a month	Don't know	Total
1	1	1	-	2	4	14	22
2	-	6	12	7	6	4	35
3	2	2	23	6	8	12	53
4	1	5	15	27	9	12	69
5	10	7	14	3	2	3	39
6	19	21	13	-	15	83	151
7	43	23	4	6	1	99	176
8	-	2	4	4	35	25	70
9a	15	10	8	3	10	5	51
9b	-	-	-	-	1	17	18
10	8	17	5	2	9	31	72
TOTAL	99	94	98	60	100	305	756
%	13.10	12.43	12.96	7.94	13.23	40.34	100.00

F. Electricity

Table 4.13 : Status of Electricity

Zone	Metered	Un Metered	No Electricity	Not Answered	Total
1	20	10	9	1	40
2	41	30	5	1	77
3	47	8	25	0	80
4	45	21	14	0	80
5	40	27	11	2	80
6	99	37	20	1	157
7	149	56	28	6	239
8	87	54	17	0	158
9a	51	40	3	1	95
9b	51	22	6	1	80
10	75	6	22	2	105
Total	705	311	160	15	1191
%	59.19	26.11	13.43	1.26	100.00

Table 4.14: Source of Un-metered Electricity

Zone	Local tout	Neighbour	Himself /themselves	Not Answered	Total
1	0	9	1	9	19
2	1	4	25	5	35
3	0	6	2	25	33
4	0	20	1	14	35
5	1	25	1	11	38
6	1	36	0	20	57
7	1	51	4	28	84
8	3	24	27	17	71
9a	1	19	5	3	28
9b	0	10	12	6	28
10	1	20	0	22	43
Total	9	224	78	160	471
%	1.91	47.56	16.56	33.97	100

Table 4.15: Substitute of Electricity

Zone	Lantern	Kerosene	Candle	Not Answered	Total
1	2	3	0	4	9
2	0	3	0	2	5
3	0	14	0	11	25
4	0	13	0	1	14
5	0	9	0	2	11
6	0	11	0	9	20
7	1	5	1	22	29
8	0	12	0	4	16
9a	0	3	0	0	3
9b	0	2	0	4	6
10	0	17	1	4	22
Total	3	92	2	63	160
%	1.88	57.50	1.25	39.38	100

Annex 5

A. Women (15-49 age group)

Table 5.1: Age Of Women (at 1st Marriage)

Zone	<15 yr	15-19 yr	20-25 yr	25+ yr	Total
1	7	16	13	2	38
2	4	22	13	2	41
3	3	42	18	3	66
4	5	51	26	1	83
5	6	53	23	2	84
6	17	77	48	6	148
7	8	143	87	6	244
8	16	121	39	2	178
9a	8	53	19	1	81
9b	6	41	22	4	73
10	5	80	36	3	124
Total	85	699	344	32	1,160
%	7.33	60.26	29.66	2.76	100.00

Table 5.2: Age of Women (at 1st Delivery)

Zone	15-19	20-25	26-30	30+	Total
1	19	16	0	0	35
2	18	13	5	0	36
3	32	19	4	1	56
4	35	30	3	0	68
5	42	31	2	0	75
6	65	60	5	0	130
7	90	106	11	1	208
8	101	55	2	0	158
9a	50	21	1	0	72
9b	28	29	3	0	60
10	60	45	3	0	108
Total	540	425	39	2	1,006
%	53.68	42.25	3.88	0.20	100.00

Table 5.3: Number of Deliveries (in last one year)

Zone	Yes	No	Total
1	5	33	38
2	5	36	41
3	8	58	66
4	7	76	83
5	10	74	84
6	25	123	148
7	43	201	244
8	15	163	178
9a	12	69	81
9b	8	65	73
10	16	108	124
Total	154	1,006	1,160
%	13.28	86.72	100.00

Table 5.4: Place of Delivery (in last one year)

Zone	Govt. Hospital	Pvt. Hospital	Home	Don't Know	Total
1	4	1	0	0	5
2	5	0	0	0	5
3	6	1	1	0	8
4	4	0	3	0	7
5	6	1	0	3	10
6	17	2	0	6	25
7	27	3	10	3	43
8	6	0	9	0	15
9a	11	0	1	0	12
9b	6	0	1	1	8
10	9	5	1	1	16
Total	101	13	26	14	154
%	65.58	8.44	16.88	9.09	100.00

Table 5.5: Number of Delivery Assisted by (in last one year)

Zone	Doctor	ANM/Nurse	Dai	Relative/ Friend	Don't Know	Total
1	5	0	0	0	0	5
2	5	0	0	0	0	5
3	8	0	0	0	0	8
4	4	1	2	0	0	7
5	7	0	0	0	3	10
6	19	0	0	0	6	25
7	33	1	1	5	3	43
8	7	0	5	3	0	15
9a	10	0	1	1	0	12
9b	7	0	0	0	1	8
10	15	0	0	0	1	16
Total	120	2	9	9	14	154
%	77.92	1.30	5.84	5.84	9.09	100.00

Table 5.6: Weight of Child at Birth (in grams)

Zone	<2500	2500	>2500	Don't Know	Total
1	7	2	5	6	20
2	3	4	6	5	18
3	4	3	10	3	20
4	8	5	3	7	23
5	8	8	10	4	30
6	12	9	24	22	67
7	18	16	18	68	120
8	8	6	16	9	39
9a	7	6	7	3	23
9b	7	7	5	9	28
10	9	2	19	18	48
Total	91	68	123	154	436
%	20.87	15.60	28.21	35.32	100.00

B. Children (0 – 5 years)

Table 5.7 : Children Suffered With Diahorrea (In Last 2 Weeks)

Zone	Yes	No	Don't Know	Total
1	2	19	0	21
2	12	21	2	35
3	10	16	0	26
4	6	24	2	32
5	7	25	3	35
6	15	50	9	74
7	40	118	7	165
8	25	60	4	89
9a	8	18	4	30
9b	7	21	1	29
10	20	42	4	66
Total	152	414	36	602
%	25.25	68.77	5.98	100.00

Table 5.8: Children Suffered with Cough

Zone	Yes	No	Don't Know	Total
1	6	15	3	24
2	9	26	1	36
3	7	18	1	26
4	7	24	1	32
5	9	24	2	35
6	18	47	2	67
7	70	88	7	165
8	14	73	1	88
9a	16	11	6	33
9b	12	17	2	31
10	31	30	4	65
Total	199	373	30	602
%	33.06	61.96	4.98	100.00

Table 5.9: Children Suffered With Fever

Zone	Yes	No	Not answered	Total
1	4	17	0	21
2	11	24	0	35
3	8	18	0	26
4	7	24	1	32
5	14	18	3	35
6	20	43	11	74
7	72	89	4	165
8	38	50	1	89
9a	15	13	2	30
9b	10	19	0	29
10	39	26	1	66
Total	238	341	23	602
%	39.53	56.64	3.82	100.00

Table 5.10: Quantity of Fluid Given During Diarrhoea

Zone	None	Less 75%	Same	More	Total
1	0	2	0	0	2
2	2	4	2	5	13
3	1	1	7	1	10
4	0	5	1	0	6
5	1	6	0	1	8
6	0	4	8	2	14
7	5	16	13	2	36
8	1	21	3	0	25
9a	1	7	0	0	8
9b	0	1	4	2	7
10	3	11	7	2	23
Total	14	78	45	15	152
%	9.21	51.32	29.61	9.87	100.00

Table 5.11 : Number of Children Attended Training Centres

Zone	Yes	No	Don't Know	Total
1	8	1	2	11
2	13	4	0	17
3	8	6	2	16
4	12	7	3	22
5	6	8	2	16
6	19	19	6	44
7	45	40	9	94
8	18	28	4	50
9a	5	5	3	13
9b	10	5	0	15
10	27	8	2	37
Total	171	131	33	335
%	51.04	39.10	9.85	100.00

Table 5.12 : Kind of Learning Centres

Zone	Anganwadi	Balwadi	Other Govt./ Pre-school	Private Nursery Pre-school	Don't Know	Total
1	2	2	0	3	1	8
2	1	9	0	1	2	13
3	1	4	0	3	0	8
4	3	7	1	0	1	12
5	0	1	3	2	0	6
6	3	8	1	7	0	19
7	18	19	0	4	4	45
8	5	13	0	0	0	18
9a	0	4	0	0	1	5
9b	3	2	1	0	4	10
10	4	9	3	7	4	27
Total	40	78	9	27	17	171
%	23.39	45.61	5.26	15.79	9.94	100.00

C. Children (5 - 14 years)

Table 5.13: Number of Children Enrolled in School

Zone	Yes	No	Don't know	Total
1	43	0	1	44
2	63	5	0	68
3	68	1	1	70
4	64	0	0	64
5	94	4	1	99
6	169	2	2	173
7	248	3	3	254
8	182	10	2	194
9a	82	1	0	83
9b	75	1	0	76
10	88	2	1	91
Total	1,176	29	11	1,216
%	96.71	2.38	0.90	100.00

Table 5.14: Number of Children Currently Attending School (Grade wise)

Zone	Attending					Not Attending	Total
	1-3	4-5	6-8	9-10	Don't know		
1	15	16	9	3	0	0	43
2	26	8	19	7	2	1	63
3	18	17	25	5	3	0	68
4	17	20	20	5	2	0	64
5	22	22	29	9	7	5	94
6	45	45	58	12	4	5	169
7	92	67	60	11	7	11	248
8	57	37	60	10	14	4	182
9a	34	20	21	4	-2	5	82
9b	27	16	22	5	5	0	75
10	25	21	23	6	8	5	88
Total	378	289	346	77	50	36	1,176
%	32.14	24.57	29.42	6.55	4.25	3.06	100.00

Table 5.15: Number of Children Dropped out

Zone	1-3	4-5	6-8	9-10	Total
1	0	0	0	0	0
2	0	1	0	0	1
3	0	0	0	0	0
4	0	0	0	0	0
5	0	1	4	0	5
6	2	2	0	1	5
7	2	3	1	5	11
8	3	0	1	0	4
9a	0	1	1	3	5
9b	0	0	0	0	0
10	1	4	0	0	5
Total	8	12	7	9	36
%	22.22	33.33	19.44	25.00	100.00

Table 5.16: Status of Working Children

Zone	Paid			Unpaid			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	0	0	0	1	0	1	1	0	1
2	1	0	1	3	1	4	4	1	5
3	0	0	0	0	0	0	0	0	0
4	0	1	1	2	2	4	2	3	5
5	0	0	0	7	4	11	7	4	11
6	0	1	1	6	6	12	6	7	13
7	3	2	5	13	10	23	16	12	28
8	1	1	2	2	3	5	3	4	7
9a	0	1	1	2	1	3	2	2	4
9b	0	0	0	10	12	22	10	12	22
10	1	1	2	3	4	7	4	5	9
Total	6	7	13	49	43	92	55	50	105
%	10.91	14.00	12.38	89.09	86.00	87.62	100.00	100.00	100.00

National Institute of Urban Affairs

I & II, Floor, Core 4-B, India Habitat Centre, Lodhi Road

New Delhi – 110003, INDIA

Tel: (91-11) 4643284, 4617517, 4617543, Fax: (91-11) 4617513

Email: niua@niua.ernet.in