

Urban Development Department  
Government of Uttarakhand



**City Development Plan: Nainital**  
**Revised**

Under  
Jawaharlal Nehru National Urban Renewal Mission  
(JNNURM)



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*in association with*

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## **Preface**

The City Development Plan (CDP) of Nainital is prepared as a part of the initiative of Government of Uttarakhand to access funds under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM). CDP is one of the pre-requisites for accessing funds under the scheme.

This CDP focuses on the municipal area of Nainital. At the same time it takes into consideration the future urban growth of Nainital city which is likely to grow beyond the present municipal boundary. The likely urban growth in the nearby municipal areas of Nainital and Bhimtal, Naukuchiatal, Sattal, Khurpatal and areas falling under 220 yards on both sides of the roads connecting these lakes has been kept in view while formulating the City Development Plan. The suggestions and recommendations contained in the Stakeholder meetings and workshops have also been taken into consideration for Institutional Development as well as identified works proposed in the City Investment Plan. The CDP was first prepared in August 2006. The CDP was adopted by the State Level Nodal Agency and forwarded to Ministry of Urban Development, Government of India. The CDP was subsequently appraised by the National Institute of Urban Affairs (NIUA). The comments and observations of NIUA have been duly incorporated in this revised report.

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## Abbreviations and Acronyms

ADB	Asian Development Bank
ADP	Annual Development Plan
ARV	Annual Rateable Value
BMS	Basic Minimum Services
BPL	Below Poverty Line
BOD	Biological Oxygen Demand
BOO	Build Own Operate
BOT	Build Operate Transfer
BSY	Balika Samriddhi Yojna
CAA	Constitutional Amendment Act
CBO	Community Based Organisation
CCF	City Challenge Fund
CDP	City Development Plan
CDS	Community Development Society
CII	Confederation of Indian Industry
CIP	City Investment Plan
CO	Community Organiser
CPHEEO	Central Public Health Engineering and Environmental Organisation
CSO	Civil Society Organisation
DA	Development Authority
DDP	Draft Development Plan
DM	District Magistrate
DoHFW	Department of Health and Family Welfare
DPR	Detailed Project Report
DUDA	District Urban Development Agency
DWACUA	Development for Women and Children in Urban Area
EIA	Environmental Impact Assessment
EIRR	Economic Internal Rates of Return
EWS	Economically Weaker Section
FIRR	Financial Internal Rates of Return
GIS	Geographical Information System
GoU	Government of Uttarakhand
Gol	Government of India
Ha	Hectare
H&ED	Housing and Environment Department
HUDCO	Housing and Development Corporation
ICDS	Integrated Child Development System
IDSMT	Integrated Development of Small and Medium Towns
IHSDP	Integrated Housing and Slum Development Programme
IIE	Integrated Industrial Estate
ILCS	Integrated Low Cost Sanitation
IRC	Indian Roads Congress
ISBT	Inter State Bus Terminus
ISO	International Standard Organisation
IT	Information Technology
JNNURM	Jawaharlal Nehru National Urban Renewal Mission
KABB	Knowledge Attitude Belief Behaviour
LDA	Lake Development Authority
LPCD	Litres per Capita per Day
M&E	Monitoring and Evaluation
MDG	Millennium Development Goals
MIS	Management Information System
MLD	Millions Litres Per Day
MMIS	Municipal Management Information System
MoRTH	Ministry of Road, Transport and Highways
MSW	Municipal Solid Waste
NGO	Non Governmental Organisation



NH	National Highway
NLCP	Nainital Lake Conservation Project
NPP	Nagar Palika Parishad
NNPP	Nainital Nagar Palika Parishad
NRCD	National River Conservation Directorate
NRY	Nehru Rozgar Yojana
NSDP	National Slum Development Programme
NLRSADA	Nainital Lake Region Special Area Development Authority
O&M	Operation and Maintenance
PMIUPEP	Prime Minister's Integrated Urban Poverty Eradication Programme
PMU	Project Management Unit
PPP	Public Private Partnership
PPTA	Project Preparation for Technical Assistance
PRA	Participatory Rapid Assessment
PSP	Private Sector Participation
PWD	Public Works Department
RAP	Resettlement Action Plan
RTO	Regional Transport Office
SDM	Sub Divisional Magistrate
SGDP	State Gross Domestic Product
SFC	State Finance Commission
SH	State Highway
SJSRY	Swarna Jayanti Shahari Rojgar Yojna
STP	Sewage Treatment Plant
SUDA	State Urban Development Agency
SWM	Solid Waste Management
SWOT	Strength, Weakness, Opportunity & Threat
TA	Technical Assistance
TCPO	Town and Country Planning Organisation
T&CP	Town and Country Planning Department
ToR	Terms of Reference
UBSP	Urban Basic Services Programme
UDD	Urban Development Department
UBSP	Urban Basic Services for the Poor
UDA	Urban Development Authority
UEPPCB	Uttarakhand Environment Protection and Pollution Control Board
UFW	Unaccounted for Water
UJS	Uttarakhand Jal Sansthan
ULB	Urban Local Body
UPCL	Uttarakhand Power Corporation Ltd.
UPE	Urban Poverty Eradication
UPJN	Uttarakhand Pey Jal Nigam
USWEP	Urban Self Employment Programme
UUDP	Uttarakhand Urban Development Project
UWEP	Urban Wage Employment Programme
VAMBAY	Valmiki Ambedkar Awas Yojana
VRS	Voluntary Retirement Scheme
WHO	World Health Organization

## Executive Summary

Of the 63 towns identified and targeted under JNNURM, Nainital is one of the three cities in Uttarakhand under “selected cities / UAs” (state capitals and other cities). Nainital has been selected for its tourist importance. Nainital city, located at an altitude of 1938 m is spread over an area of 11.73 sq km.

Nainital, which was set up by the British way back in early 19<sup>th</sup> century as a summer resort became summer capital of the Northern Province. It has a proud privilege of being one of the oldest municipalities. Once an abode of the rich and famous, the city has become a popular getaway during the scorching summer of the northern plains. Cradled in the Himalayan foothills, Nainital acts as the gateway to Kumaon hills.

Although Nainital has a record of uneven population growth trend in the past, in the decade 1981-91 the growth rate shot up to 20%, and in 1991-2001 decade it recorded 26.67% growth rate, exceeding the national average of 21.53% for the same decade. This rate is likely to continue for sometime, perhaps occupying areas extending beyond the present municipal boundary.

The increasing urban growth, large tourist arrivals, and consequent over crowding, congestion and urban pollution threatens the very centre of its existence – *Nainital*. A project for conservation of Nainital and other Lakes, jointly funded by Gol and GoU is currently under implementation. The city requires substantial investment to upgrade, expand and provide new infrastructure to sustain its tourist economy and meet the growing demand of rapid pace of urbanization. This City Development Plan (CDP) is intended to provide a perspective for development of Nainital for the next 20 years, keeping in view longer term growth.

In keeping with the guidelines of the JNNURM for preparation of the CDP, a process of consultation and participation of all stakeholders have been adopted from the initiation until finalization of this CDP. The process started with identifying and sensitizing the stakeholders and continued through preparation of city vision, prioritization of infrastructure provision and preparation of sector strategies, concurrently with analysis of current situation of various elements of urban planning and infrastructure development. Strategies, interventions and action plans were developed in continuous consultation with the stakeholders.

The views of stakeholders have been consolidated to form the city vision. The aspirations of the stakeholders of Nainital city is brought out in its vision statement.

**“I want to live in an ecologically sound and beautiful Nainital that is well managed with efficient public services, a healthy economy and a natural and built environment that retains its unique character”**

The vision is quite clear. The citizens want to retain the character and natural beauty of Nainital, protect its ecology; yet want a healthy economy and efficient urban services. To reach the goal arising out of the vision a comprehensive approach is necessary with well planned investments and bringing order and efficiency from the present situation.

The sectoral key issues that emerged out of public consultations, field visits, analysis of data from secondary sources and discussions with Nainital Nagar Palika Parishad and para-statal are:

- i) **Physical Growth and Environment:** The major issues that face Nainital are : (a) hilly terrain surrounding the Lake, forest areas and ecologically fragile areas restrict the physical expansion within the municipal boundary; (b) due to limited space for construction within NNPP, there is immediate need to develop townships outside NNPP to depopulate the city and accommodate the future population; (c) although ecologically sensitive areas have been earmarked as 'prohibited areas' in the master plan, there is high incidence of unauthorized construction in these areas; (d) many buildings in the old city areas are in dilapidated condition; (e) growth of slums and squatter settlements is leading to environmental degradation (f) unsafe construction practices render the buildings vulnerable to natural disasters; (g) landslides on surrounding hills, and (h) pollution in Naini lake.
- ii) **Water Supply:** Piped water supply was introduced in Nainital in 1898 from Pardadhara spring situated inside the town. The system has undergone incremental expansion over a period of time. Originally, it was a gravity flow system. Tubewells, located at the periphery of Nainital lake near 'Flats', are now the main sources of water for Nainital City. Based on the current water production and a reasonable 30% UFW, average availability of water at consumer end is 135 lpcd, which is satisfactory. However, unequal distribution of water, low pressures, old dilapidated pipelines, uncontrolled zoning and unsatisfactory operation and maintenance requires thorough reorganization and up-gradation of this sector to meet future demand.
- iii) **Sewerage:** A skeleton sewerage system was laid in Nainital in the beginning of 19th century. Rapid urbanization and inadequate sewer system led to the problem of overflowing of sewage in stormwater drains ultimately discharging into Nainital Lake. To put an end to this, under the NLCP, two STPs of 5 mld each are proposed, of which one is under implementation. The city needs investments to expand the sewer network, provide decentralized STPs and on-site treatment in low density areas.
- iv) **Storm Water Drainage:** In a hill town like Nainital, adequate stormwater drainage facilities are required to prevent soil erosion and control of pollution to lakes and water bodies. Investments are needed to address the needs of (a) repairs and reconstruction of drains in critical sections, (b) additional cross-walls and catch-pits, (c) provision of screens at outfalls, (d) disconnection of side drains from sewers and (e) removal of obstruction in drains.
- v) **Solid Waste Management:** NNPP's estimated total daily MSW generation ranges between 12 MT to 18 MT during peak and non-peak tourist seasons. The city has not met its mandatory obligations under the Solid Waste Management Rules, 2000 and is burdened with an inefficient collection system, environmentally unsound disposal practices and uncontrolled dumping at a site down a gorge like formation. It thus requires immediate and sustained effort to upgrade to an acceptable level.
- vi) **Roads and Transport:** Nainital City comprises of 85.09 km of roads, of which 25.94 km (160 nos.) are maintained by NNPP and 59.15 km (51 nos.) including 4.0 km National Highway are maintained by PWD. Due to high

percentage of tourists with respect to the resident population, growing number of vehicles and lack of space lead to an unacceptable congestion in Nainital. Traffic management, road hierarchy and provision of parking are greatest needs. Pedestrianisation of tourist areas and alternative intermediate transport are of utmost importance. The city needs immediate investment in these areas.

- vii) **Heritage and Tourism:** Nainital is a known destination in the northern tourist circuit of India. Tourists are attracted by the beauty of Nainital Lake surrounded by hills, lush green forest areas and its rich cultural heritage. Its rich heritage needs to be conserved and showcased to promote tourism through diverse means such as interpretation centres, experiential museums, walks, publications, etc. Other elements which need attention are: demonstration of model architectural elements and restoration of heritage buildings such as cemeteries, churches, old temple sites. Nainital has the potential to tap high end tourism by development of eco tourism and adventure tourism.
- viii) **Urban Poor:** Nainital has about 10 slums scattered over the city, providing shelter to more than 9,000 population, which forms 21% of urban population within NNPP. The access to basic services on an overall basis is not too bad although conditions vary. Majority (85%) of all the households have in-house water connection. Of the sample households, 97 percent have a latrine in the house. Some of the BPL families do not have pour flush toilet. Only 14 percent of slum dwellers do not have paved approach road. Condition of the streets is not very bad in the town and there are street lights of which most are functional. The main issue is ownership of land. Of the below poverty line (BPL) population, 43 percent households and 14 percent of the poor do not have any legal rights of the land.
- ix) **Institutions and Governance:** NNPP has very few functions in the municipal domain. Unlike ULBs elsewhere in India, NNPP has very limited role to play in the city's planning, development and infrastructure provision. In fact, solid waste management is the main function of NNPP. Conventional municipal functions such as water supply, sewerage, roads, etc. are in the hands of either para-statal or state agencies. In the absence of institutionalization of citizens' involvement through smaller ward committees and other mechanisms, city management has remained virtually an 'outsiders' job and not a participative civic management. In Nainital urban situation, there are too many institutions that have grown up under historical circumstances. Keeping in view the needs for coordinated development and institutional strengthening, well-thought-out institutional planning is of crucial importance. This can not be a one-shot exercise and needs to be taken up on phased basis.
- x) **Municipal Finance of NNPP and Finance of Para-Statals:** NNPP, UJS, and NLRSDA (also known as LDA in NNPP) are the three most important agencies responsible for the urban finance in Nainital. NNPP's revenue receipts (own) mainly comprises of Property / House tax, rentals and advertisement. UJS's revenue receipts are mainly water tax and water charges. The income sources of NLRSDA include development charges, compounding fees, conversion charges, interest etc. Over the years the income and expenditure have shown an increasing trend. NNPP still depends largely on state government grants for meeting its revenue expenditure. There is a need to provide suitable training on double-entry accounting/accrual

system of accounting. There is lack of financial and taxation powers. Under the present financial status it is very difficult for NNPP to access funds from market. The data base and information management is poor and there is a lack of use of technology in infrastructure monitoring. NNPP proposes to adopt strategies to achieve the targets of Financial Reforms as mandated in the JNNURM guidelines.

Among the many reform agenda items listed in JNNURM guidelines, conformity legislation on the basis of 74<sup>th</sup> CAA is of crucial importance. A new Municipal Bill has been drafted, and this should be finalized and given full legal form at the earliest possible time. At the local level, training and capacity building will need to be done for both political leadership and the professional staff in NNPP and the para-statal. The Urban Center within ATI may be suitably strengthened. NNPP's political and executive structure needs overhauling to enable it to cope with its responsibilities and large development projects in future. Although the formation of ward committees is not mandatory in Nainital, it is desirable to have greater level of interaction with the citizens. The ward committees are required to be set up in order to establish a citizen authority network.

To achieve the goals and vision of the city of Nainital, an investment of Rs.1036.3 crores is required over two phases. Phase-wise requirements for each sector arranged in order of priority expressed by the citizens of Nainital are summarized below:

#### Summary of Capital Investments (Rs. crores)

S. No	Sector	Phase 1 2007-13	Phase 2 2014-25	Total
1	Water Supply	38.2	29.1	67.3
2	Sewerage & Sanitation	19.7	11.8	31.5
3	Roads, Traffic & Transport	240.5	450.0	690.5
4	Street Lights	3.4	0.6	4.0
5	Storm Water Drainage	23.8	10.1	33.9
6	Solid Waste Mgement	33.0	32.3	65.3
7	Urban Poor / Slums	46.2	0.0	46.2
8	Urban Renewal and Environment	45.4	45.0	90.4
9	Heritage and Tourism	7.2	0.0	7.2
	<b>Total</b>	<b>457.3</b>	<b>579.0</b>	<b>1036.3</b>

*Note: Above costs are at current 2006 prices and includes 7.5% for physical contingencies and 5% for project management assistance.*

On an overall basis, 66.6% of the total identified investment is proposed in the roads and transport sector towards up-gradation, widening and strengthening works, ropeways, other public transport systems, bridges and junction improvements. This is followed by investments in urban renewal and environment improvement projects forming 8.7%. Similarly investments are: 6.5% for the water supply sector, 4.4% for urban poor/ slum development programmes 3.3% for storm water drainage, 6.3% solid waste management, 3.0% for sewerage sectors, 0.7% for heritage and tourism and 0.4% for street lights.

# 1. Introduction and Background

## 1.1 Background of JNNURM

Urban population constitutes nearly 28% of India's total population (2001 census). More importantly, during the last five decades, the urban population has grown five times, while the total population has grown three times<sup>1</sup>. The population living in slums has also grown rapidly, posing a challenge to the urban basic services. Faced with this phenomenal growth, it became imperative for the Government of India to draw up an integrated and coherent national strategy to develop selected cities on a mission mode. The Jawaharlal Nehru National Urban Renewal Mission (JNNURM) is a "reforms driven, fast track, planned development of identified cities with focus on efficiency in urban infrastructure/services delivery mechanisms, community participation and accountability of Urban Local Bodies (ULBs)/parastatals towards citizens".

Considering the magnitude of investment and contents, the JNNURM will have significant impact on cities and city planning system. With the launch of JNNURM, urban development has acquired a renewed focus. JNNURM aims at providing incentives to cities to undertake institutional, structural and fiscal reforms, necessary to improve service delivery systems that are sustainable, enhance local economic performance and bring about transparency and accountability in the functioning of municipal governments. The mission cities are required to prepare a City Development Plan (CDP) for accessing the funds under the scheme.

Of the 63 towns identified and targeted under JNNURM, Nainital is one of the 3 towns in Uttarakhand under "selected cities /UAs" (state capitals and other cities). Nainital has been identified as town of tourist importance. All three towns have less than 1 million population.

The CDP is intended to provide an action plan towards creating economically productive, efficient, equitable and responsive cities. Following are the basic steps in preparation of a CDP:

1. In-depth Analysis of Existing Situation
2. Development of a Vision of the City
3. Formulation of City Development Strategies including city governance and required reforms
4. Preparation of Action Plan with identified projects under each sector of infrastructure
5. Preparation of City Investment Plan

## 1.2 Objective of CDP

The objective of the CDP is to provide a perspective and a pathway of future development of the city over the next 20-25 years. It presents a clear view of where are we to-day, arising out of analysis of current situation. It strives to put together collective vision of the citizens and other stakeholders where do we wish to go. Finally, it also provides a roadmap of strategies, alternatives and action plans of how we achieve the vision of the city and how we manage the city ourselves. In essence, it provides options and choices as exercised by stakeholders, not the city as an urban space by default. Clearly, a CDP is a blue-

<sup>1</sup> Guidelines for Projects of Jawaharlal Nehru National Urban Renewal Mission, December 2005

print of an informed exercise, owned by the citizens and the city government, i.e., the ULB.

### 1.3 Process of CDP Preparation

CDP Nainital has been prepared through four steps forming the process of preparation. In the first step, consultants' team members gathered data and information from various sources, made field visits, carried out detailed discussions with the officials concerned followed by an analysis of the current situation. Data gaps were identified and these were filled by generating primary data and utilising such primary data collated and analysed further. For this purpose, a detailed socio-economic survey with purposive stratified random sampling of 440 households was carried out and the results analysed. The whole exercise enabled the consultants to identify both present shortcomings and likely interventions needed over the next 20 - 25 years or the planning/design period.

In the next step, it was desired to sensitize the stakeholders, appraise them about the CDP process and impress upon them the need for their participation towards forming the city vision and sector visions. This was done by holding a workshop with the municipal ward councillors, elected representatives and officials in charge of various departments looking after relevant components of infrastructure in Nainital. During this workshop, two things came up clearly – (i) the present needs of Nainital city in terms of infrastructure; and (ii) a broad consensus regarding priorities of interventions in various sectors including infrastructure and urban management.

Before holding the next workshop to elicit citizen's vision, documentations were prepared (i) about JNNURM, (ii) city vision, (iii) evaluation / performance of infrastructure and (iv) sectoral visions and priorities of intervention. Stakeholders were identified as:

#### Stakeholders Consultation: Calendar of Events

- Mid May: Team visit during the inception phase
- 30<sup>th</sup> May, 2006: First Workshop with Nagar Palika Parishad Councillors, CBO's and NGO's, Elected Representatives, Senior Officers of NPP and Infrastructure Departments e.g. PWD, UJS, UPJN etc. Chaired by the Minister, Urban Development
- 15<sup>th</sup> June- 15<sup>th</sup> July: Socio- economic Survey - Field Group Discussions with Urban Poor – Verification of Slums
- 11<sup>th</sup> August, 2006: Second Workshop with Primary Stakeholders, Secondary Stakeholders and Tertiary Stakeholders to formulate and agree on a City Vision chaired by the Chairperson Nainital NPP.
- 11<sup>th</sup> August, 2006: Group Discussions and Consultation with Working Groups – (a) Urban Planning & Land Management, (b) Water & Sanitation, (c) Roads & Transport, (d) Solid Waste Management, (e) Basic Urban Services to the Poor, (g) Governance & Finance
- Series of Consultation with Nagar Palika, SUDA, UPJN, PWD, UJS, NLRSDA and such other organisations (Mid August)
- 17<sup>th</sup> August 2006: Discussion on Identified Projects for CDP with all Secondary and Tertiary Stakeholders, chaired by the Hon'ble Chief Minister.

- Primary stakeholders (e.g., residents, interest groups, CBOs and NGOs)
- Secondary stakeholders (service providers – e.g., UPJN, UJS, PWD, UPPCL, NLRSA, officers at District/Division level etc.)
- Tertiary Stakeholders (Policy providers – Secretaries of concerned department(s), M.D. of UPJN, CGM of UJS etc. at state level)

The workshop was led by the Chairperson. After brief introduction by the Chairperson, Citizens were requested to share their vision about the city of future. Later, they were asked to present their views in the open house for discussion. At the end of the workshop, the vision statement was adopted collectively. During the proceedings, a number of citizens showed keen interest in certain sectors. They were invited to participate in the subsequent sector vision workshop. In the sector vision workshop, six sub-groups met in roundtables for a Focus Group Discussions. The sub-groups were:

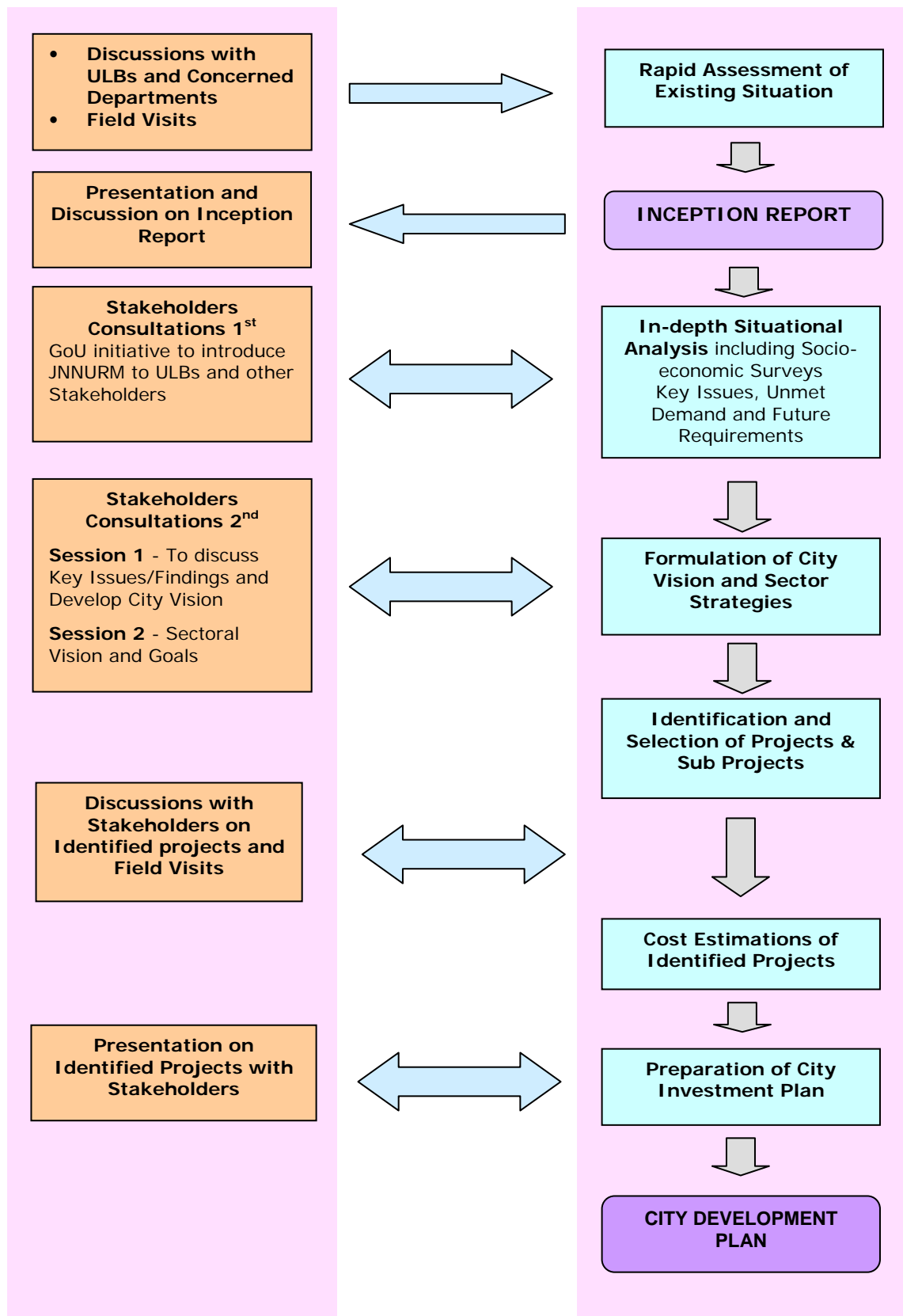
- Governance and Finance
- Water, Sewerage and Stormwater Drainage
- Roads and Transport
- Solid Waste Management
- Basic Urban Services to the Poor.
- Urban Planning, Tourism and Industries

Each sub-group comprised citizens, representatives of CBOs/NGOs, officials of para-statal bodies (e.g., for Roads & Transportation group, representatives from PWD, Police (traffic), Nagar Palika Parishad etc.) and Consultants' subject experts. After discussions on the sector vision over the next 20-25 years, interventions were discussed, identified and consensus was reached in prioritizing them.

Based on the activities of steps 1, 2 and 3, sub-projects were developed and cost estimates prepared. These were again discussed at length over a period of time with Nagar Palika Parishad officials and officials of concerned para-statal bodies. The CDP was then prepared with inputs obtained from the series of consultations held as mentioned. Figure 1.3.1 presents the CDP preparation process.



Figure 1.3.1: Process of CDP Preparation



## 2. Nainital City Profile

### 2.1 About Nainital

Nainital is known as the Lake District of Uttarakhand due to predominance of lakes in the area. Presence of more than a hundred lakes has been recorded till the nineteenth century. The district boasts of some of the most scenic lakes in India. Nainital city, located at an altitude of 1,938 m is spread over an area of 11.73 sq km, of which Naini Lake covers 0.54 sq km.

City of Nainital is the headquarters of Nainital Lake District and Kumaon Mandal. Of the hill towns in the State of Uttarakhand, Nainital occupies a unique place. Known for its salubrious climate and scenic beauty, the town is a popular destination in the northern tourist circuit. Nainital attracts thousands of tourists round the year. Nainital is also an important administrative town in the State having the High Court and well known institutions such as Academy Of Administration, Aryabhata Research Institute of Observational Sciences (ARIES), Office of Kumaon Mandal Vikas Nigam and Kumaon University.



### 2.2 Location and Accessibility

Nainital is situated at a distance of 34 km from Kathgodam, the gateway of Kumaon and the terminus of north eastern railway. According to the District Gazette Nainital is located approximately in between 80°14' and 78°80' east longitude and 29°00' and 29°05' north latitude. It is located at 304 kms from Delhi, 360 kms from Dehradun the state capital and 388 kms from Lucknow.

By road, Nainital is situated at a distance of 40 km from Haldwani. The city has three entry points by road. The major entry point is via Haldwani road (State Highway), the second entry point is via Bhowali road, both being at southern end of town at Tallital. The third entry point is via Kaladhungi road in the northwest of the town at Mallital. The nearest airport is at Pantnagar (71 km) in the plains.

### 2.3 Regional Setting

Almora district lies to the north of Nainital and to its south lies the Udham Singh Nagar district. Champawat district flanks it in the east and district of Pauri Gahwal lies in the west. The nearby places of importance include Bhowali (11 km), Bhimtal (22 km), Naukuchiatal (26 km), Sattal (24 km) and Khurpatal (10 km).

Cradled in the Himalayan foothills, Nainital acts as the gateway to Kumaon hills. The hill towns of Almora and Ranikhet are 65 km and 58 km distant respectively. Kausani, famous for its unparalleled view of 250 km wide Himalayan panorama is 116 Km away from Nainital. Pithoragarh is at a distance of 131 km while the Pindari Glacier, a popular destination for mountaineers and trekkers, is 236 km away. The world famous Jim Corbett National Parks is 117 km away from Nainital.

## 2.4 Historical Background

Nainital has an important mythological reference as one of 64 'Shakti Peeths'. These centres were created wherever parts of charred body of Sati (Goddess Parvati) fell when Lord Shiva was carrying around her corpse in grief. According to a legend, the left eye (Nain) of Sati dropped in the lake while her body was being carried by Lord Shiva to Kailash Parvat. Hence, the lake was given the name of *Nainital*, from where the city derives its name. Naina Devi is worshipped as the patron deity of the town. Naina Devi temple is located at the northern end of the lake. The temple was destroyed in the landslide which occurred in 1880. It was subsequently replaced by the present structure.

The British occupied Kumaon and Garhwal in 1815. In the year 1841, Mr P. Barron a European merchant and an enthusiastic hunter from Rosa, near Shahjahanpur was the first European who took great fancy to this land. Moved by the beauty of the sparkling lake he wrote: ***"It is by far the best site I have witnessed in the course of a 1,500 miles trek in the Himalayas."*** It is relatively lesser known that this region was called "Khasdesh" in ancient times and "Khasis" ruled this region before Christ was born.



According to the data available, Nainital had become a popular hill resort by 1847. The Nainital Municipal Board was formally constituted in 1845. It was the second Municipal Board of North Western Provinces. In 1862, Nainital became the summer seat of the North Western Provinces. The town also became the summer seat of the U.P. Govt after independence. After 1963 the summer exodus of the U.P. Government was stopped. The Secretariat building is now being used by divisional and district offices.

## 2.5 Climate

Nainital, owing to its location, is colder than the rest of the hilly tract of Kumaon region. During monsoon, it gets heavy rainfall. The neighbouring areas of Almora and Ranikhet are warmer than Nainital. The monthly maximum and minimum temperatures in the town range between 28 degree C and 7 degree C.

The rainy season begins earlier than in the plains and continues upto the end of September. The heaviest rainfall is observed on the outer slopes of the hills. As per the 1999 records, total average rainfall of district was 1338 mm. During winter, rains create a considerable fall in temperature.

## 2.6 Physiography

Nainital lies in a valley of the Gagar range running east and west, which is bounded on the north by the China Peak, which rises to a height of 8,568 ft, continued by the Alma peak (presently known as Snow-View) and the Sher-Ka-Danda to the eastern extremity, where the ridge descends almost to the level of the lake.

Geographically the district is divided in to two zones viz. Hilly and Bhabar. The hilly region in outer Himalayas is known to geologist as Krol. The highest peak of the district is Baudhanstali 2,623 m high near Binayak adjoining Nainital town. The hilly region of the district has many lakes. *Bhimtal, Sattal, Naukuchiatal,*

*Khurpatal, Nainital, Malwatal, Harishtal, Lokhamtal, etc.* are known bigger lakes of the district.

The foothill area of the district is known as Bhabhar. The name Bhabhar is derived from a tall growing grass growing in the region. The underground water level is very deep in this region.

Kosi is the main river of the district. River Kosi arising out of Koshimool near Kausani flows on the western side of the district. There are number of smaller rivulets like Gaula, Bhakra, Dabka, Baur etc.

### 3. Situational Analysis - Problems and Opportunities

#### 3.1 Socio-economic Profile

In order to study the socio-economic profile of the city, secondary data (from various sources, including the Census of India) were collected and analysed. To supplement the analysed secondary data, primary data were obtained from the socio-economic survey, analysed and the results utilised. The following sections present an overall socio-economic profile of Nainital. Description of the methodology used for the socio economic survey is presented in the Annex 3.1.2.

##### 3.1.1 Demographic Profile

Since the decade of 1901, the behaviour of decadal growth rate of population of Nainital municipal area has been erratic, varying in a wide range. The growth rates in some years, both positive and negative (Table 3.1.1), are incredible. Conspicuously, the decadal growth rate of 43% in 1901 - 11 decade dropped to 10 % low in the following decade. Still more conspicuous, as the Table below indicates, is that Nainital had negative growth rate in the decade 1921-31 (- 9%), and no growth at all (0%) in the following decade. These phenomena give clear indication that during these two years there had been large exodus of population from this town. For, even the natural growth of population in the 1931 decade was overtaken by the rate of out-migration, and in the decade of 1941 was evened out by the rate of population exodus from the town. This situation was not repeated in the later decades but the trend of growth rate has not been smooth.

The decades 1961-71 and 1971-81 held some big surprises. While in the former decade the decadal growth rate shot up to as high as 71%, in the later decade it recorded a 4% low. By implication, 4% decadal growth rate (i.e. less than 0.5 % per annum) being much lower than even the natural growth rate of population in India, it may be inferred that in this decade also, Nainital was de-populated. In the decade 1981-91 the growth rate shot up to 20%, and in 1991-2001 decade it recorded 26.67%, exceeding the national average of 21.53% for the same decade.

**Table 3.1.1: Population and Decadal Change in Population**

Year	Population-2001 ('000)	Decadal Change (%)
1901	7	
1911	10	42.86
1921	11	10.00
1931	10	-9.09
1941	10	0.00
1951	12	20.00
1961	14	16.67
1971	24	71.43
1981	25	4.17
1991	30	20.00
2001	38	26.67

Source: 1991 to 1991 - Nainital Mahayojana 1995 -2011 and 2001 – Census 2001

The volatility of the decadal population growth rate in Nainital does not have any ready explanation. Why it was de-populated in particular decades, why it shot up to the incredible high of 71% and such other questions are yet to be answered. However, it seems that the population growth rate of Nainital will stabilize in the coming decades.

Given the above constraint, and erratic behaviour of the decadal change in population, the 27% (or a simple average annual growth of 2.7%) change in the decade 1991-2001 is assumed as the base data for forecasting the population of this town. It is assumed that the population will grow at higher rates during 2005 to 2010 due to the initiatives taken for the development of infrastructure of this hill town, and then will gradually settle down by the year 2020. The Annex 3.1.1 furnishes the year-wise assumed growth rates and projected population.

The floating population of Nainital has been projected separately. In 2003, the floating (mostly tourist) population of Nainital was 4.24 lakhs, which increased to 5.18 lakhs by 2005, recording an increase of 22% over a period of three years. Its average annual growth rate was 7%. In Nainital, as is understood, like most of the hill stations, most of the tourists (floating population) visit this town in three summer months. Taking the tourist population of 2005 (5.18 lakhs) as the base, the average days of stay per tourist as 15 (source: discussion with Hotel Owners' Association and different stake holders), the average tourist load (including short and long duration stay) per day works out to 34,533 or say 35,000. From stakeholders' meetings and discussion with knowledgeable persons it emerged that the educational institutions, and training institutions (which are many in number where most of the students come from outside the town) and the University together account for at least 16,000 population. Besides, being district head quarter town and location of district court and High Court, and office of the Divisional Commissioner, large number of people visits the town on official business. The estimated number of such visitors is around 5,000. Thus, the total number of floating population in Nainital town works out to 56,000 in 2005. Applying the annual average growth rate of India's population (2%), the floating population (tourists) has been projected. Annex 3.1.1 provides year-wise projected population. The average household size, as per Census 2001, was 4.6.in number

### ***Social Composition***

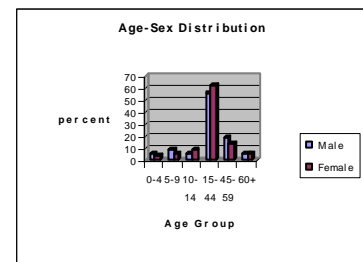
The town of Nainital has a multi-ethnic population of various religious groups and they are living here through generations. Broadly eighty percent of population follow Hindu religion; the rest belong to Sikh, Muslim, Christian, Buddhism etc. The majority follow Kumouni traditions.

### ***Age Sex Structure of Population***

The overall sex ratio in the sampled households is 915, which is higher than that reported (842) in Census of India 2001. The age groups of 15-44 have highest population for both the sexes.

**Table 3.1.2 Age-Sex Distribution and Sex Ratio**

Age group	Male*	Female*	All*	Sex Ratio
All	52.23	47.76	100	915
0-4	5.6	3.7	4.7	
5-9	8.5	5.6	7.1	
10-14	5.1	8.9	6.9	
15-44	56.0	62.6	59.2	
45-59	19.2	14.0	16.7	
60+	5.6	5.1	5.4	



\*Data show households in percentage

### Literacy

Literacy, being an important indicator of social development, it affects the demographic characteristics and labour participation. As per Census 2001, literacy rate in urban Nainital is for 94.1 males and for 84.1 for females. The gender gap being 10. The survey results show there are 97.1 percent literate males and 95.3 percent females. Overall literacy is 96.2 percent. This data show a gender gap of 1.8.

**Table 3.1.3: Literacy Status of Population Age 7 Years and Above**

Male*		Female*		Total*	
Illiterate	Literate	Illiterate	Literate	Illiterate	Literate
2.9	97.1	4.7	95.3	3.8	96.2

\*Data show households in percentage

### Occupation

Data on occupation shows that 32 percent of the workers are in gainful employment. 5.1 percent are unemployed, 39 percent are students, and 24 percent are housewives.

**Table 3.1.4: Occupation by Age**

Category*	Age group (in years)					Total
	<18	18-24	25-44	45-59	60+	
Working	1.0	11.4	47.0	68.1	15.0	31.6
Unemployed	1.0	8.6	2.7	1.4	45.0	5.1
Student	98.1	71.4	6.7	-	-	38.9
Housewife	-	8.6	43.6	30.6	40.0	24.4

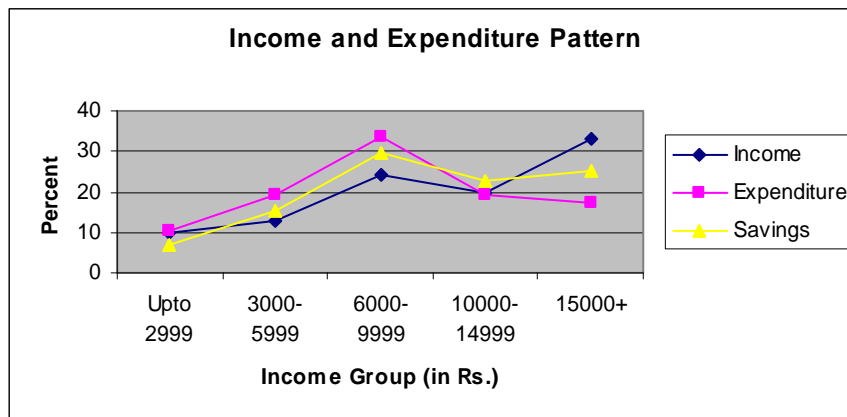
\*Data show households in percentage

### Income and Expenditure

Majority of the sampled households are in middle income groups and 7 percent of the sampled population is below poverty line. Mean per capita monthly income of the families is Rs.3,411 and mean household income is Rs. 14,172. There is a considerable proportion of population in the middle expenditure group and it is apparent that they spend more than their income. This may probably be due to suppression of actual income by the respondents. Families in the higher income groups have maximum savings.

**Table 3.1.5: Data on Income**

Income	In Rs.	Percentage household
Per Capita Income per month		
Below Poverty Line (BPL)	Upto 562	7.0
Poor	563-1999	29.0
Lower-Middle	2000-3499	27.0
Upper-Middle	3500-5999	21.0
High	6000+	16.0
Mean Income		3411.0
Household Income	Upto 2999	10.0
	3000-5999	13.0
	6000-9999	24.0
	10000-14999	20.0
	15000+	33.0
	Mean Income	14172.0

**Table 3.1.6: Data on Expenditure and Savings**

Income	In Rs.	Percentage of household
Household Expenditure	Upto 2999	10.2
	3000-5999	19.4
	6000-9999	33.7
	10000-14999	19.4
	15000+	17.3
	Mean Expenses	10610.2
HH Savings	In Rs.	
	Upto 2999	7.1
	3000-5999	15.5
	6000-9999	29.8
	10000-14999	22.6
	15000+	25.0
	Mean Saving	4492.9

Table 3.1.7 shows the distribution of population by household composition and possession. Of the BPL families 43 percent do not have any legal right of their land, but 52 percent of the poor have legal rights of land. Middle and high income groups are mainly on leased land. A large portion of BPL families are staying in



rented house, ownership of house is very low among them, but 29 percent is on leased land. Even in other income groups a large portion have house on leased land. Of the BPL families 71 percent are having kutcha houses. In the poor and lower-middle group houses are mostly semi-pucca in nature and about 62 percent higher income group families have pucca houses. Legal electric connection is available in most of the sampled houses. On an average 19 percent of all the families in the slums stays with some other family.

Around 57 and 97 percent of the BPL and poor households respectively use gas as fuel for cooking. Of the rest 100 percent families have gas connection. Wood is also used in the poorer groups.

**Table 3.1.7: Distribution of Population by Household Composition and Possession**

Characteristics*	Income Group					
	Below Level	Poverty	Poor	Lower-Middle	Upper-Middle	High
Land Ownership						
Freehold title		14.3	51.7	37	47.6	18.8
Lease		28.6	27.6	51.9	42.9	43.8
Patta		0	0	0	0	0
Joint patta		0	0	0	0	0
Other legal right		14.3	3.4	11.1	9.5	37.5
No legal right		42.9	17.2	0	0	0
House Ownership						
Own		14.3	55.2	40.7	47.6	31.3
Rented		42.9	27.6	59.3	42.9	37.5
Others		42.9	17.2	0	9.5	31.3
Mean rent per month		1166.7	1275.0	1700.0	1831.4	1866.7
House Type						
Kutcha		71.4	27.6	3.7	0	0
Semi-pucca		28.6	37.9	63	38.1	37.5
Pucca		0	34.5	33.3	61.9	62.5
Access to Electricity						
Yes		100	96.6	100	100	100
No		0	3.4	0	0	0
Electric Meter						
Yes		100	92.9	88.9	90.5	93.8
No		0	3.6	7.4	9.5	6.3
Not specified		0	3.6	3.7	0	0
Fuel Used						
Gas		57.1	96.6	100	100	100
Wood		42.9	3.4	0	0	0

\*Data show households in percentage

### Migration

It was found that on average all the sampled families are residing in the town for about 16 years. Only 4 percent families have moved in the town within last 5 years (Table 3.1.8). Of all the households 2.8 percent migrated from another town and 1.4 percent came from rural area. In Nainital even poor families are residing for 20 years or more. This contradicts the notion that poor settlements are created by in-migration from rural areas.

**Table 3.1.8: Migration**

Migration*	Income Groups					
	All	BPL	Poor	Lower-Middle	Upper-Middle	High
No. of HH moved in last 5 years	4.2	0	0	10	5.9	0
From another town	2.8	0	0	5	5.9	0
From a rural area	1.4	0	0	5	0	0
Not specified	95.8	100	100	90	94.1	100

\*Data show households in percentage

### 3.1.2 Urban Poverty Profile

#### *Poverty and Vulnerability*

It is important to examine poverty with reference to its various dimensions including asset ownership. Accordingly project packages need to be worked out to reduce urban poverty especially the vulnerability of the poor and to enhance their assets in terms of labour, human capital, housing, social capital and so on.

#### *The Situation in Slums of Nainital*

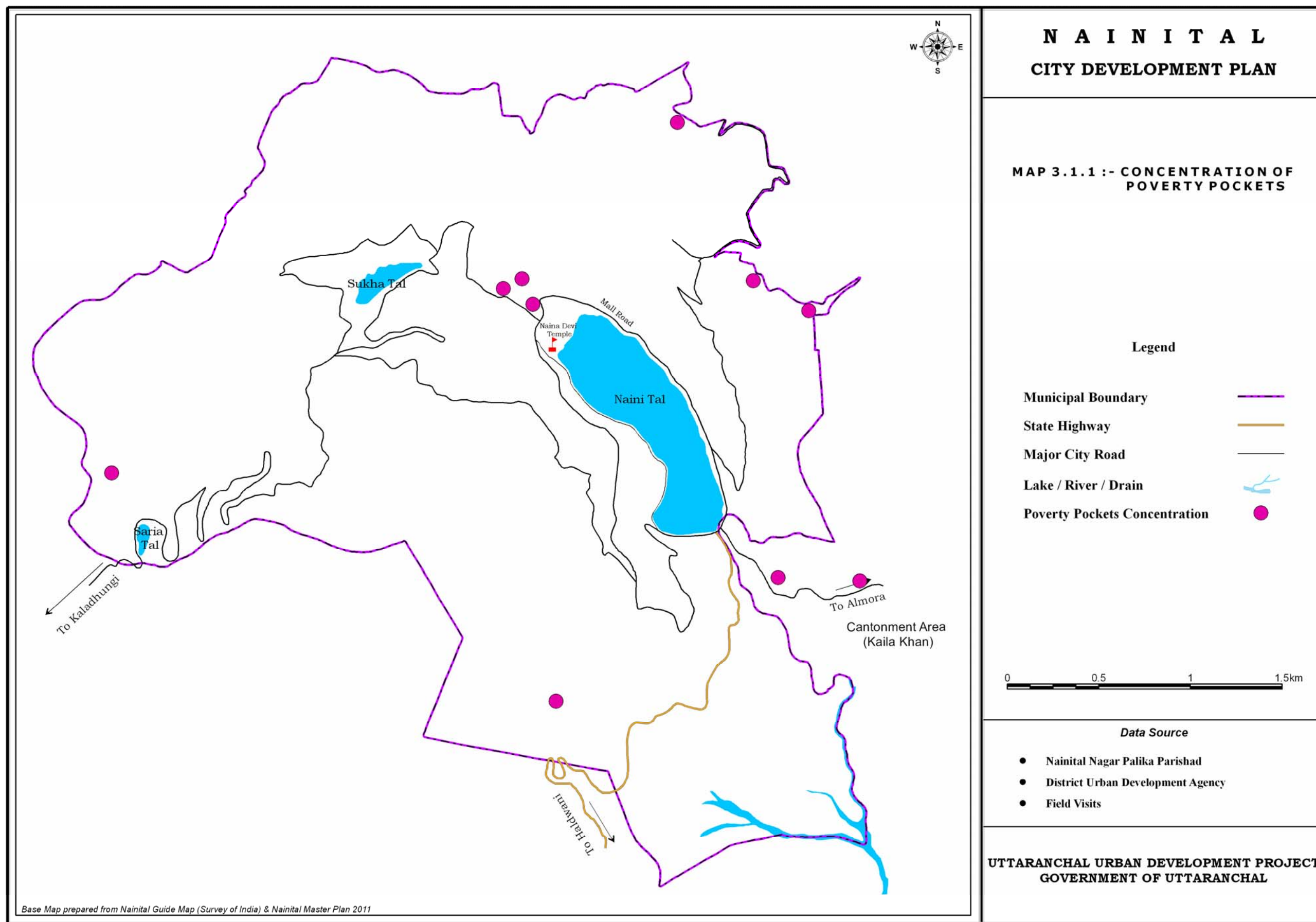
This section presents an overview of the urban poverty in Nainital. No recent studies are available about the extent of poverty levels in the town. According to information available from the NPP and the District Urban Development Agency (DUDA) the town has 10 main slums<sup>2</sup> scattered across the town (Map 3.1.1). Such area accounts for about 21 percent of the total population of the town. Many of those are within the catchment area of the lake.

**Table 3.1.9: List of Slums in Nainital**

S. No.	Name of Slum Areas	Population (Approx)
1	Narayan nagar	1947
2	HariNagar- Tallital	1200
3	NLRSADA line- Mallital	960
4	Committee line	750
5	Bakery compound	650
6	Kathbans	90
7	Bray Side- Mallital	1360
8	Mangawali	750
9	Rajpura	800
10	Dhobi Ghat	780
	Total	9287

Source- Document of Nainital Nagar Palika Parishad /DUDA (2006)

<sup>2</sup> A slum is a compact settlement with collection of poorly build tenement mostly of temporary nature, crowded together usually with inadequate sanitary and drinking water facilities in unhygienic conditions (Govt. of Uttarakhand 2002).



In order to obtain first-hand information, visits were made to the slums. An effort was made to assess the prevailing situation through -

- Focus Group Discussions
- Observation
- Socio-economic Sample Survey.

### ***Household Profile***

Average household size in the town as found in the baseline survey, is 4.5. Slum population in Nainital is 9,287. The slums on encroached land and on the hill slope in fringe areas are generally worse in comparison to other slums. Of the below poverty line (BPL) population 43 percent households and 14 percent of the people do not have any legal rights of the land. In the absence of ownership of land and clear policy to address their problems, the poor suffer from many inadequacies in terms of access to basic services and infrastructure. The situation as observed in the slums and the detail situation analysis is given below.

### ***Water Supply***

The town is served mainly by a piped water supply system. Water problem exists in many slums as supply is irregular in some localities and mostly supplied in odd hours- either at night or early morning. Duration of supply is mostly 1-2 hrs each in morning and evening, sometimes water is not supplied for a few days; so people are dissatisfied. In slums on elevation water rarely flows in the taps. So people carry water from the low areas to up. There is lot of wastage from stand posts in the low lying areas of *NLRSADA Line*, as residents rarely take care in this regard and as there is no scarcity of water. The residents expressed that they have no difficulty except that of unemployment.

Residents in *Committee Line* complained about worms in the water as the storage tank is not cleaned regularly. In slums on the hill slope like Alma House and Bray Side, the residents fetch water from tap for which they need to climb up the unpaved path. They store water in household storage utensils as supply is not sufficient. At Bray Side water is supplied since 4 am for about two and half hours. There is only one stand post for about 30 households, which is not sufficient, especially on hills. Supply in some slums is for fairly long duration - from 10 pm-6/6.30 am. No public stand post is present inside Mangawali slum, only one stand post is at about a distance of 70 ft. In Dhobi Ghat water is available through a pipe from cantonment area. The water flows under substantial pressure and over a duration of 2-3 hours each in morning and evening. Lot of wastage is evident here.

### ***Sanitation and Sewerage***

While the town is covered by sewerage system, areas of some slums like Harinagar, are not covered by sewerage. Most of the slum residents have their own latrine in their houses and they use soak pit or septic tank. A few families do not have latrine at home. They either go to community latrine or for open defecation. The areas where sewer line is absent, people have soak pit with their latrines.

### ***Solid Waste Management***

Solid waste situation is gloomy in many poverty pockets; there is no arrangement for solid waste collection. The residents, therefore, dump waste openly on street or down the hill slope. The drains and streets in slums are either rarely cleaned or never cleaned at all. In some places waste is taken in containers or bins. There is no scientific method of disposal. Waste is burned occasionally or thrown down.

### ***Storm Water Drainage***

There are a few natural drainage channels in the catchment area of the lake, discharging into the lake. Due the natural slope there is no water logging. But during rains the drains overflow in the lower regions. Often rain water gets mixed with water from sewer. The big drainages are maintained by the PWD and the rest are by the local body. In Dhobi Ghat the street light has been disconnected; none of the residents could tell the reason.

### ***Approach Road and Street Lighting***

In some slums approach road is not paved and very narrow. Other colonies, especially in lower zone, have proper approach road. Streets are in bad condition in the slums and street lights are less in number and many are not well maintained. Light bulbs are often non-functional.

### ***Others***

The slum residents are willing to pay for services. They are even willing to pay tax, but often the Municipal body is not paying attention to this. In some localities they are even willing to form local groups to manage their problems.

Local people complained that there is lot of encroachments in the town. Many hawkers spread their merchandise on the streets of market area. This hinders vehicular movement in the town. The citizens complained that the encroachers are mostly from other states and they dirty the lake by open defecation.

In Hari Nagar the overall situation is poor with poor housing and no Solid Waste Management (SWM). In Raish Hotel slum there is a cluster of Economically Weaker Section (EWS) housing on land slide prone area, the situation is poor and this may be relocated.

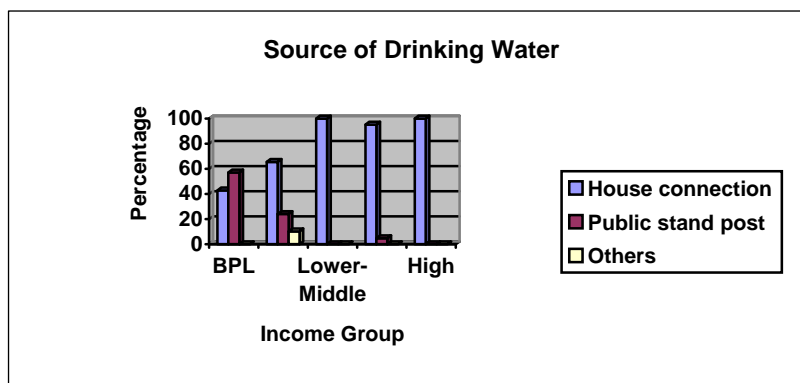
After this brief portrayal of the slum situation a detail situation analysis of Nainital as a whole is presented in the subsequent section.

### **3.1.3 Situation Analysis**

Adequate secondary data at household level on water supply, sanitation, solid waste management etc. are not available. Consequently, data from socio-economic survey at household level were analysed and the findings are discussed in this section. Wherever secondary data are available, these are used in the situation analysis, supplemented by further field studies. The status of service delivery and service coverage as brought out in sample survey is summarised in the following sections.

## Water Supply

Majority (85%) of all the households have in-house water connection. Of the BPL households 43 percent and 66 percent of the poor have house connection. The number of house connection increases with higher income. 57.1 percent BPL families and 24 percent poor collect water from public stand posts.



**Table 3.1.10: Source of Drinking Water**

Source of Drinking Water*	BPL	Poor	Lower-Middle	Upper-Middle	High
House connection	42.9	65.5	100	95.2	100
Public stand post	57.1	24.1	0	4.8	0
Others	0	10.3	0	0	0

\*Data show households in percentage

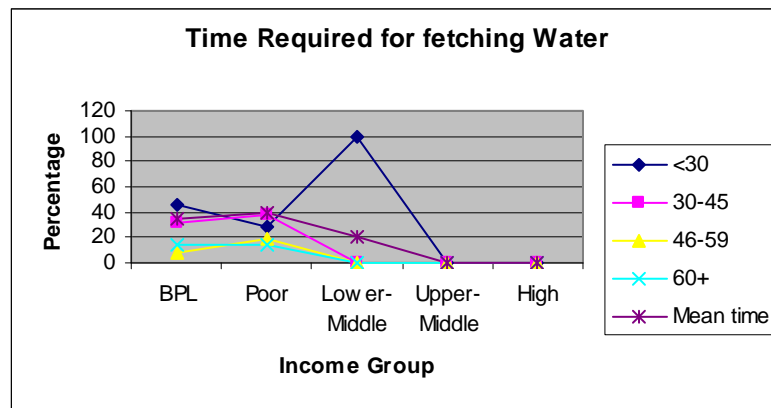
Water is mostly fetched by women (95 percent). Men (3.4 percent) from only poor income group share this responsibility. Of all children 2 percent (from each sex) help their family in fetching water. Support from girls is more in poorer groups. This signifies that household responsibilities are mainly carried out by the female member of the family.

**Table 3.1.11: Responsibility of Water Collection**

Gender*	BPL	Poor	Lower-Middle	Upper-Middle	High
Adult male	0	3.4	0	0	0
Adult female	71.4	93.1	100	100	93.8
Boy	14.3	0	0	0	6.3
Girl	14.3	3.4	0	0	0

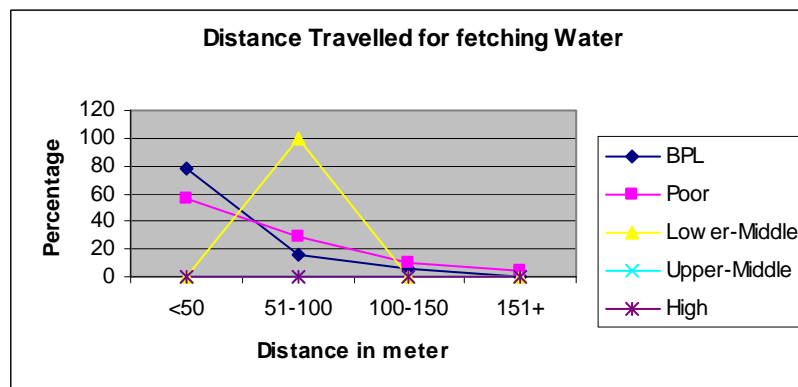
\*Data show households in percentage

Among all the families who collect water from outside the BPL families and 90 percent of the poor spend upto 45 minutes, rest of the poor travel more than 100 metre and spend 30-45 minutes for collection of drinking water. Mean distance travelled is 47 metre and mean time spent is 36 minutes for all.

**Table 3.1.12: Time Spent for Collecting Water\***

Time spent per day (in minutes)	BPL	Poor	Lower-Middle	Upper-Middle	High
<30	50	10	0	100	0
30-45	50	80	0	0	0
46-59	0	0	0	0	0
60+	0	10	0	0	0
Mean time	28.5	38.6	0	20	0
Standard Deviation	8.5	11.6	0	0	0

\*Data show households in percentage

**Table 3.1.13: Distance covered for Collecting Water\***

Distance in meter	BPL	Poor	Lower-Middle	Upper-Middle	High
<50 m	75	80	0	100	0
51-100 m	0	10	0	0	0
100-150 m	0	0	0	0	0
151+m	25	10	0	0	0
Mean distance	72.5	51.5	0	30	0
Standard Deviation	73.6	51.3	0	0	0

\*Data show households in percentage

Majority (68 percent) of the sampled household have rated water quality as medium. 90 percent expressed that they judge the quality by its taste, rest said they consider the quality by its appearance. Most (71%) of the BPL families and 41 percent of the poor do not treat water before consumption. A large portion (70 to 88 percent) of the higher income groups filters the water, the rest boils. It shows the poorer families either lack awareness or cannot afford it.

**Table 3.1.14: Quality of water**

Quality*	BPL	Poor	Lower-Middle	Upper-Middle	High
Good	85.7	41.4	14.8	23.8	6.3
Medium	14.3	58.6	74.1	76.2	87.5
Poor	0	0	11.1	0	6.3

\*Data show households in percentage

Only 18 percent families in the town are willing to take new connection for water supply. This percentage is 14 for BPL families and 17 for the poor. Willingness to get new connection is more among the middle groups. Of the high income group 19 percent desires new connection.

### **Sanitation and Sewerage**

Of the sample households 97 percent have a latrine in the house. None of the BPL families have pour flush toilet, they use pit latrines. 30 percent of the poor families have pit latrines. Rest have sanitary latrines. Those who do not have a latrine in the house go for open defecation. These families use footwear while going for defecation - a good hygienic practice.

**Table 3.1.15: Type of Latrine**

Characteristics*	BPL	Poor	Lower-Middle	Upper-Middle	High
All having latrine in household	6	27	27	21	16
Pour flash	0	3.7	0	4.8	0
Twin pit latrine	50	66.7	100	95.2	100
Pit latrine	50	29.6	0	0	0

\*Data show households in percentage

Eighty three percent of all households have sewer connection. Cleaning and maintenance of latrines are mostly done by the respective family.

**Table 3.1.16: Data on Sanitation**

Characteristics*	BPL	Poor	Lower-Middle	Upper-Middle	High
Defecation site for households					
Latrine in this house	85.7	93.1	100	100	100
Neighbour's house	0	0	0	0	0
Public toilet	0	0	0	0	0
Pay and use toilet	0	0	0	0	0
Open defecation	14.3	6.9	0	0	0
Water in latrine					
Yes	70.9	85.3	97.6	96.3	100
No	29.1	14.7	2.4	3.7	0
Latrine discharges					
Sewer	88	93.3	97.5	88.9	100
Drain	6	5.2	2.5	11.1	0
River	0	0	0	0	0
Open land	0	1.5	0	0	0
Septic tank/Soak pit	6	0	0	0	0

\*Data show households in percentage



Sewer line is absent in some areas, people have septic tank or soak pit with their latrines. On average 79 percent families are satisfied with their facility, so only a few plans for betterment.

### **Solid Waste Management**

Sweeping and SWM are done by the NPP, the service is irregular, and overall poor. On average sixteen percent dispose waste openly. In poverty pockets this is as high as 86 percent. SW situation is poor in many pockets – BPL (86%) and poor (35%) households dump waste openly. Some families in the higher income groups pay for waste collection. Drains are not cleaned regularly. Covered waste bins are required in many localities.

**Table 3.1.17: Solid Waste Management**

Disposal Place*	BPL	Poor	Lower-Middle	Upper-Middle	High
In private bin for house collection	0	0	14.8	4.8	6.3
In community bin	14.3	62.1	85.2	95.2	93.8
Burn	0	3.4	0	0	0
Throw outside openly	85.7	34.5	0	0	0

\*Data show households in percentage

Only about 5 percent of the respondents said that they segregate solid waste at source. Disposal of waste is done mainly by the women (76 percent) member of the family. Municipal collection is not uniform. Collection by private sanitary worker is very little. About 13 percent residents said that burning waste is practiced. All most all household reported they sell old news paper, plastic, glass, bottles, etc., only a few dispose them openly.

**Table 3.1.18: Disposal of Solid Waste**

Satisfaction with disposal*	BPL	Poor	Lower-Middle	Upper-Middle	High
All	7	29	27	21	16
Adult male	14.3	13.8	33.3	33.3	12.5
Adult female	85.7	86.2	66.7	66.7	81.3
Boy	0	3.4	0	0	0
Girl	0	0	0	0	6.3

\*Data show households in percentage

### **Storm Water Drainage**

Drains are mostly *pucca* but open. Proper drain is absent in some slums and in some pockets those are congested. Nainital being a hill town do not suffer from water logging.

**Table 3.1.19: Data on Drainage**

Status	BPL	Poor	Lower-Middle	Upper-Middle	High
Household	7	29	27	21	16
Drainage*					
Yes	85.7	86.2	96.3	100	100
No	14.3	13.8	3.7	0	0
Nature of drain*					
Pucca	85.7	62.1	63	66.7	56.3

Status	BPL	Poor	Lower-Middle	Upper-Middle	High
Kutcha	0	24.1	33.3	33.3	43.8
Covered	0	0	22.2	14.3	25
Open	85.7	86.2	70.4	85.7	75
Flowing	71.4	79.3	96.3	100	100
Clogged	14.3	6.9	3.7	0	0

\*Data show households in percentage

### Approach Road and Street Lighting

Only 14 percent of slum dwellers do not have paved approach road. Condition of the streets is not very bad in the town and there are street lights of which most are functional. Light bulbs are non-functional often in slums.

**Table 3.1.20: Approach Road**

Status	BPL	Poor	Lower-Middle	Upper-Middle	High
Paving*					
Yes	57.1	72.4	88.9	85.7	93.8
No	42.9	27.6	11.1	14.3	6.3
Condition of the road*					
Kutcha	14.3	13.8	11.1	14.3	6.3
Metalled	85.7	62.1	51.9	76.2	62.5
Painted	0	24.1	37	9.5	31.3
Street Light*					
No	14.3	0	0	0	0
Yes within 50m	71.4	82.8	81.5	76.2	87.5
More than 50m Away	14.3	17.2	18.5	23.8	12.5
Functional*					
Yes	33.3	79.3	85.2	85.7	100
No	66.7	20.7	14.8	14.3	0
Payment for street light					
Yes	0	3.4	3.7	0	0
No	83.3	96.6	92.6	95.2	100
Not specified	16.7	0	3.7	4.8	0

\*Data show households in percentage

### Health and Hygiene

Hygiene practices of citizens are good. All use soap, all of those who go for open defecation, uses footwear. Reported cases of diarrhoea and ARI are very few.

**Table 3.1.21: Health and Hygiene Status**

Characteristics*	BPL	Poor	Lower-Middle	Upper-Middle	High
Use of footwear while going for open defecation (Percent of families)					
Yes	100	100	0	0	0
No	0	0	0	0	0
Diarrhoea in last six months (Percent of families)					
Yes	0	10.3	3.7	0	6.3
No	100	89.7	92.6	100	93.8
Acute Respiratory Infection (ARI) in last six months (Percent of families)					
Yes	0	0	0	0	6.3
No	100	100	100	100	93.8

Characteristics*	BPL	Poor	Lower-Middle	Upper-Middle	High
Work days lost in illness (Percent of families)					
None	14.3	62.1	96.3	95.2	100
Less than 5 days	0	6.9	3.7	0	0
5-10 days	0	3.4	0	0	0
10-20 days	0	0	0	0	0
More than 20 days	0	0	0	0	0
Not specified	85.7	27.6	0	4.8	0

\*Data show households in percentage

Total reported deaths in the last year were 3; all due to accident. A large number of the families spend Rs.200+ per month for treatment; monthly cost of treatment is comparatively more in the poorer income groups.

**Table 3.1.22: Data on Mortality in the Last Year**

Characteristics	BPL	Poor	Lower-Middle	Upper-Middle	High
Death in last year					
Yes child under 5	0	0	0	0	0
Yes Other	0	0	3.7	9.5	0
No	85.7	100	96.3	90.5	100
Not specified	14.3	0	0	0	0
Average cost of treatment for the family per month					
Nothing	0	24.1	25.9	33.3	37.5
Less than Rs 50	14.3	0	3.7	0	0
Rs 50-100	0	6.9	11.1	9.5	6.3
Rs 100-200	28.6	20.7	22.2	19	18.8
Rs 200+	57.1	48.3	37	38.1	37.5

\*Data show households in percentage

### Priorities

Of the sampled households all have expressed that their first priority is water supply. Second priority of 39 percent is drainage and 40 percent placed sanitation as their third priority. SWM is also of third priority to some (41%) families. Some (88%) of the families put emphasis on roads and street lighting as their fifth priority. They felt that street light is important as a safety measure for the residents, especially women. A large number (96%) consider proximity to public transport as their 6<sup>th</sup> priority. The citizens wanted improved services for solid waste management, street cleaning, sanitation and drainage.

**Table 3.1.23: Priority in Order of Importance to Quality of Life**

Services*	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5	Priority 6
Water	100%					
Sanitation			40%			
Drainage		39%		40%		
Solid waste collection			41%			
Roads, street lighting					88%	
Proximity to public transport						96%

\*Data show households in percentage

### **Municipal Services**

Sixty-five percent rate the overall municipal services as average. Dissatisfaction is more among the BPL families. Most of the services are rated as average by all. However, of the BPL households a large portion considers some services as poor. Those are SWM, roads, street lighting and access to public transport.

### **Willingness to Pay**

Willingness to improve house is maximum among the middle income groups (86%). Fifty seven percent of BPL families, 76 percent of poor and 75 percent of the rich families are willing to spend for improving their houses.

**Table 3.1.24: Willingness to Improve House**

Willingness	Income Group*				
	BPL	Poor	Lower-Middle	Upper-Middle	High
Willing	57.1	75.9	85.2	85.7	75
Unwilling	42.9	24.1	14.8	14.3	25

\*Data show households in percentage

Of all residents, 37 percent are not willing to pay for urban services. Willingness is less among poorer groups and the richer are not sure whether to pay more. More positive response was received for SWM from the middle and higher income groups.

### **Others**

Of all the respondents 64 families stay at a distance 100 meter to 1 km away from the main road; some stays further.

### **Social Capital**

Membership of local group is low about 5 percent of all are having membership. This increases in higher income groups. Membership of Residents or community welfare association is highest among the middle income group. It is possible that if community groups are reorganised and empowered they could probably be able to take active part in planning and decision making. More than 81 percent in each income group have ration card and all of the BPL families hold such card.

## **3.1.4 Key Urban Social Issues**

The followings are the key issues identified during community consultation and by situation analysis:

- Drinking water supply in the slums is not adequate.
- Practice of open defecation exists in the town.
- Absence of sewer in some areas.
- Solid waste is poorly managed in most of the slums.
- Community infrastructure is not sufficient and groups are inactive

The specific needs in the slums are:

- Providing sufficient, timely and uniform supply of potable water by Installing

public stand post.

- Connecting slum latrines to existing sewer line.
- Initiating effective solid waste management, especially segregation at source.
- Paving approach roads.
- Maintenance of street lights.
- Organising residents in the participatory process
- Involvement of Community Based Organisations (CBOs)/Non-Government Organisations (NGOs) in the whole process.
- Establishing base offices for community based complaint redress system.
- Establishing a community development cell in the NPP and deploying an officer, who could be a link between the NPP and the base offices.
- Launching awareness programme, especially to stop wastage of water.
- Securing land tenure to the residents and providing low cost housing. EWS housing schemes need be targeted at registered slum dwellers. In-situ upgradation should be given priority within such schemes.
- Convergence of various programmes and inter-departmental coordination needs to be promoted.

## 3.2 Economic Development

### 3.2.1 Economic Base of the city

From Table 3.2.1 below it is evident that work participation in primary sector is relatively insignificant in Nainital. For obvious reasons, growth of primary sector is not what is expected. But, work participation in secondary (house hold industries in this particular case) is also insignificant.

**Table 3.2.1: Distribution of Workers by Category (%)**

Cultivators		Ag. Labourers		HH industries		Others	
Male	Female	Male	Female	Male	Female	Male	Female
0.50	0.70	0.20	0.30	1.20	1.40	98.10	97.60

Source: Census 2001

As may be seen in Table 3.2.2, there are in all 9 industrial units employing only little over 4 thousand workers. None of these units are located within the town of Nainital. This town's economy is based primarily on tertiary sector activities.

**Table 3.2.2: Large and Medium Industrial Units and Workers Employed**

Types of Industrial Units	No. of Workers	No. of Units
Water filters	101	1
Watch components	925	1
Iodine salt	19	1
Paper and paper products	2774	2
Food processing	33	1
LPG bottling	42	1
Dairy products	142	1
Total	4036	9

Source: Government of Uttarakhand, Directorate of Industries,  
Directory – Large and Medium & Industries (Functioning, 2005.)

The tertiary sector activities are related to a great extent to tourism and to some extent to educational institutes (it is also the location of quite a few educational institutes including a university), and government offices (the High Court of Uttarakhand is also situated in Nainital).

### 3.2.2 Economic Growth potential

Due to its hilly terrain there is no visible possibility of reckonable growth in the secondary sector of the economy of Nainital. Migration of workers to this town, seeking jobs in secondary sector has little possibility of happening. On the other hand, evidently the tertiary sector seems to be the engine of economic growth in this town. Most of the activities under the tertiary sector, which is the main constituent of the economic base of this town, are related to small trade and enterprises, hotel business, transport and such other activities. Nainital is the destination of thousands of tourists particularly in the summer months. In the year 2005, the tourist arrivals in Nainital exceeded 5 lakhs.

There is tremendous growth potential in the area of tertiary sector activities. The High Court of the State, a university, several other state and central government offices and institutions are located in this town. These institutions enhance importance of Nainital but contribute only marginally to its economy. On the other hand tourism has its impact on the tertiary sector of the economy of the town.

Traditionally, Nainital attracts large number of tourist population in the summer even when much is yet to be done to improve and develop its tourist infrastructure. To attract 'high end' tourists including foreign tourists, who have the capacity to pay, higher order facilities need to be created for comfortable accommodation, high altitude recreations including 'adventure tourism' etc. As the tourism grows further, more employment opportunities will be created as a result of expansion of the aforesaid activities and enterprises. In its Vision statement in the New Industrial Policy – 2003, the State Government emphasizes tourism development in the following words:

**'To promote tourism as a focus area and develop Uttarakhand as a premier global tourism destination.'**

Substantial portion of the tourists in Nainital belong to middle income group. But there is always short supply of economic accommodation for them. Their needs are to be addressed on priority basis. Furthermore, for this class of tourists' facilities need to be created for affordable amusements.

A critical issue like heritage conservation has not yet been addressed adequately. Besides the pre-dominant natural heritage, Nainital's built heritage is reckonable. The first cottage raised after Mr P. Barron discovered this site of pristine beauty in 1841 is now at the verge of extinction; and the residence of famous and immortal Jim Corbett is in dilapidated condition now. Nainital has some of the very old Churches. Due to lack of publicity, tourists often do not come to know of such heritage structures. These are only a few examples of built heritage sites that have high potential of tourist attraction.

Social and cultural heritage is another area that attracts attention. The old narrow lanes with steep rise and slopes, lined with small houses and shops – including those of local handicrafts, and so on that permits a glimpse of the typical traditional life style of the local hill people could be an attraction for those who are interested in heritage tourism. Again, a heritage village, like the ones that have

experienced tremendous success in some other Asian (e.g. Chiangmai in Thailand) countries could boost tourism, particularly high end tourism.

Conservation of built heritage, developing social and cultural tourist attractions, their promotion and marketing, and of course development of infrastructure together would ensure substantial positive impact on the economy and its growth, particularly on the tertiary sector, which is and will remain the dominant economic sector in this town.

The State Government has taken initiative for developing the infrastructure of the tourist destinations in the State. It is learnt that the Tourism Department has engaged an international consultant to prepare a plan for developing Uttarakhand as global. It is expected that the planned infrastructure and institutional improvement with financial assistance of the ADB and Infrastructure Development Fund, and the proposed overall development of the town under the JNNURM will provide impetus for faster rate of growth of the economy of Nainital, particularly in the tertiary sector or for that matter tourism, which in turn will widen opportunities for employment.

### **3.3 Physical Growth and Environmental Aspects**

#### **3.3.1 Growth of Nainital**

The following section gives an overview of the important stages in growth of Nainital. The growth of Nainital can be described broadly in four stages:

Before 1841

- Kumaon state was under Gorkha rule till 1803. It was acceded to British rule in 1815
- Nainital was an unpopulated forested area with Nanda Devi temple at Mallital and known only to local tribal

1841 - 1900

- Nainital Lake was discovered by English tea merchant P. Barron in 1841
- Pilgrim lodge was the first building to be constructed. Nainital Nagar Palika Parishad was established in 1845 and many of important buildings came up during this period
- The landslides of 1880 on the slopes of China Peak (also known as Naina Peak) caused substantial damage and created *Flats* ground on Mallital, which is used as public space for residents and tourists in the present times
- Nainital District was created in 1891
- Boat Club house was built in 1897

1900 – 1947

- During this period it became the Eastern command army headquarters and summer capital of Northwest Province. After it was made the summer capital, a remarkable expansion of the town occurred with the growth of magnificent bungalows, construction of facilities such as marketing areas, rest houses, recreation centres, clubs etc together with the secretariat and other administrative units. It also became an important centre of education for the British
- The 36 km long Kathgodam – Nainital road was completed and also electric

supply came to the town. Almost 925 buildings were constructed during this period

After 1947

- After independence, Nainital continued to function as UP Government's summer capital. The towns' growing popularity as tourist centre spurred construction of numerous hotels along Mall Road and Sher ka Danda area
- The Greater Nainital Development Authority (GNDA) was established in 1984 to regulate development of the town. In 1989, GNDA was dissolved and Nainital Lake Region Special Area Development Authority (NLRSDA) was established
- The year 2000 saw the creation of Uttarakhand State and the setting up of the High Court in Nainital

### 3.3.2 Nainital Lake Region Special Area Development Authority

Nainital Lake Region Special Area Development Authority (NLRSDA) was established under The Special Area Development Authority Act, 1986 on 21st October 1989 vide GO 5148/11-5-89-69 Meeting/89. Nainital Lake Region Special Development Area was demarcated in the same GO to include municipal areas of Nainital and Bhimtal, Naukuchiatal, Sattal, Khurpatal and areas falling under 220 yards on both sides of the roads connecting these lakes. The planning area was revised in 1994 to further include Bhowali municipal area and surrounding villages. NLRSDA comprises of five planning zones:

- Nainital (including Khurpatal)
- Bhowali
- Mehragaon – Khas
- Bhimtal (including Sattal)
- Naukuchiatal

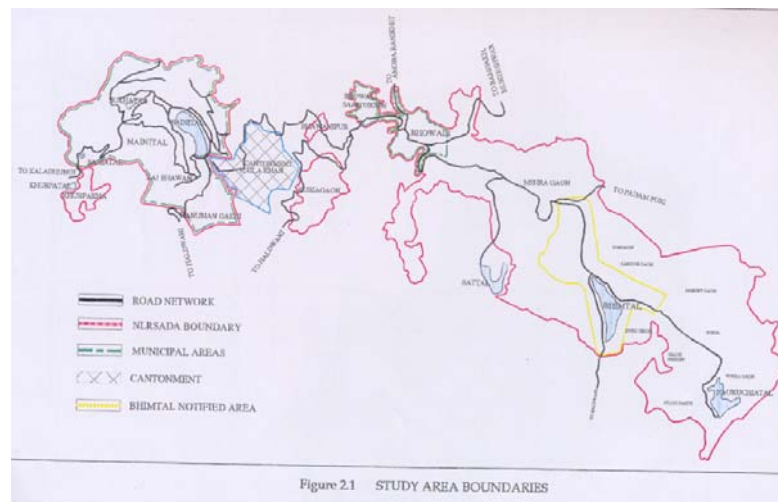


Figure 2.1 STUDY AREA BOUNDARIES

Source: Transport Plan for NLRSDA, Jan 2003 Prepared by RITES Ltd.

NLRSDA is the Planning and Development Authority for the demarcated Nainital Lake Region Area. The Authority vested with the responsibility of preparing and enforcing the development plan is NLRSDA is commonly known as Lake Development Authority (LDA).



### 3.3.3 Review of Nainital Master Plan 2011

Among the five planning zones, considering the ecological sensitive areas within Nainital NPP, high rate of urbanization and increasing resident as well as tourist population, Master Plan of Nainital was prepared on a priority basis by the Town and Country Planning Division Office (Kumaon) for the time horizon of 1995-2011. Nainital Master Plan 2011 covers the NPP area of 11.73 sq km. There has been no change in the NNPP area since 1845.

The Master Plan 2011 projected population of 54,000 by 2011. The Master Plan proposes to depopulate Nainital NPP by 16,000 population out of the proposed projected 54,000 population by 2011 and develop surrounding areas of Bhimtal and Khurpatal to accommodate this additional population. In keeping with this policy many of the government offices have been shifted to Bhimtal and Bhowali. Nainital is situated around the lake on hills. Ecologically sensitive areas which are unsafe for any construction activities have been declared as 'Prohibited Areas' which form a considerable part of NNPP. This leaves limited areas in safe category for physical urban growth. Master Plan clearly lays down land use policy and development guidelines for the entire lake region and more specifically for the NNPP area in the context of difficult terrain for urban development.

**Guidelines for five Planning Zones of Nainital Lake Region Special Development Area**

- Development in each planning zone in Lake Region Area shall be in cognizance to its topography and geographical setting
- Development of non polluting industries shall be promoted in Bhimtal Planning Zone
- Development of tourism based infrastructure to be promoted in Naukuchiatal Planning Zone
- Development of tourism and commercial activities to be promoted in Sattal planning zone
- Bhowali Planning zone lies in the centre of the Nainital Lake Region Special Development Area and has the capacity to fulfill the demands of high level government offices
- Nainital Planning division including the NNPP area should have development to the extent of its carrying capacity and surrounding areas of Khurpatal, Kuriyagaon and Bhavanipur should be developed to accommodate additional population growth. Khurpatal area is proposed to have development in the sectors of residential, tourism, education, entertainment, government offices and commercial establishments.

Master Plan has proposed a comprehensive set of physical development policies for development within NNPP (Refer Annex 3.3.1). The development policy restricts further non residential development and allows residential development only to domicile of Nainital. Renovation/reconstruction is allowed with: (1) restrictions on height of the building to 7.5 m or second floor whichever is less, (2) no increase in plinth and floor area and (3) no change in the use of building. The development policy promotes tourism by revamping the sightseeing points and conservation of natural resources. Areas which are ecologically sensitive have been earmarked as 'Prohibited Areas'. Regulations for Prohibited area include the following:

- No renovation, extension and urban development works shall be allowed
- No new construction shall be allowed. Limited developmental activities such as construction of retaining wall, plantation, widening (limited to 7.5 m) and strengthening of existing roads can be allowed in special circumstances. No new road construction shall be allowed in these areas and only pedestrian walkways would be permitted

- Division of land and land conversion for development and construction works shall not be allowed

The Master Plan covers various sectors such as residential, tourism, commercial, government offices, public utilities, roads and transportation. Main issues identified in the Master Plan and proposed activities are summarized in the table below.

**Table 3.3.1: Key Provisions as per Master Plan 1995-2011**

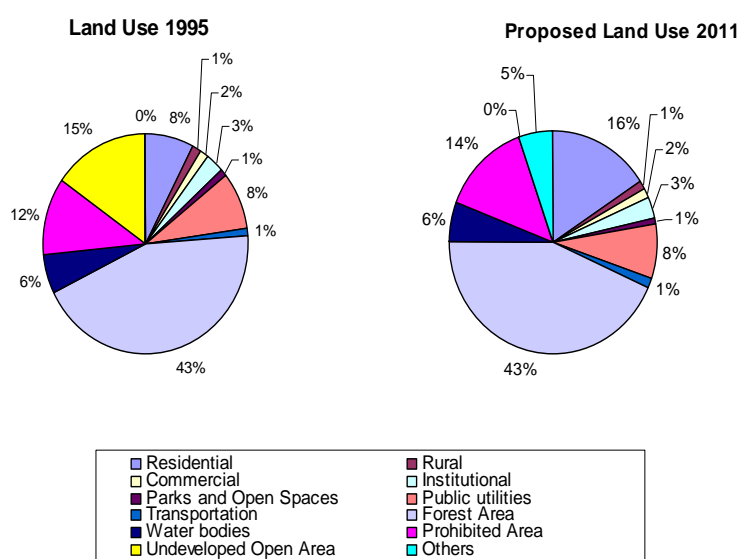
Component	Issues Identified in Master Plan 2011	Proposed Activities in Master Plan-2011
Residential	Lack of suitable terrain and connectivity for residential development Shortfall of 106 houses in 1991 Rapid residential development in areas along Upper Mall road, Sher Ka Danda, Sukhatal ward, Nainital club, Tallital, Mallital, Narayan nagar and Harinagar.	Building byelaws were revised for residential development on private properties An average density of 20.98 persons per Ha has been proposed for 2011. The city has been divided into low, medium and high density areas for residential development. Area of 83.59 Ha is proposed under low density ( 50 p/Ha), 63.50 Ha proposed under medium density ( 50-100 p/Ha) and 39.2 Ha proposed under high density (100-150 p/Ha)
Commercial	Main commercial areas are Mallital, Tallital and Upper Mall Road. Due to high density development and large no. of commercial establishments, these areas are highly congested Lack of retail shops in other areas.	Provision of 200 retail and local shops by 2011 on the basis of zoning regulation.
Roads and Transportation	Inadequate existing road infrastructure to carry heavy vehicles Traffic congestion Lack of adequate parking areas and insufficient space for parking of govt and private buses in Bus Stand Lack of public transportation facilities	Proposal of Bypass road from near Baldiakhan to South of Rajbhavan till Khurpatal. Parking place proposed at Sukhatal and near Nainital Club (Metropol Hotel) Widening of 18 existing roads has been proposed
Tourism	Lack of accommodation facilities for tourists Lack of proper parking place Lack of transportation facilities Lack of clean drinking water Lack of public toilets Lack of pucca ghats and covered areas (shed) for boats Increasing pollution in the lake	Integrated development to bridge the present gaps and redevelopment of tourist attractions. Redevelopment of areas of tourist importance in and around Nainital with financial assistance from the state govt. in the perspective of govt's tourism development policy Development of tourist village with temporary construction material to accommodate the intermittent large no. of tourists during peak seasons

### 3.3.4 Land Use Assessment

Master Plan for 2011 is proposed for the NNPP area of 11.73 sq km. The land use distribution is shown in table 3.3.2.

**Table 3.3.2: Land use Distribution in 1995 and Proposed for 2011 as per Master Plan 2011**

S. No.	Land Use	Land Use 1995		Proposed Land Use 2011	
		Area (Ha)	% to Total NNPP Area	Area (Ha)	% to Total NNPP Area
1	Residential	90.54	7.72	186	15.86
2	Rural	15.5	1.32	15.5	1.32
3	Commercial	17.75	1.51	17.75	1.51
4	Institutional	34	2.90	34	2.90
5	Parks and Open Spaces	10.64	0.91	10.64	0.91
6	Public utilities	99.02	8.44	89.77	7.65
7	Transportation	14.07	1.20	16.14	1.38
8	Forest Area	508.76	43.37	508.76	43.37
9	Water bodies	68.9	5.87	68.9	5.87
10	Prohibited Area	135.08	11.52	164	13.98
11	Undeveloped Open Area	177.7	15.15		
12	Others	0.74	1.41	61.16	5.21
	Total	1173	100	1173	100

**Figure 3.3.1: Comparison of Land use in 1995 and Proposed for 2011 as per Master Plan 2011**

The comparison of the land use in 1995 to the proposed land use for 2011 is shown in Figure 3.3.1 and Map 3.3.1. The Plan proposed increase in areas under residential and transportation land use and marginal increase in the area covered under 'Prohibited Area'. Master Plan proposed increase in the parking area from the existing 0.12 Ha in 1995 to 2.24 Ha proposed for 2011. Areas for Parks and open spaces remain the same with 4.02 Ha used for Recreational use and Open Spaces; 1.5 ha for Golf Course; 1.5 Ha for Parks and 3.62 Ha for Botanical Garden. Proposed land use 2011 as per Master Plan 2011 is shown in Map 3.3.1.



# NAINITAL CITY DEVELOPMENT PLAN

MAP 3.3.1 :- PHYSICAL GROWTH CHARACTERISTICS

## Legend

आवासीय	
उच्च घनत्व	हाक लॉड इन्फ्रामैक्रो
मध्यम घनत्व	दूरदर्शन प्रसारण केन्द्र
निम्न घनत्व	पुलिस स्टेशन, अग्नि इमरजेंसी
वाणिज्यिक	शमशान कब्रिस्तान, सिमेंटरी
व्यापारिक एवं वाणिज्यिक	
वाणिज्यिक केन्द्र	उपविकास एवं सेवाएं
क्रिडान लानेज	विद्युत केन्द्र
कार्यालय एवं राजस्विय उपयोग	आल काल
कर्मचारी	यातायात एवं परिवहन
राजस्विय उपयोग	मुख्य मार्ग
सामुदायिक सुविधाएं	अन्य मार्ग
विद्यालय	रज्जु मार्ग
महाविद्यालय विभाग	बस स्टेशन, टैक्सी स्टैंड
प्रशिक्षण संस्थाएं	पार्किंग स्थल/बैठ स्टैंड
स्वास्थ्य सुविधाएं	पर्यटन
क्रीडा व खेल स्थल	पर्यटन विकास स्थल
क्रीडा केंद्र	अन्य उपयोग
पार्क	अपरिभाषित क्षेत्र
वन्य जीव उद्यान	वन/हिले क्षेत्र
हासिक एवं सांस्कृतिक क्षेत्र	महत्वपूर्ण सीमा/परिधि
	झील/झरोका

0 0.5 1 1.5 km

## Data Source

- Nainital Master Plan 2011
- Field Visits & Stake Holder Consultations

UTTARANCHAL URBAN DEVELOPMENT PROJECT  
GOVERNMENT OF UTTARANCHAL

Map Source: Nainital Master Plan 2011

### Areas around High Court

- Recent development of support offices and service sector around High Court
- Old city area having high density commercial and residential development
- Poor housing conditions in some parts
- Congested narrow streets with poor infrastructure facilities
- Surrounding hills prone to landslides

### Flats

- A large public open space
- Naina Devi Temple Complex near flats used for religious occasions
- Created as a result of landslide in 1880
- Used for parking, sports activities, etc by residents and tourists

### Prohibited Area

- Ecologically sensitive area prone to natural disasters
- Hilly area prone to landslides
- High incidence of unauthorised construction
- Encroachments by residential and commercial development

### Areas along Mall Road

- Main city road along the lake
- High density development along Mall Road
- Rapid growth of hotels and commercial establishments
- Main access road for tourists

### Areas along Kaladhungi Road

- Surrounded by forest areas which restrict development along the road within NNPP boundary
- Scope for future development outside NNPP boundary
- NLRSADA is developing satellite township in Khurpatal (8 Kms) on 3.5 Ha

### Areas in South and Southeast of Nainital

- Growth of squatters on hilly terrain in Hari Nagar leading to environmental degradation
- Unsafe construction in Hari Nagar
- Scope for residential development in Krishnapur as private land is available but poor accessibility
- Scope for future development along Haldwani Road
- Growth restricted by Cantonment in the Southeast
- High density development in old city areas of Tallital and Sher Ka Danda

### 3.3.5 Implementation of Master Plan

#### Housing

Master Plan states housing shortfall of 106 nos. in the year 1991. Master Plan proposes an area requirement of 189.29 Ha of land divided into high, medium and low density areas for 2011. The following table gives the details of housing in Nainital.

**Table 3.3.2: Housing Units in Nainital**

Year	Total Housing Units	No. of H/H	Shortfall of Housing Units	H/H Size
1961	3762			
1971	4053	4946	893	4.84
1981	5456	5579	123	4.45
1991	7836	7942	106	3.75

*Source: Nainital Master Plan 1995-2011*

NLRSADA is responsible for giving building plan permission. The Development Authority revised the building byelaws in 1992 to restrict further construction and regulate the reconstruction activities. Revised building byelaws restrict the height of the building to 7.5 m and/or 2 storeys whichever is less; floor area is restricted to 250 sq m and sub division land is not allowed. The city is divided into four categories for giving building permissions:

- Areas where slope is more than 80%
- Areas where slope is 50%-80%
- Areas where slope is 20% - 50%
- Areas where slope is 0 – 20%

Construction activity is not allowed in areas falling in the first two categories. For the third category, construction of 100 sq m is allowed for both ground floor and first floor each. For the fourth category, construction of 150 sq. m and 100 sq m is allowed for ground floor and first floor respectively. Development Authority receives an average of 10 applications for reconstruction and about 18-20 applications for new construction in a year. It was reported that construction by lower income groups is unsafe as the safety guidelines are not followed, which raises the need for training of labour/mason/contractor.

Although 1.64 sq km of total NNPP is declared as prohibited area, unsafe for any construction in the Master Plan, this area is under pressure for further urban growth but does not have the desired level of planning and development control which is urgently required.

NLRSADA has developed Waverly Housing Scheme providing a total of 100 housing units - 48 in EWS, 36 in LIG, 4 in MIG and 12 in HIG categories. Other schemes of housing development by NLRSADA include construction of 150 EWS housing in Narayan nagar, relocation scheme from Rayis Hotel in Tallital and Power Grid housing scheme. NLRSADA is developing Khurpatal (Devbhoomi) Satellite Township Scheme residential scheme at a distance of 8 km from NNPP in an area of 3.5 Ha. The scheme proposes construction of 80 housing units with all civic amenities. This area provides a wide range of options for the future urban growth but requires proper development control and enforcement.



### Lake Conservation

NLRSADA is the nodal agency for Nainital Lake Conservation Project to the tune of Rs. 65 crores. An amount of Rs. 47.96 crores is earmarked for Nainital Lake and the rest Rs. 16.85 crores for the other four lakes in the region. This programme is funded by the central (70%) and the state (30%) government. Under Nainital Lake Conservation Project, works have been proposed in the following broad sectors:

- Sewerage and sanitation works
- Hydraulic works
- Restoration and development works
- Catchment conservation works
- Infrastructure facilities
- Social awareness and participation plans.

A summary of the works undertaken in the above mentioned sectors as per the Progress Report May 2006 is given in the Table 3.3.3 for Gol component.

**Table 3.3.3: Summary of Works undertaken in Nainital Lake Conservation Project**

S. No.	Items	Implementing Agencies	Sanction	Released	Utilized
1	Sewerage System				
1.1	Sewerage lines & Sewage Treatment	Jal Nigam	1084.45	625.00	427.57
		Jal Sansthan			
		Nagar Palika Parishad			
1.2	Low cost Sanitations	LDA Nainital	354.24	127.21	34.66
1.3	Solid waste disposal works	NNPP	81	10.75	10.30
	Sub total		1519.69	762.96	472.53
2	Hydraulic works				
2.1	Siphon pipe line for the lake	Utranchal Irrigation	90.81	1.88	1.88
2.2	Strengthening of outlet works of lake	Utranchal Irrigation	40	20.0	0.00
2.3	Protection works at Balia Nala	Utranchal Irrigation	1455.83	1550.00	1550.00
	Sub Total		1586.64	1571.88	1551.88
3	Restoration and Development				
3.1	Installation of controlled aeration works	LDA Ntl	495	17.00	17.00
3.2	Dredging of the lake near delta	LDA Nainital	7.5	6.00	6.00
3.3	Biomanipulation through fish	Cold Water Fisheries	50	25.00	0.00
3.4	Shoreline Development	LDA Nainital	191.26	174.12	50.07
	Sub Total		743.76	222.12	73.07
4	Catchments conservation works				
4.1	Catchments Treatment	Forest Deptt. UA	70.8	14.60	9.60
4.2	Other Stabilization measures	PWD Uttarakhand	53.79	36.50	31.28

S. No.	Items	Implementing Agencies	Sanction	Released	Utilized
	Sub Total		124.59	51.10	40.88
5	Infrastructure Facilities				
5.1	Water quality/monitoring labs	Kumaon Uni. Nainital	32.37	9.00	7.80
5.2	Bypass road	PWD Uttarakhand	110	1.80	1.80
5.3	Parking Area	LDA/ Nagar Palika	64.78	35.00	0.0
5.4	New Bridge	Irrigation Deptt.	45	102.00	26.19
5.5	Power Plant of Sewage	UREDA	103.7	0.0	0.00
5.6	Cost of sidewalks on Mall Road	LDA	24	24.00	0.00
	Sub Total		379.85	171.80	35.79
6	Social Awareness				
6.1	Awareness Plan	LDA	87.09	19.76	10.20
	Sub Total		87.09	19.76	10.20
	Total		4441.62	2799.62	2184.35
	Unforeseen Misc. Expenditure @ 8%		355.32	67.42	31.49
	Grand Total		4796.94	2867.04	2215.84

Source: Progress Report of NLCP, May 2006

### Shifting of Government Offices

As per the guidelines for planning zones in Nainital Lake Region Special Development Area, Government as well as private offices from Nainital are shifting to Bhimtal and Bhowali. Presence of High Court in the north of NNPP area is generating lot of construction activities for its support offices and related service sector activities in its surrounding areas.

### Tourism Development

Master Plan proposes goals for tourism development in Nainital in keeping with its resources and potential. They are as follows:

- Establishing a regional tourism circuit
- Creating opportunities to increase the period of stay of tourists
- Development of non conventional tourism
- Planned development of tourist attractions surrounding the town
- Development of new entertainment opportunities
- Development of zones for solitude and meditation

### 3.3.6 Future Directions of Growth

The lake is surrounded by hills and forests, which restrict the physical expansion of the town to a great extent. Most of the area within NNPP is covered by forests and 'Prohibited Areas' which leaves limited developable area within the municipal boundary. Physical growth is restricted by Cantonment in the southeast of the city. The likely direction for growth in the near future is towards the south and west of Nainital, along Haldwani road and Kaladhungi road. Difficult terrain and saturation of construction activities within the municipal boundary and as per the development guidelines in Master Plan, DA is promoting development in Khurpatal about 8 km from Nainital. This area provides a wide range of options for the future urban growth but requires proper development control and enforcement.

Bhimtal is a major settlement, which is fast developing as a counter magnet to reduce the population and development burden on Nainital. Other likely areas identified for development of satellite townships are Naukuchiyatal, Jolikot, Takula, Rusi, etc. Urban growth perspective based on field visits and stakeholders consultation is given in Map 3.3.1.

### 3.3.7 Key Issues related to Physical Growth and Built Environment

**Lack of Developable Land in Nainital NPP:** Hilly terrain surrounding the Lake and ecologically fragile areas restrict the physical expansion within NNPP.

**Development of Satellite Townships outside NNPP:** With limited space for construction within NNPP, it is deemed necessary to develop townships outside NNPP to depopulate the city and accommodate the future population. The satellite townships are proposed to form Resident Welfare Associations to maintain the services after area/housing development by NLRSA.

**Unauthorised Constructions in Ecologically Sensitive Areas:** Although ecologically sensitive areas have been earmarked as 'prohibited areas' in the Master Plan, there is high incidence of unauthorised construction in these areas by residential as well as commercial establishments. About 1200 to 1300 notices for demolition of unauthorised buildings have been issued by NLRSA.

The issue is further accentuated by the fact that Nainital lies in high seismic zone and has continued threat from landslides from the surrounding hills. Growing city of Nainital needs a strong policy support and relocation plan for removing unauthorised buildings from the prohibited area.

**Vulnerable Buildings in Old City Areas:** Many houses in the old city areas are in dilapidated conditions and face the peril of breaking down. A concerted effort to identify such vulnerable structures and a relocation plan needs to be in place immediately to safeguard the lives of the citizens.

**Increasing Slums and Squatter Settlements on Hills:** Increasing squatter settlements on the hilly terrain is leading to environmental degradation through disposal of solid waste and unhygienic conditions in these areas.

**Shortage of EWS Housing:** The new township development around Nainital needs to ensure adequate housing provision for EWS and lower income groups to provide housing to existing slums and future need for this sector. The number of EWS housing required is also dealt in section 3.1.

### 3.3.8 Environmental Management

Uttarakhand Environment Protection and Pollution Control Board (UEPPCB) is mainly responsible for advising the state government in environmental pollution related issues and monitoring of environmental pollution of the state.

Nainital Lake Region Special Area Development Authority (NLRSA) is responsible for management of the Naini Lake.

### 3.3.9 Key Environmental Management Issues

Following are the major environmental management issues of the city:



**Pollution of Naini Lake:** Naini Lake is the most important water body in Nainital both in terms of environment and tourist attraction. It is also recipient of storm water for large catchments. This lake is polluted due to urbanization and tourism activities. Discharge of untreated waste water, disposal of solid waste and silt deposition are the major factors that cause pollution of the lake. Nainital Lake Region Special Area Development Authority (NLRSDA) is implementing centrally sponsored Nainital Lake Conservation and Management Project (NLCP) under the National Lake Conservation and Management Project. UEPPCB monitors the lake water quality. The quality monitoring result for the lake water suggests very low level of dissolved oxygen. The quality of the lake water is expected to be improved after implementation of the NLCP.

**Land Slide on Surrounding Hills:** The problem of landslide, subsidence and erosion of soil is common in Nainital particularly in the periphery of the Naini Lake. This is due to a combination of several factors like geological movements, structure, lithology, water seepage, soil cover, vegetation cover, weather and climate change. Landslide and soil erosion from the adjoining hills causes heavy silt deposition in the lake. Adequate protective measures are necessary to prevent such land slide and soil erosion.

**Collection, Transportation and Safe Disposal of Solid Waste:** The city managers have failed to comply with the “Municipal Solid Wastes (Management & Handling) Rules, 2000” under the umbrella act “The Environment (Protection) Act, 1986”. A significant part of the solid waste and plastics generated in the city find its way in to the lake either through the storm water drains or indiscriminate litter in the lake. These not only pollute the lake water but also degrade the aesthetics’ of the lake.

### 3.4 Municipal Infrastructure

#### 3.4.1 Water Supply

The water supply of Nainital is operated and maintained by Uttarakhand Jal Sansthan (UJS), an institution working under Department of Drinking Water, Government of Uttarakhand (GoU). UJS also undertakes small budget capital works. Large capital works and overall planning are carried out by another corporation Uttarakhand Pw Jal Nigam (UPJN) also working under Department of Drinking Water. Although it is supposed to be a municipal function, Nainital Nagar Palika is not involved in the planning, design, construction, operation, maintenance and service delivery of this important Urban Infrastructure. This section deals with the analysis of current situation of water supply, its problems, key issues and the likely scenario of water supply with respect to water demand, resources, system requirements and related aspects.

##### **Water Sources and Generation of Water**

Piped water supply was introduced in Nainital in 1898 from Pardadhara spring situated inside the town. This was a gravity flow system

Later on, water was tapped through borewells and infiltration well located at the periphery of Nainital lake near *Flats*. These tubewells are now the main sources of water for Nainital City from which it meets about 93% of its total supply, the rest 7% or about 1 mld is drawn from the surface source, as shown in the Table 3.4.1

**Table 3.4.1: Present Availability of Water from Various Sources**

S.No.	Name of source	Approximate quantity available (mld)
1.	Parda Dhara Spring	1.0
2.	Lake Infiltration well	1.92
3.	Tubewells	
	a) Old tubewells 6 Nos.	7.80
	b) New tubewells 2 Nos.	4.32
	Total	14.32
4.	System losses 30% (assumed)	4.29
5.	Net Water distributed	10.03

Based on the net water distributed, average availability of water at consumer end is calculated as 135 lpcd (based on 74000 total population during summer). This indicates that the present level of supply is quite satisfactory. Since all the shallow tubewells and infiltration well are being directly recharged by lake water for all practical purposes, lake is the main source of water for Nainital at present.

### ***Treatment of Water***

The quality of ground water from tubewells is good and does not need filtration. As such it is distributed after disinfection. Disinfection is being done by mixing bleaching powder solution in CWR's at water works. The quality of water from Pardadhara stream is also quite good but in rainy season the turbidity increases for some period. As such the surface water from the stream and discharge from infiltration well is filtered through one No. Rapid gravity filter of 3.54 mld capacity as well as through 2 Nos. pressure filters of 1mld capacity each, both located at the water works. The discharge from the stream is 1 mld and that from Infiltration well is 1.94 mld; thus only 2.94 mld is being filtered at present and capacity of water works is under utilised. It is expected after cleaning of infiltration well its discharge may increase which has decreased from 5.34 mld to 1.94 mld at present.

### ***Pumping System***

Nainital water supply is based on a complex system of pumping. From the spring source, aq pipeline goes towards Tallital distribution, mainly to public standposts. From the infiltration well, and from two lakeside tubewells, water is pumped to a ground reservoir in the water works. This reservoir also receives water from Pardardahara spring. From this reservoir water is pumped to rapid gravity filters. The filtered water goes to a CWR, also located in the water works. From this CWR, water is pumped through different zones through a large array of 17 pumps - which is basically a set of 8 groups. Each group has one duty and one standby to pump water to 8 main service reservoirs. It may be noted that some of these service reservoirs could be grouped to reduce the number of pump-sets.

Water from the tubewells are pumped directly to a reservoir (capacity 1360 kl) located in the *Flats*. There is a pumping station close to the reservoir, from which water is pumped to 5 zones. The heads of pumps vary; pumps to Ratan cottage high zone have 275 m head. Four other rising mains deliver water to (i) Sherwood, (ii) Zila Parishad, (iii) Birla Mandir, and (iv) Polytechnic zones. Further, local storage reservoirs may also be needed for particularly high elevation areas. This way energy saving can be accomplished.

### **Distribution System**

Geographically the entire town is covered by the water supply network but with some missing feeder and branches to convey treated water to certain pockets.

There are 20 Over Head Tanks (OHT) / Clear Water Reservoirs (CWR) serving the water supply system within the municipal limits. The combined storage capacity of these OHTs and CWRs is 5754 kl against a total supply of 14.32 mld (without losses) i.e. about 40% of the gross total supply, which is sufficient to cater to the present demand. The demand of water in 2021 would be 18.26 mld for which the required reservoir capacity with 10 hours storage would be about 7600 kl. Thus it will fall short by 1846 kl. Taking into consideration that one 900kl reservoir is under construction, there would be need to provide 946 kl storage. The locations of the storage tanks need to be examined during DPR stage.

The total length of distribution network in the town is 200km in addition to 25km of rising mains from 8 tubewells. The old and dilapidated pipe lines in the old city area also give rise to frequent problems in service. Repairing of these pipelines also poses various problems to the traffic circulation of the town. Therefore, the old and dilapidated pipelines need replacement.

There are 4152 domestic water connections. Total number of houses as reported by NPP is 5631. This means about 74% of the houses have water connections, which does not seem to reflect actual position. In addition there are 916 commercial connections and 138 community standposts provided from the network. Families living in slums (21%) and households belonging to the economically weaker section use standpost supply in a ratio of about 20 houses per standpost. There are 916 commercial connections and 138 community standposts provided from the network. In addition there are 916 commercial connections and 138 community standposts provided from the network. The level of service in respect of supply hours is non uniform. Generally, the supply hours in various areas vary from 6 hours to 24 hours.

### **Zones**

Nainital has been divided into 5 zones based on the elevation of various areas as shown in the Table 3.4.2.

**Table 3.4.2: Gravity Zones for Water Supply**

S. No.	Name of zone	Elevation (m)
	Gravity zone	1935 & below
	Lower zone	1935 – 1980
	Middle zone	1980 – 2040
	High zone	2040 – 2150
	Upper high zone	2150 & higher

Gravity zone, situated around Tallital between Haldwani and Bhowali Road is the only zone where water flows under gravity from the Water Treatment Plant near fire brigade station at Mallital. Pumping is required in all other zones, as described earlier. Map 3.4.1 shows the various zones of water supply in Nainital.

Pressure difference is quite high in almost all the zones resulting into unequal distribution of water. Break pressure tanks can be provided to bring the pressures within reasonable limit.



### **Unaccounted for Water (UFW)**

No proper investigation and study have been conducted to determine a reasonable figure of Unaccounted for Water (UFW) in Nainital. The UPJN/UJS could however agree from their day to day experiences that line and production losses of water may be up to the extent of about 30%. The actual UFW may however be more than this. Some of the major reasons for high UFW are as given below.

- Open zone boundaries allowing water to flow free from high pressure zones to low pressure zones resulting in some areas getting water supply for long hours beyond supply period developing a tendency of wastage and misuse of water. As given above the pressure difference in a single zone is as high as 110 m which is too high
- Some of the existing old pipelines have the potential to frequent breakdown and leakages
- General leakage from joints and valves in the distribution system
- Production losses due to reduction in efficiencies of old aging equipment and filter beds in the water works
- Unauthorized tapping and duplicate connections
- Wastage through the stand posts by removal of taps
- Non recording of connections and consumption
- Missing revenue collection from certain consumers
- Tampering with the ferrule sizes (i.e changing a smaller ferrule by an unauthorized bigger ferrule)

Considering all these major causes that are prevalent, the total UFW is estimated to be not less than 30%.

### **Population**

The estimated population of Nainital in 2006 is 45320. Total tourist, institutional and visitor population in the town has been estimated at 57,120 (see Annex 3.1.1). The estimated population in 2006 is shown in Table 3.4.3 below:

**Table 3.4.3: Estimated Population**

S. No.	Categories of Population	Population (2006)
1	Permanent Population	45,320
2	Tourist Population	35,700
3	Institutional population in colleges, university and other institutions	16,320
4	Daily visitor to Nainital as district headquarter	5,100
	Total	1,02,440

Of the total, 57,120 is the floating population. A uniform rate of supply of 135 lpcd has been considered for the resident population. For the floating population, a reduction factor has been assumed @ 0.5 over the rate of 135 lpcd to take care of overall range of tourists, institutional demand and daily visitors. Details of assessment of water demand are presented in section 7.3.

### **Water Quality**

The total hardness of lake water and tubewell is found to be 390 and 340 respectively which is slightly higher than the desirable limit of 300 mg/l (as CaCO<sub>3</sub>). Other water quality parameters are all within permissible limits. GoU has already sanctioned a water softening Plant of 10 mld capacity which is under construction. By 2021 one more such plant would be needed.

Chlorination through bleaching powder solution is done in the reservoirs. Available data from UJS show that quality of water is satisfactory.

There is sometimes deterioration in the quality of water at times due to malfunctioning of the system. Many of the old leaking pipes may contribute to such deterioration in quality.

### **Operation and Maintenance**

UJS bears the responsibility of maintenance of water supply system. During the study, field visits were made and detailed discussion were held with consumers (primarily citizen of Nainital Nagar Palika Parishad area) and officials of both UJS and UPJN. The findings related to O & M are:

- Lack of standby power generation system to make up frequent interruptions in power supply.
- Low efficiency of old pumping machineries (requiring replacement).
- Lack of adequate data base on transmission & distribution system. There exists no drawing / map of distribution system, which is the basic information needed.
- Many rising mains are tapped and used as distribution main leading to large scale drop in pressure, wastage of energy and disruption in supply.
- The UFW rate is believed to be high resulting in large revenue losses.
- Low tariff and absence of metering contributing to large scale wastage; UJS has little or no means to control such wastage.
- Zones are generally interconnected with each other, resulting in uncontrolled transfer of water from zones in higher ground elevation to those in lower ground deviation.

### **Summary of Present Status of Water Supply System**

The following Table summarizes the present status of water supply system.

**Table 3.4.4: Present Status of Water Supply (2005-06)**

S. No.	Item	Quantity
1.	Total Permanent Population in Municipal Area	45,320
2.	( Tourist Population + Institutional population + Daily visitors)	57,120
3.	Estimated households	10000
4.	No. of Households	5631
5.	Total No. of Domestic Connections.	4152
6.	Total No. of Commercial Connections.	923
7.	Total No. of standpost	130
8.	Total Length of Pipeline	200km

S. No.	Item	Quantity
9.	Total Nos. of Storage Tanks (OHT/CWR)	20
10.	Total Capacity of Storage Tanks (OHT/CWR)	5754kl+900kl under implementation
11.	Total No. of Tubewells	8
12.	No. of Infiltration well	1
13.	Estimated line & production losses	30%
14.	Present (2006) estimated rate of per capita water supply reaching consumers	135.7 lpcd
15.	Total Length of rinsing main	25km

### **Key Issues**

Based on the above situation analysis, the following emerge as the key issues facing water supply system:

- Lack of adequate data base and maps on transmission and distribution system network
- Zones being open, water of one zone freely travels to other zones
- Although overall rate of supply is satisfactory, unequal distribution of water results in acute shortage in several localities, while some areas have plentiful.
- Excessive difference of pressures in a single zone
- Deterioration in quality of water at times
- Inefficient network hydraulics with respect to tapping, pumping and balancing storage tanks causing lack of pressure / very high pressure
- In the intermittent supply system the tendency of the consumer is to keep the taps open throughout the supply increasing the peak factor and raising the chances of wastage of water
- The old and dilapidated network develops leakages most of which are buried under roads and remain undetected. This results in entry of polluted water into the pipes when supply is closed
- Lack of standby power generation system at Tubewell Head works as interruptions in power supply happen quite often
- Low efficiency of old pumping plants
- Many rising mains are tapped and used as distribution main leading to large scale drop of pressure, wastage of energy and disruption in supply
- Growth in demand in high density areas with which the existing diameters of pipeline cannot cope
- The cost of water recovered is many times lower than its production cost

### **3.4.2 Sewerage and Sanitation**

#### **Coverage of Sewerage Network**

A skeleton sewerage system was laid in Nainital in the beginning of 19<sup>th</sup> century. During 1940-1950, a main sewer of 300 mm dia was laid on Mall road and outfall sewer of 300 mm dia was laid on Nainital-Haldwani road. The sewage was disposed into ravines near Rusi village about 3 km from Talli Tal, in a valley on southern side of the main road named as Ghati. Some branch sewers were laid in different parts of the town during the period 1940-1960.

Growth of urban population and inadequate sewer system led to the problem of overflowing of sewage in stormwater drains ultimately discharging into Nainital

Lake. To resolve the problem of pollution in the lake, the state government constituted in late seventies, a high level expert committee, in a hill development department to evaluate the problem of pollution and silting of lake. The committee recommended the reorganization of trunk and outfall sewers, branch sewers and new laying of sewers. As a result, trunk and branch sewers were laid from time to time and two pumping stations for the interception of sewage from low lying areas were constructed.

In 2002, a new project on Nainital Lake Conservation was taken up with assistance from the Gol. In the project, almost all the area discharging wastewater to the lake was covered and intercepted by sewerage system. Additionally, 5 + 5 MLD STP (Phase I & II) are proposed to be constructed before discharging the sewage to Rusi village for irrigation. At present phase I, 5 MLD STP is under construction.

Based on the topography of the town and the need of STP's, the city is divided into 4 zones.

Zone I: Nainital Lake Catchment Zone

Zone II: Sukha Tal Zone

Zone III: Narayana Nagar Zone

Zone IV: Hari Nagar-Krishnapur Zone

**Table 3.4.5: Characteristics of Sewerage Zones**

Zones	Municipal Wards Covered	Permanent Pop (2006)	Floating Population (Tourists + Guests) (2006)	Sewage Generated (in mld)	Area Covered	Remarks
Zone I Nainital lake Catchment Zone	50 % of 1&4, 2, 6, 7, 8, 9, 10,11, 13, 14, 15, 16, 18, 19, 21	26005	3467+13003	5.0	Half of Staff House Ward and Ayar Pata Wards, Allahabad Bank, Gadi Parav, Snow View, Raj Bhawan, Alma House, Ramjay, Sher ka Dianda, nainital Club, Awagarh, Upper mall, Naini Devi, Naya Bazar, Boat House & Malli Tal Wards	The area is fully covered with sewerage system. At present total collected sewage from zone I (5 MLD) and zone II 1.5 MLD is being disposed off near Rusi village. A 5 MLD primary sewage treatment plant is under construction. Old sewer network require augmentation.
Zone II Sukha Tal Zone	50 % of 1, 50 % of 4, 12, 17 & 24	8710	1161+4355	1.5	Half of Staff house and Ayar Pata wards, Sainik, Balrampur & Sukha tal wards.	The area is fully covered with sewerage system. In order to reduce the load to the proposed STP near Rusi Village,



Zones	Municipal Wards Covered	Permanent Pop (2006)	Floating Population (Tourists + Guests) (2006)	Sewage Generated (in mld)	Area Covered	Remarks
						the sewage of this zone is diverted to the new proposed Sukha Tal STP. Old sewer network in this zone require augmentation.
Zone III Narayan Nagar Zone	3	1457	194+726	0.3	Narayan Nagar	The whole area of the zone is outside the catchment of the lake in which no sewer lines have been laid as yet.
Zone IV Hari Nagar-Krishnapur Zone	5,23, 25, 22, 20,18	8828	1177+4414	2.0	Hari Nagar, Krishna Pur, Tallital Bazar, Sipahi Dhara, Rais Hotel, naya Bazar	The whole area of the zone is outside the catchment of the lake in which no sewer lines have been laid as yet.

\*Calculations of sewage flow is based on 80 % of water supply rate of 135 L/c.d for total population.

### Service Levels of Sewerage Systems

Service levels for sewerage collection and treatment are satisfactory. Out of the total 8 MLD sewage generated by 45,000 permanent, 6,000 tourist and 22,500 guest population at peak period, almost 82% collected by sewerage system and rest 18 % is treated by individual septic tanks. A detailed calculation of present and future sewage generation is provided in Annexure 3.4.1.

**Table 3.4.6: Service Levels of Sewerage System**

Details	Units (MLD)	Remarks
Water Supply	14.3	
Actual Water Reached to Consumers	10	30 % distribution Loss
Sewerage generated	8	80 % water consumption.
Sewage Collected	6.5	82 % sewerage & rest 18 % is treated by individual septic tanks
Gap in treatment capacity	3	5 MLD STP Under construction

### Treatment and Disposal of Sewage

At present there is no STP taking care of Nainital sewage. At present 5 MLD primary sewage treatment plant is under construction near Rusi village to cover the gap in treatment capacity of 3 MLD.

However at present, new sewerage schemes are needed to increase the coverage and treatment to 100%. In addition, augmentation of old sewer network is required. Details of calculations of proposed schemes are provided in Annexure 3.4.1. Sewerage zones and location of STP is shown in Map 3.4.2.



### **Key Issues**

In the proposed scheme, the coverage is to be increased to 100% collection and treatment of sewage. However, there is no information available on the mapping i.e., length and diameters and profile of the existing sewerage system, therefore a GIS and AutoCAD based software assisted database of the existing system is needed. The mapping database would be very useful in implementing proposed schemes for sewerage.

At present, algal bloom is clearly seen in the Nainital Lake depicting the trophic status -eutrophication. Apart from the collection of all sewage falling into the lake, suction of benthic material and aeration of lake water are still to be implemented under the Lake Conservation Project. However, if eutrophication is not controlled, a detailed lake water quality and balance studies are needed to formulate action plan for lake conservation.

Community should be encouraged to use public conveniences (pay and use category) with community involvement in the maintenance of the sewerage system. It is observed that currently sewerage is not covered by way of user charges; only sewerage service charges are collected as part of property tax.

A strategy is to be formulated for 100 % treated sewage and sludge reuse for agriculture, horticulture, and purposes like recreational parks.

New technologies such as Intermittent cyclic or Sequencing Batch Reactor Activated sludge process are needed for proposed small scale STP's. The main criteria of selection of these technologies are the high effluent quality, low land requirement, no odor, vector or nuisance control and low operation and maintenance cost.

### **Existing State Of Sewage Pumping Stations and Sewage Treatment Plants**



Existing Mall Road Trunk Sewer & Rusi Outfall (Zone I)

The main problems of the natural drainage system are man made, which can be listed as below.

- Dumping of garbage and all kind of solid waste in to the drains.
- Unauthorized cutting of slopes for construction of houses, creating a danger to the stability of the hills and disturbing the drainage system.
- Obstruction to the natural flow by encroaching upon the drains by construction of houses.
- Floating material like plastics, paper etc, find their way in to the lake in the absence of fine screens

- One of the biggest drains having its outfall near Naina Devi Temple flows continuously even in dry season, indicating its connection with some natural source and a possibility that domestic waste water finds its way in to it. The test results of raw water of lake show presence of colliform organism in the lake.
- Many of the road side drains have been trapped into sewers which need detailed investigation.
- Non existence of fine screens.
- Coarse Screens do not have cleaning platforms.

### 3.4.3 Storm Water Drainage

#### **Rainfall**

Average annual rainfall in Nainital is 2583.3 mm. Maximum rainfall occurs normally in the months of July and August which accounts for nearly 50% of the total of annual rainfall.

#### **Topographical Features**

Nainital is situated mainly on the slopes of hills which are surrounding Nainital lake spread over 132.5 acres.

The Sher Ka Danda and Naina Peak in the north, spread from west to east slope towards south i.e. in the direction of the lake. In the west is Chorkhet and Babuliya village and in the south is Raj Bhavan and Ayarpatta, hill ranges all sloping towards the lake. A stream named Baliya Gadhera flows in the east which carries the surplus water of the lake.

These hills are unstable and many land slides have caused havoc in the past. New Construction in most of the hills are prohibited yet unauthorised commercial as well as domestic construction continue, posing danger to the natural drainage system as well as the stability of slopes.

As per the Old records there were 62 nos. of major drains as given Table 3.4.7.

**Table 3.4.7: Details of Storm Water Drains**

S.No.	Drains	Total
1	No. of main drains discharging in to the lake	40
2	No. of drains discharging in to Sukhtal	14
3	No. of drains discharging into baliya Nala	8
	Total	62

But the present records of PWD who is maintaining the drains, enlist only 51 drains.

#### **Drainage System**

The catchment area of Nainital lake forms the major part of municipal area. Most of the drains emerging from the hills surroundings the town are falling in the lake. Other drains outside the lake catchment area have their outfalls in sukhtal.

Practically the whole town, wherever roads or brick pavement exist, have some or the other kind of side drains leading to storm water *nallas*, except in slums or

some parts of peripheral areas. However many of the drains need cleaning, repairs and remodelling. In addition to this there are lanes and roads in the town which are still kuchha. The total length of kuchha roads is about 6.84km. There are all together 25.94 km of roads under Nainital Nagar Palika, in addition to about 49 km roads under PWD. The break up of roads is given Table 3.4.8 below.

**Table 3.4.8: Type of Roads**

S.No	Name of Departments	Length in Km
1.	State PWD	55.15
2.	Central PWD	4.0
3.	Nagar Palika	25.94
	Total	85.09

### ***Situation Analysis***

#### **Main Storm Water Drains**

Most of the storm water drains carrying rain water from the top of hills, with very steep slopes, develop very high velocities. To cut the velocity and to arrest the debris and boulders, catch pits and cross walls play a critical role. With the increase in the construction activities more and more grit, clay and boulders are likely to come down the hill. Due to conversion of vegetated land into built-up area of the catchments, the run off has also increased substantially. It is important to ensure that the carrying capacity of these drains is able to cope with the increased run-off.

#### **Road Side Drains**

During the field visits it was observed that discharge of many roadside drains are obstructed due to encroachment; high gradient leads to correspondingly high velocity in the drain. This often leads to hydraulic jump, causing overflow on the roads. Also, flow from sewers overflow through manholes onto roads. All these arise because of blockages in drains and sewers in rains when high velocity occurs.

The connection between sewers and stormwater drains exist all over the towns and is one of the main causes of pollution of Nainital Lake. This problem has been acknowledged in the Lake Conservation Plan. The work of disconnection of drains from the sewers at 36 points all over the town has already been taken up under the Lake Conservation Programme.

### ***Key Issues***

Apart from keeping the drains in proper shape by efficient maintenance and regular cleaning of screens and catchpits following measures are essential to be taken.

- Need for repairs and reconstruction of drains in critical sections.
- Need for additional crosswalls and catchpits.
- Non existence of screens at outfalls.

- Non availability of cleaning platforms at coarse screens.
- Removal of obstruction in the road side drains.
- Disconnection of side drains from sewers.

### 3.4.4 Solid Waste Management

#### ***Municipal Solid Waste Generation***

The quantity of MSW generation for the city varies during peak and non-peak tourist period due to variation in the number of tourist population. According to the Nainital Nagar Palika Parishad (NNPP) estimate the total daily MSW generation ranges between 12 MT to 18 MT during peak and non-peak tourist seasons. The major sources of MSW generations are domestic, hotels & restaurants, shops and commercial establishments, institutions, fruit and vegetable markets and construction rubbish.

#### ***Waste Composition***

NNPP has carried out MSW composition for the city through the IIT Roorkee. The result of the analysis is given in Table 3.4.9.

Analysis was done on weight basis. The above result suggests that the city waste has a very high composition of inert matter (52.4%). Recyclable waste contributes about 22% including 4% plastics. Composition of organic substances is only 16%.

**Table 3.4.9: Composition of MSW in Nainital**

Constituent	Composition (%)
Paper and Cardboard	12.41
Cloths & Rags	4.16
Polyethylene/Plastic	4.16
Metal	1.14
Glass	3.14
Wooden Waste	1.18
Stones	9.12
Fruits & Vegetable Waste	12.15
Inert Waste	52.54

Source: DPR for Conservation and Management Plan of Nainital Lake

#### ***Collection, Storage and Transportation***

No primary collection exists in the present solid waste collection system. Solid waste is collected either through community bins/containers and open collection points or by street sweeping. Municipal Corporation sweepers and sanitary workers engaged by the Mohalla Swachhata Samities sweep solid wastes from the streets and accumulate the collected waste into small heaps and subsequently loaded manually or mechanically onto the solid waste transportation vehicles for onward transportation to the disposal site. The present collection and transportation system involves multiple handling of solid waste. The existing solid waste transportation vehicles do not have access to about 40-50% areas and thus these areas remain unattended. Wards 3, 4, 6,8,10 and 11 are inaccessible to vehicles. A significant part of the waste generated finds its way into the storm water drains and hill slopes. There are 15 handcarts which are mainly used for collection of waste from the mall road.

Mohalla Swachhata Samity (MSS), comprising of a group of residents, has been formed to engage private sweepers for door-to-door primary collection of waste from the area and to keep the area clean. Two such MSS have been formed to cover Narayan Nagar and Krishnapur areas. However, it is reported that these MSS are not performing satisfactorily.

There are two major hospitals in Nainital - BD Pandey Hospital for male and Ramsey Hospital for female. It is learnt that BD Pandey Hospital has its own autoclave for treating bio-medical wastes whereas bio-medical wastes generated from other medical establishments are transported to Sushila Tewari Medical College at Haldwani by private agency for incineration. There is no major waste generating industry within the city.

Secondary storage of solid waste is done by means of community containers having capacities of 4.5 m<sup>3</sup> and RCC bins. 42 such containers and 15 RCC bins are placed at different locations (also called collection points) of the city for secondary storage of solid waste. NNPP presently utilizes the following vehicles and equipment for transportation of solid waste.

**Table 3.4.10: Vehicle/Equipment Presently Used by NNPP**

Type of Vehicle/Equipment	Quantity
Dumper placer machine	2
Tipper truck	1

Source: Nainital Nagar Palika Parishad

All the three vehicles are owned by the NNPP, and are in running condition. NNPP claims that about 60 percent of the waste generated is removed everyday. There is no facility for weighing the loaded vehicles before disposal for assessment of the quantity of solid waste disposed everyday. The assessment is based on the number of trips each vehicle makes per day and the loading capacity of the vehicle. NNPP does not have any workshop for repair of its vehicles. Vehicle repair works are carried out through outside agencies.

### ***Waste Disposal***

The existing solid waste disposal site is located at Hanumangarh, about 2 km from the city on Nainital-Haldwani road. Solid waste is dumped on the site down the hill slope. No process of the solid waste is in practice. Land for the proposed disposal site has yet to be identified. The location of existing solid waste disposal sites is shown in Map 3.4.3.

### ***Institutional Setup***

Health Department (HD) of NNPP is responsible for solid waste management of the city. The Senior Health Officer heads the department. Chief Sanitary and Food Inspectors, Sanitary and Food Inspectors and Supervisors support him.

NNPP has divided the 11 municipal wards (Map 3.4.3) into 3 SWM Circles, namely, Mallital, Malroad and Tallital for better management of solid waste. Wards covered under each SWM Circles are presented in Table 3.4.11.



# NAINITAL CITY DEVELOPMENT PLAN

MAP 3.4.3 :- SWM Circles & Existing Disposal Site

- Legend**
- Municipal Boundary
  - State Highway
  - Major City Road
  - Ward Boundary
  - Lake / River / Drain
  - Circle - 1 (Mallital)
  - Circle - 2 (Mall Road)
  - Circle - 3 (Tallital)
  - Existing Solid Waste Disposal Site



## Data Source

- Nainital Nagar Palika Parishad

UTTARANCHAL URBAN DEVELOPMENT PROJECT  
GOVERNMENT OF UTTARANCHAL

Base Map prepared from Nainital Guide Map (Survey of India) & Nainital Master Plan 2011



**Table 3.4.11: Wards Covered Under SWM Circles**

S. No.	SWM Circle	Total Wards	Municipal Wards
1	Mallital	4	4,5,6 and 7
2	Malroad	3	1,2 and 3
3	Tallital	4	8,9,10 and 11

Source: Nainital Nagar Palika Parishad

Present status of the staff strength of the Public Health Department is shown in Table 3.4.12.

**Table 3.4.12: Present Staff Strength of Public Health Department**

S.No.	Post	Sanctioned	Filled	Vacant
1	Senior Health Officer	1	1	Nil
2	Chief Sanitary & Food Inspector	1	Nil	1
3	Sanitary & Food Inspector	2	1	1
4	Clerk	3	3	Nil
5	Driver	2	2	Nil
6	Cleaner	2	1	1
7	DDT Gang	6	2	4
8	Sr. Sanitary Supervisor	3	3	Nil
9	Sanitary Supervisor	17	17	Nil
10	Sweeper	261	249	12

Source: Nainital Nagar Palika Parishad

### Key Issues

The major issue of the SWM is non-compliance of the Municipal Solid Waste (Management & Handling) Rules, 2000 by the NNPP. NNPP has failed to comply with the rules in all aspects of SWM i.e. collection, storage, transportation, processing, disposal of MSW of the city and the Institutional Reform. Other important issues along with the deficiencies in the present SWM system are:

- **Segregation of waste at source:** At present, there is no segregation of waste at source.
- **Primary Collection of waste:** There is practically no primary collection of MSW. Present collection system is irregular, ineffective and inefficient. A significant part of the waste is left unattended. This waste not only degrades the environment but also blocks storm water drains and pollute the Naini Lake.
- **Community and Private Participation:** Although NNPP has initiated community involvement by forming MSS for primary collection of waste; a lot of improvement is necessary in the level of services.
- **Improvement in SW Transportation system:** The present SW transportation system lacks:
  - Proper routing of vehicles for transportation of waste to the disposal site.
  - Inadequate and proper vehicle and equipment
  - Modern record keeping and communication facilities
- **Safe Disposal of Waste:** A part of the solid waste generated is disposed into open lands, streets, surface drains, hill slopes etc and sometimes burnt in open causing health hazards, public nuisance and degradation of environment

and aesthetics. The existing solid waste disposal site has the following major shortcomings:

- The disposal site was selected without fulfilling the site selection criteria
- Disposal is by crude dumping of waste. There is no scientific landfill.
- Unsegregated waste is disposed in the site without any processing.
- No monitoring of level of pollution at the disposal site including pollution due to leachate.
- Lack of basic infrastructural facilities such as fencing, proper road, office building, and vehicle/equipment shed etc.

NNPP has not identified any land as an alternative disposal site for the city.

- **Health and Hygiene of Sanitary Workers:** Under the present SWM activities manual handling of waste is involved starting from collection up to the disposal of waste. During the process, the sanitary workers are exposed to the waste. No protective measures have been taken for safety, health and hygiene of these workers who are vulnerable to the health hazards.
- **Public Awareness:** No major initiatives have been taken so far by the NNPP to educate people on the ill-effects of haphazard disposal of solid waste.

### 3.4.5 Roads and Transport

#### ***Road Network, Junctions and Traffic Management***

##### **Existing Situation – Road Network**

The city is connected to other parts of the states and other states through the following roads:

- National Highway No. 87 connecting Rampur (Uttar Pradesh) with Nainital. It connects Lucknow, Bareilly and other parts of UP, Delhi, Rajasthan, Haryana, and other parts of India.
- Doraha – Bajpur – Kaladungi – Nainital State Highway No. 13 which connect Dehradun, Haridwar, Garhwal region of Uttarakhand, Moradabad, Dhampur, Najibabad and other western part of UP, Punjab, Haryana.
- Nainital – Bhowali Road, which join National Highway No. 87 E (Jyolikot – Almora – Ranikhet - Karanprayag) near Bhowali. This road connect Almora, Pithoragarh, Bageshwar and Garhwal portion of Uttarakhand State. Through this road other important tourist places of Kumaon region e.g. Mukteshwar, Kaushani, Ranikhet, Munsiyari are connected with Nainital.

Nainital City comprises of 85.09 km of roads of which 25.94 km (160 nos.) are maintained by NNPP and 59.15 km (51 nos.) including 4.0 km National Highway are maintained by PWD. The traffic carrying capacities are low due to limited widths, intense land use and encroachments.

##### **Roads Maintained by NNPP**

Out of 160 roads with total length of 25.94 km maintained by NNPP, 24 roads (length 7.26 km) are kharanja, 4 roads (length 1.51 km) are kutcha, and remaining 132 roads (length 17.17 km) are cement concrete road. Almost all roads do not have railing for the safety of road users. Most of the roads under maintenance of Nagar Palika are of small length even as less as only 15 m. The roads having length more than 0.50 km are only 6:

1. Pitaria Tall Bar to Narain Nagar Motor Road	-	1.242 km
2. Killberry Motor Road to Cheena Chungi	-	0.615 km
3. Alma House to Kahala Garden School	-	1.050 km
4. Jublee Graph to Middle Cheena Mall lake view	-	0.555 km
5. From House of A R Khan to Krishanpur Golghar Bend	-	0.780 km
6. From Ganga Sati Avas to Hocky Chungi State	-	0.650 km

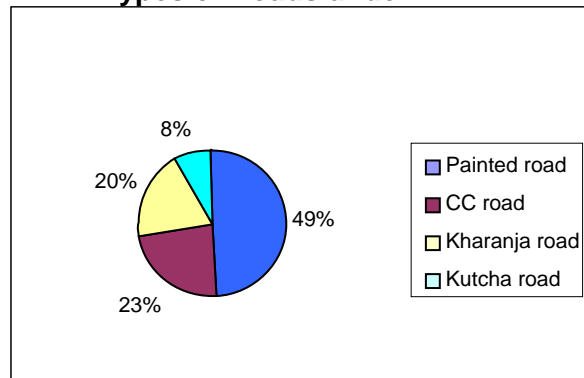
#### Roads maintained by PWD

Out of 51 roads of 59.15 km length, which are maintained by PWD, 10.17 km roads are kharanja road, 2.15 km are cement concrete road and 5.33 km are pucca roads. Remaining 30 roads with length of 41.51 km are painted roads. Most of the roads having length more than 0.5 km.

**Table 3.4.13: Status of Roads**

S. No.	Type of Road	Length in km		
		NPP	PWD	Total
1.	Painted road	-	41.50	41.50
2.	CC road	17.17	2.15	19.32
3.	Kharanja road	7.26	10.17	17.43
4.	Kutcha road	1.51	5.33	6.84
	Total	25.94	59.15	85.09

**Types of Roads under PWD**



The core network of the roads within city consists of following main roads, which are under the maintenance of PWD: 1. Upper Mall Road; 2. Lower Mall Road; 3. Middle Cheena Road; 4. Upper Cheena Mall Road; 5. East Laggan Road; 6. Osley Road; and 7. Upper Ayarpatta Road.

#### Junctions

It has been observed that junctions have not been designed properly i.e. 1. No proper channelisation for the free left turn; 2. Lack of footpath on approaches of the junctions; 3. No planned pedestrian Zebra crossing; 4. Haphazard parking on the junction approaches; and 5. Lack of proper signalling system as per the requirement for the smooth traffic movement.

On the basis of observation, discussion with Traffic Police Personnel, NNPP and PWD Engineers, mainly following junction are having above short comings: 1. Tallital Bus stand; 2. Mallital Rickshaw stand; 3. Municipal Council; 4. Junction

near Masjid; 5. Telephone Exchange; 6. Manu Maharani; 7. Sherwood (Ramsay Road – Middle Ayarpatta Road).

### **Existing Situation – Traffic Flow, Congestion and Management**

Following are the causes for traffic congestion: Inadequate width of the road; Encroachments; Street hawkers; Unplanned on-street parking; Heterogeneity of traffic; Pedestrian flow; Improper turning of traffic; Lack of traffic signages, road marking, guard rail etc.; Lack of enforcement of traffic rules; Poor road geometrics; and Inadequate side protection barriers.

The floating population in the town in comparison to its population is very high. Similarly vehicular traffic flow is also very high. Mostly all roads are having 2-way traffic movement. There is large numbers of pedestrians and Rickshaws on Upper, Lower Mall Roads.

To counter the increase in vehicular traffic on the limited road space in the town, a number of traffic restrictions are enforce. Mall road is declared as a No-parking zone right from Tallital Bus Terminal till Mohan Co. in Mallital. Entry of Heavy Vehicles is allowed only between 10 pm and 7 am and 1330 pm to 1330 pm (1230 pm for Buses). During summer peak season, all vehicles, including Rickshaws are banned on the Mall Road between 6 pm to 9 pm when it is an exclusively pedestrian zone.

### **Transport System Characteristics**

In 2001 the estimated motor vehicles in Nainital was 3,650. Of these 600 were private cars, 500 were taxis, 2,500 were two wheelers while 50 were buses and trucks.

As per RITES study (2001) projected traffic volume is shown in Table below

**Table 3.4.14: Projected Traffic Volume in Summer Peak Seasons**

S. No.	Name of Road	Daily		Peak Hours			
		2011	2021	Morning		Evening	
				2011	2021	2011	2021
	Outer Cordons						
1.	Haldwani Road	5470	6805	605	750	575	715
2.	Bhowali Road	4125	5135	400	500	350	435
3.	Kaladungi Road	1835	2280	340	420	220	275
	Screen Lines						
4.	Mall Road	20900	26000	2305	2870	2225	2770
5.	Ramsay Road	3340	4160	265	330	465	580
	Mid Blocks						
6.	Mall Road Chungi	9530	11860	840	1050	940	1170
7.	Mid Cheena Road	2980	3710	310	285	225	280
8.	Lower Kaladungi Road	9365	11165	880	1095	865	1075
9.	B D Pandey Hospital	6355	7905	520	650	600	745
10.	East Laggan Road	2225	2770	330	415	195	240
11.	Mid Ayarpatta Road	2425	3015	425	530	180	225
	Inter Sections						
12.	Hotel Evelyn	23680	29460	2195	2730	2070	2575
13.	Tallital	13230	16465	1335	1660	1225	1525
14.	Nagar Palika	12575	15650	1070	1330	1185	1475

S. No.	Name of Road	Daily		Peak Hours			
		2011	2021	Morning		Evening	
				2011	2021	2011	2021
15.	Masjid	10910	13570	1060	1315	950	1180
16.	Telephone Exchange	9960	12390	980	1220	890	1110
17.	Sherwood Ring	3380	4205	530	660	275	340

### ***Pedestrian Volume Demand***

RITES carried out survey in 2001. On the basis of growth of tourist arrival the projected pedestrian traffic for 2011 and 2021 summer peaks seasons is shown in Table below:

**Table 3.4.15: Projected Pedestrian Count in Summer Peak Season**

S. No.	Name of Road	Daily		Peak Hour			
		2011	2021	Morning		Evening	
				2011	2021	2011	2021
	Mallital						
1.	Mall Road (Rickshaw stand)	30955	35360	2545	2905	2945	5650
2.	Flats Entry	35505	40560	2640	3015	6560	7490
3.	Bara Bazar Road	37460	42790	2505	2860	6660	7610
4.	Behind Ashok Cinema	14645	16730	1100	1260	1950	2225
5.	Modern Book Store	19170	21895	1380	1580	2430	2775
6.	B D Pandey Hospital	20890	23860	1610	1835	2245	2565
7.	Allahabad Bank	18525	21160	2165	2475	1810	2070
	Tallital						
8.	Mall Road (Rickshaw stand)	19140	21860	2205	2515	2435	2780
9.	Bazar Road	25675	29325	2505	2865	2770	3160
10.	Bhowali Road	12835	14665	1720	1965	1645	1880
11.	Haldwani Road	8170	9330	1080	1235	830	950
	Ayarpata						
12.	Thandi Sarak – Talli	4320	4930	230	260	760	865
13.	Handi Sarak - Malli	2920	3335	210	240	470	535

### ***Existing Situation – Public Transport System***

No proper Intermediate Public Transport (IPT) facility is available in the city. Only Taxis are available which mainly do inter-city trips. Rickshaws are available for journey between Tallital Bus stand to Mallital Rickshaw stand near Gobind Ballabh Pant's Statue.

### ***Parking Demand Requirement***

The parking demand is directly proportional to the number of tourist arriving Nainital by their own vehicles. Though increasing number of such tourist would be staying at newer boarding accommodations being developed nearby Nainital e.g. Bhimtal and Sattal with adequate parking facilities. RITES study indicate parking facilities. RITES study indicate Parking Demand Requirement in the year 2011 and 2021 as follows:

• Projected Peak Season Daily parking demand in 2011 –	1800
• Projected shortfall in hotel parking supply in 2011 –	775
• Extra parking supply needed by 2011 –	350
• Projected Peak Season Daily parking demand in 2021 –	1925
• Projected shortfall in hotel parking supply in 2021 –	900
• Extra parking supply needed by 2021 –	475

### **Key Issues**

- Absence of road hierarchy and inadequate traffic carrying capacity. Most of the internal roads are single lane except few roads, rapid growth of vehicles and population (both permanent and floating) result in exceeding the carrying capacity on the road network.
- Lack of enforcement measures has further deteriorated the situation. Encroachment on streets by shop owner and vendors further reduced the width of carriage way.
- Basic problem of traffic movement along major arterial road network is the absence of alternative road network.
- Hindrance of pedestrian movement because absence of footpaths.
- Absence of adequate parking lots leading to haphazard on-street parking reducing road capacity thereby causing traffic congestion
- Lack of public transport system in the city has resulted in improper operation of Intermediate Public Transport Vehicles causing traffic congestion and pollution.
- Ineffective traffic control and management measures.
- Inadequate road infrastructure, side protection barriers and the safety issue.

## **3.5 Heritage and Tourism**

### **3.5.1 Background**

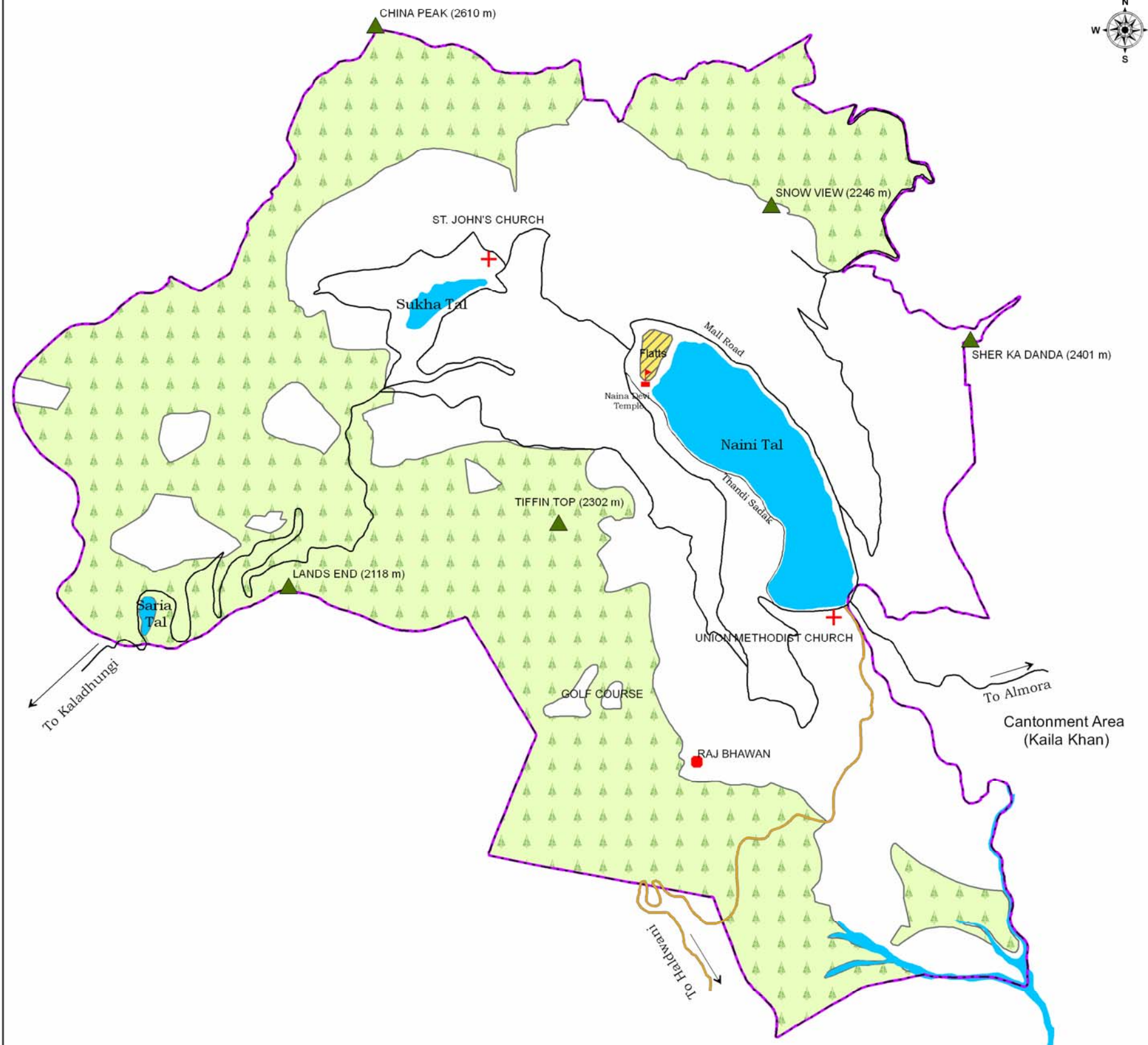
Nainital finds mention in Puranas, the ancient texts of Hindu, and mythology woven around it. The citizens have kept the traditions alive in the form of various religious fairs and festivals organised round the year.

With the advent of the British rule, the town of Nainital saw its physical formation in tandem with Colonial Architecture. In the 1960s, construction elements used by the Government institutions began to be accepted as the norm in Nainital as in other towns developed by the British.

Tourism as a 'quick buck' industry saw a huge boom beginning around 1905 and continuing even more aggressively today. This saw the mushrooming of hotels to cater to the ever increasing tourist population of the town. Construction of hotels has been primarily responsible for the transformation in built form of Nainital.

### **3.5.2 Built Heritage**

The Cultural Resource Mapping of Nainital District carried out by INTACH lists the important cultural and heritage resource. Nainital boasts of some of the most revered buildings such as Rajbhavan , High Court, etc. Other heritage structures in the city include churches such as St. Johns Church and Union Methodist Church. Some of the major tourist attractions are shown in Map 3.5.1.



Base Map prepared from Nainital Guide Map (Survey of India) & Nainital Master Plan 2011

## NAINITAL CITY DEVELOPMENT PLAN

MAP 3.5.1 :- TOURIST ATTRACTIONS

### Legend

Municipal Boundary	
State Highway	
Major City Road	
Lake / River / Drain	
Flats	
Forest	

0 0.5 1 1.5km

### Data Source

- Nainital Master Plan 2011
- Nainital Guide Map (Survey of India)

UTTARANCHAL URBAN DEVELOPMENT PROJECT  
GOVERNMENT OF UTTARANCHAL



The aggressive construction phase of the past decade permeated all aspects of life in Nainital. The cement-iron based development, with no effective design nor regulatory guidelines changed the character of this town. Repairs to old buildings, retaining walls and other elements changed the original building forms. This happened so because local labour discontinued work or was ignored due to migration of cheaper labour from the Indo-Gangetic plain. Quarries that provided material were closed down and this necessitated the use of 'foreign' material that had a different visual aspect. Dexterity in local building skills was ignored. Roof laying that was an art became a mere part of a 'cheaper work approach'. Limited Exposure Levels to design, materials and technologies, and low level of commitment to standards resulted in mediocre and even substandard physical growth of the town.

### 3.5.3 Cultural Heritage

Nainital has a rich tradition of religious fairs and occasions related to the positions of the stars. At the transition of sun from one constellation to another Sankranti is observed. Each Sankranti has a fair or festival connected to it somewhere in Kumoun. Nainital celebrates such occasions in an array of events organized round the year. The Uttaraini Mela at Chitrashila near Ranibag is observed on Makar Sankranti Day (Approx. 14<sup>th</sup> January). On Buddha Purnima Day, in the month of May there is festivity near Budhansthi, while Bhimtal observes Harela Mela on 16<sup>th</sup> or 17<sup>th</sup> of July. Nandashtami Festival is observed with full devotion in the district, fairs are organised at Nainadevi temple.



#### ***Heritage Conservation***

Heritage components in the city which needs conservation efforts are as follows:

- Culture and traditions of Nainital: Much of the original Nainital is not generally exposed to public consciousness. This 'exposure' can be achieved through an identification of the elements and local activities, weaving narratives around them and then presenting it to the public through diverse means that can be interpretation centres, experiential museums, walks, publications etc. New elements that draw from the towns history and efficient public service systems can be developed to impact public as well as policy makers
- Architectural elements: Roofing Pattern; Townscape; Buildings and areas of historical interest; Buildings and features of architectural interest; Wooden facades of houses; Street pavings; Water hydrants and spouts; Bridle paths
- Buildings such as Cemeteries, Churches and Old temple sites

### 3.5.4 Tourist Influx

There has been a steady growth in the number of tourists arriving in Nainital. During the year, tourist influx is reported to be maximum in the months of May and June. Tourist arrival, of both domestic as well as international tourists, in Nainital is given in the Table below. There are about 3000 rooms for tourist accommodation in Nainital.



**Table 3.5.1: Annual Growth in Tourist Arrival in Nainital**

Year	Indian tourist	Foreigners	Total tourist	% growth
2003	420016	4537	424553	
2004	478133	66277	484410	14.09
2005	510959	6789	517748	6.88

### 3.5.5 Tourism Development Policy

Master Plan states development of Nainital and surrounding lake towns with a clearly focus on tourism development (for details refer section 3.3). The Government of Uttarakhand has also adopted a clear mandate to develop tourism in the state as one of the primary economic development force. The Government feels that 'the unlimited tourism potential of Uttarakhand has not been fully realized in the absence of a planned and coordinated strategy of tourism development. The vision of tourism development is:

- to place Uttarakhand on the tourism map of the world as one of the leading tourist destinations, and to make Uttarakhand synonymous with tourism;
- to develop the manifold tourism related resources of the State in an eco-friendly manner, with the active participation of the private sector and the local host communities; and
- to develop tourism as a major source of employment and income / revenue generation and as a pivot of the economic and social development in the State.

The tourism development policy and action plan is given in the following sections.

#### **Strengths and Assets**

Uttarakhand is blessed with enormous resources for cultural, adventure, wildlife, nature and leisure tourism and a wide variety of entertainment and sporting activities which attract the modern tourist. Specific sectors identified for tourism development are as follows:

- Pilgrimage
- Cultural Tourism
- Natural Beauty
- Adventure Tourism
- Wildlife Tourism
- Eco-Tourism
- Amusement and Leisure Tourism

#### **Challenges**

- Augmentation of Infrastructure Facilities
- Winter/Year Round Tourism
- Target Group Oriented Tourism Development
- Development of new Tourist Destinations
- Promotion of Tourism Oriented Handicrafts Industry and Cuisine

- Publicity and Tourism Marketing
- Human Resources Development
- Tourism Administration and Management
- Lack of Private Sector Participation

### **Action Plan**

Tourism has the potential to become a mainstay of Uttarakhand's economy, and needs to be developed in a planned and time bound manner. Towards this end, the following thrust sectors have been identified:

- Strengthening of institutional framework.
- Infrastructure development.
- Enhanced private sector participation.
- Mobilization of resources - Human resources Development
- Publicity and marketing.
- Optimal development of pilgrimage tourism, cultural tourism, nature and eco-tourism, amusement and leisure tourism, corporate tourism, adventure tourism and promotion of tourism oriented handicrafts and souvenir industry.

### **3.5.6 Key Issues**

- **Lack of concerted efforts for heritage conservation:** A long term plan with a sustained financial plan is required to conserve heritage in Nainital.
- **Need to develop Nainital as regional tourist hub:** There is a need to develop efficient transport links to neighbouring tourist attractions and develop Nainital as regional tourist hub.
- **Untapped high end tourism:** Nainital has the potential to attract the high end tourists but the facilities and services will have to be upgraded to attract that section of tourists. Private sector participation to develop world class facilities and tourist attractions along with effective marketing will be required to tap into high end tourism in Nainital.
- **Untapped potential of adventure tourism:** There is further potential to develop opportunities for adventure tourism in and around Nainital which will attract tourists round the year.
- **Development and maintenance of good quality tourist infrastructure:** The accommodation facilities, road infrastructure, transportation and parking facilities, uninterrupted power supply and efficient civic amenities need to be upgraded to support the increasing number of tourists.

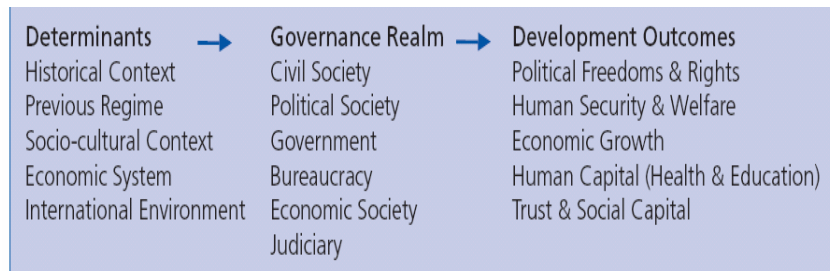
## 4. Urban Governance and Institutional Set-up

‘Good governance is perhaps the single most important factor in eradicating poverty and promoting development’

- UN Secretary General, Kofi Annan, 1998

### 4.1 Components of Governance

Thinking about how best to govern is not a new issue. ‘Governance’, as internationally acknowledged, stands for ‘the manner in which power is exercised in the management of a country’s social and economic resources for development’. Applied to local institutional analysis, governance has to be related to the management of a city or town’s social and economic resources for planned urban development. Governance refers firstly to processes – how things are done, not just what is done; and secondly, governance requires more than a focus on government. It also relates to the nature of relations between state and society. Governance refers to the nature of rules that regulate the public realm – the space where state and economic and societal actors interact to make decisions. However, it is important to make distinctions that are important for assessing the relationship between governance and development. Another challenge is that various agencies engage with governance in ways to fit their own specific mandates, and it is important to transcend these limitations - governance is contextual (see Figure 4.1). While it is possible to identify concepts and principles of governance that are universal, they make no sense without adequate contextual references.



**Figure 4.1:** Framework for Analyzing Governance & Development

The particular conditions of each place provide both constraints and opportunities to improve governance. It is also critical to recognize that there are multiple and complex relationships between governance and development. Better governance is positively associated with improved investment and growth rates. Government effectiveness, an efficient bureaucracy and rule of law are associated with better economic performance and adult literacy, and negatively associated with infant mortality. Corruption hinders development. On the other hand, some governance issues are seen a constituent of development itself.

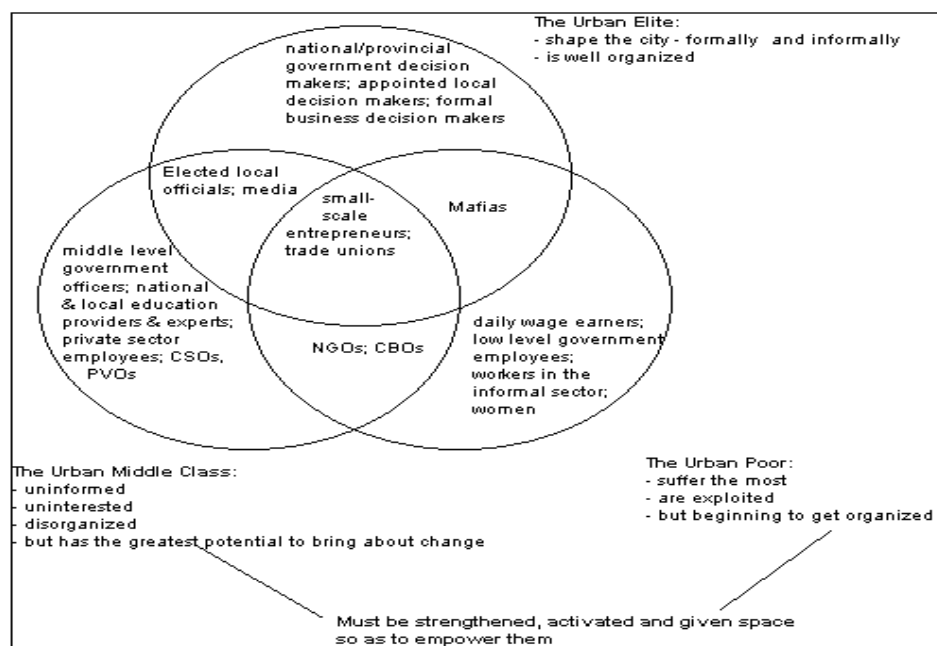
Four basic elements of ‘good governance’ are generally defined: (a) accountability, (b) transparency, (c) predictability in terms of stable, open and widely understood ‘rules of the game’, and (d) participation.

Governance and capacity-building have, at least three interrelated dimensions: (i) a strong public sector management component, (ii) the role of government in creating and fostering an enabling environment for private sector growth, and (iii) strengthening civil society which would include participation of stakeholders and

beneficiaries in development policies and projects. An analysis of governance thus focuses on both formal and informal actors involved in decision-making and implementation.

Government, in the formal sense, is one of the many actors involved in the act of governing. Other actors vary depending on the level or site chosen for the analysis of governance. In urban areas, these other actors may include the parastatal agencies involved in sectoral (e.g. Water supply, sewerage etc.) management or in the overall planning and development of the urban area. Other candidate organizations are the various associations working in the city, NGOs, finance institutions, political parties, etc. Figure 4.2 presents a picture of interconnections among multiple actors involved in urban governance.

**Figure 4.2: Interconnections Among Actors Involved in Urban Governance**

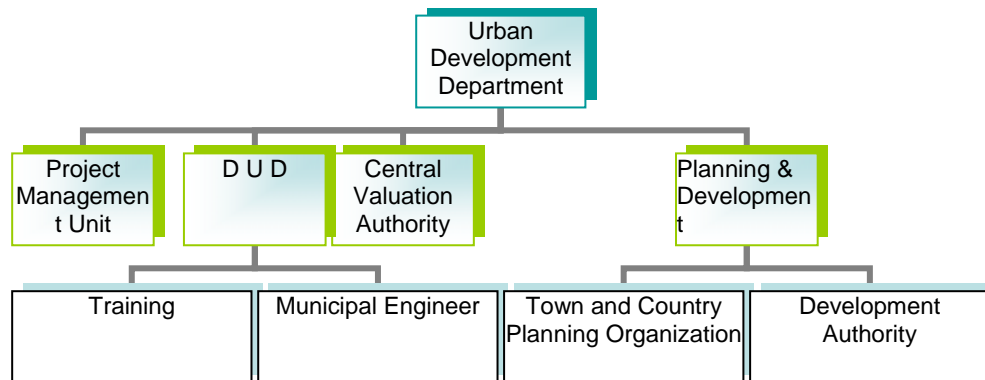


### **Role of State Government**

It needs emphasizing that local (urban) institutional development issues are closely linked with macro policy positions of Central and State Governments. Obvious examples are the 74<sup>th</sup> Constitutional Amendment and JNNURM, both emanating from Central Government's concern respectively with constitutionalizing local self-government and promoting planned urban development. The role of the State Government would be reflected in drafting 'conformity legislation' in terms of 74<sup>th</sup> CAA with consequences for both ULBs and Parastatals. *A new pattern of inter-institutional functional realignment is likely to emerge only on the basis of State's well-thought-out policy design in respect of functional redistribution between the ULBs on one hand and the Parastatals on the other. To be specific, functions such as 'urban planning', 'building regulations', 'water supply' etc. which are listed in the 12<sup>th</sup> Schedule for transfer to the ULBs are presently in the hands of Parastatals and State agencies in Uttarakhand. How and when the State Government would be deciding to transfer all or any of these functions to the ULBs is going to be crucial for the future shape of institutional development in Uttarakhand.*

Planned urban development in Uttarakhand, in the context of current initiatives, demands a fresh look at the Secretariat-level set-up of the Urban Development Department. This is addressed as part of the ongoing work for the Uttarakhand Urban Development Project, but preliminary broad-brush analysis suggests that the future shape of UDD could develop as presented here graphically, although this structure will be further refined based on further analysis of the current situation. Imaginative policy guidelines and time-bound monitoring and evaluation of large programmes, as well as guiding and assisting the municipal bodies (in their new role as vibrant local self-government) would require a refined organisation structure for the Urban Development Department in the coming years.

### Possible Future Shape of UDD



A city or town evolves over time under certain socio-cultural and legal-institutional imperatives, thus as the city or town grows demographically and socio-economically, there is bound to be commensurate growth in the scale and complexity of urban problems that would have to be addressed through governmental re-engineering. This requires an efficient and effective governance framework to suit the complexities of urban management.

## 4.2 JNNURM and Urban Governance

Against this backdrop, major highlights of the JNNURM relevant to institutional analysis are presented hereunder:

**Goal:** 'Creating economically productive, efficient, equitable and responsive cities'

**Focus:** 'On efficiency in urban infrastructure/services delivery mechanism, community participation and accountability of ULBs / parastatals towards citizens'

**Objective:** 'To implement projects on mission mode'

The inference is that a city or town, in terms of JNNURM's vision, must set its goals right, fix the focus of activities clearly, and spell out its operational objectives (mission mode) unambiguously. The 'goals', 'focus', and 'objectives', once clearly set, would be helpful in refashioning the management of a city or town, bringing about, in the process, a new paradigm shift in urban governance.

### **Multi-Institutionality**

The phenomenon of multi-institutionality in a city situation has been admitted in JNNURM Guidelines which are worth quotation in this context:

“The city is managed and governed by a number of institutions and organizations. In this respect, a city is a complex entity....Often, responsibilities overlap, and also often, there may exist fragmentation of responsibilities without any platform for coordination”.

What is significant to note is that the Guidelines talk of ‘fragmentation’ and ‘overlap’ of functions and responsibilities, and pointedly refer to the absence of ‘any platform for coordination’.

It is helpful to recount, in this context, some other important guidelines of JNNURM:

- Identification of institutions and organizations that have direct and indirect responsibilities for infrastructure provision
- Identification of areas of fragmentation or overlap
- Its impact assessment on infrastructure delivery and management, and
- Review of the role of private sector in service delivery and the potential of public-private partnership in the development and management of infrastructural service.

### **Urban Reforms Agenda**

Discussions on the issues relating to strengthening urban governance and institutional development need to be linked to the ‘urban reforms’ agenda as incorporated in the JNNURM guidelines.

The suggested ‘reforms’ cover a wide gamut of items involving two levels: State and the ULBs.

#### **ULB-level**

- Accrual-based, double-entry accounting system
- E-governance with IT applications like GIS, MIS etc.
- Property Tax reform to achieve 85% efficiency within 7 years
- User charges to recover O&M cost
- Budget-earmarking for basic services to the poor
- Basic services to the poor & security of tenure at affordable prices

#### **State-level**

- Decentralization measures as per 74<sup>th</sup> Constitutional Amendment
- Repeal of Urban Land Ceiling and Regulation Act
- Reform of Rent Control Laws
- Rationalization of Stamp Duty to bring it down to 5%
- Enactment of (i) Public Disclosure Law and (ii) Community Participation Law
- City planning function to be assigned to ULBs

## **4.3 Institutional Profile**

Nainital Nagar Palika Parishad (NNPP) is the urban local authority for the famous hill town of Nainital. Surrounded by Himalayn ranges as it is, tourists in their thousands visit the city annually, specially in the summer months. Given its special characteristics, Nainital’s civic administration or urban planning needs to

be sharply distinguished from conventional city planning and administration where the city's urban space has a fairly settled population, albeit swollen by occasional arrival of some floating population. Nainital's population as reported by the Census-2001 was little over 38 thousand, which has since then grown, as reported, to 44 thousands, which at least doubles during tourist seasons.

To cope with the unusual situation of seasonal ingress and egress of large populations, Nainital Nagar Palika Parishad (NNPP) has to constantly 'network' with a number of organizations and agencies. In other words, Nainital civic administration has to be constantly prepared to meet seasonal, anticipated 'emergencies' in addition to meeting the 'normal' civic needs of the city.

Keeping the broad JNNURM guidelines in view, the institutional profile of Nainital is presented in some detail below.

Broadly, the institutions involved in infrastructure/service provision in the city are:

- i. Nainital Municipal Council (NNPP)
- ii. Nainital-Lake-Region Special Area Development Authority (NLRSDA)
- iii. Uttarakhand Pey Jal Nigam
- iv. Uttarnchal Jal Sansthan
- v. Public Works Department
- vi. Regional Transport Office
- vii. Uttarakhand State Electricity Board
- viii. Uttarakhand State Environment Protection and Pollution Control Board
- ix. Uttarakhand State Urban Development Agency
- x. Uttarakhand Transport Authority

Besides these, State's field administration, particularly District Administration headed by the District Magistrate (DM), the Divisional Commissioner (DC), and 'heads' of functional departments such as the Executive Engineer and the Superintending Engineer are closely associated with some aspect of city administration. Various state-level agencies are operating here and are responsible for some of the major infrastructure and service provisions of the city. The responsibility often is limited to the planning, designing and execution of projects, which are then transferred to the agencies directly responsible for the operation of infrastructure facilities. Table 4.1 below provides the distribution of the responsibilities of the various agencies with respect to ULB functions listed in the XII<sup>th</sup> schedule.

**Table 4.1: Institutional Functional Matrix**

S. No.	Functions under Schedule XII of 74 <sup>th</sup> CAA	Agencies responsible for Planning and Design	Execution	Operation and Maintenance
1	Urban planning including Town Planning	TCPO, NLRSDA	TCPO, NLRSDA	TCPO, NLRSDA
2	Regulation of land use and construction of buildings	NLRSDA	NLRSDA	NLRSDA
3	Planning of economic and social development	Planning, and Social Welfare Departments	Different Government Departments	Different Government Departments
4	Roads and bridges	PWD, NLRSDA	PWD, NLRSDA	PWD, NLRSDA NNPP
5	Water supply for domestic, industrial and commercial purposes	UPJN, UJS (for small projects)	UPJN, UJS (for small projects)	UJS
6	Public health, sanitation, conservancy and solid waste management	NNPP	NNPP	NNPP
7	Fire service	State Police Deptt	State Police Deptt	State Police Deptt
8	Urban forestry, protection of environment and promotion of ecological aspects	Forest Department, UEPPCB, NNPP	Forest Department, UEPPCB, NNPP	Forest Department, UEPPCB, NNPP
9	Safe guarding of interests of weaker sections of society, including handicapped and mentally retarded	Planning, and Social Welfare Departments	Different Government Departments	Different Government Departments
10	Slum improvement and up gradation	NLRSDA, NNPP, SUDA	NNPP	NNPP
11	Urban poverty alleviation	SUDA, NNPP	SUDA, NNPP	SUDA, NNPP
12	Provision of urban amenities, and facilities such as parks, gardens and play grounds	Sports Deptt., DNN	Sports Deptt., DNN	Sports Deptt., DNN
13	Provision of cultural, educational and aesthetic aspects	Department of Culture, NNPP	Department of Culture, HNP	Department of Culture, HNP
14	Burial and burial grounds; cremations, cremation grounds and electric crematorium	HNP	HNP	HNP
15	Cattle ponds; prevention of cruelty to animals	NNPP	NNPP	NNPP
16	Vital statistics including registration of births and deaths	NNPP	NNPP	NNPP
17	Public amenities including street lighting, parking lots, bus stops and public conveniences	UPC, NNPP, NLRSDA	UPC, NNPP	NNPP
18	Regulation of slaughter houses and tanneries	NNPP	NNPP	NNPP
NLRSDA: Nainital Lake Region Special Development; TCPO: Town and Country Planning Organization; NNPP: Nainital Nagar Palika Parishad ; UPJN: Uttaranchal Pey Jal Nigam; UJS: Uttaranchal Jal Sansthan; PWD: Public Works Department; UPC : Uttaranchal Power Corporation; UEPPCB: Uttaranchal Environment Protection and Pollution Control Board; SUDA: State Urban Development Agency.				

This demonstrates the overcrowding of organizations in Nainital, which is largely the result of patchy decisions taken from time to time at the State level.

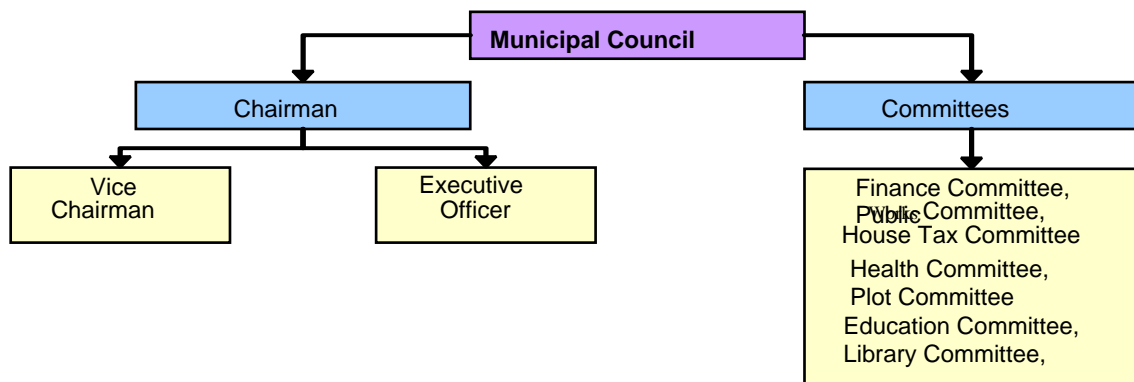
### ***The Municipal Body***

Nainital Nagar Palika Parishad (NNPP) had its origin in a City Board in 1845. Presently functioning under the provisions of the Uttar Pradesh and Uttarakhand Municipal Act 1916 (adopted by Uttarakhand in 2001), NNPP has an elected board of 11 members out of which four are women and two belong to the SC/ST category. The Chairman and the Vice-chairman are elected by the elected

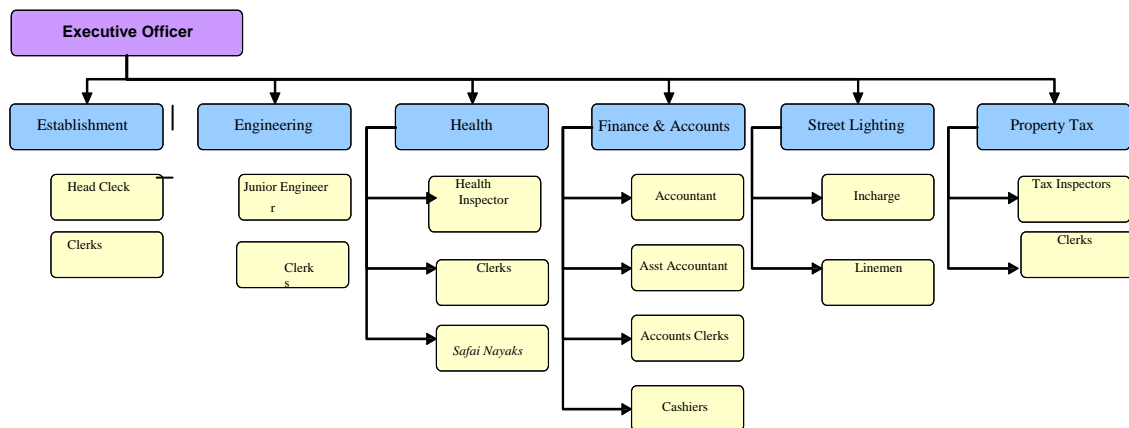


members of the board. Unlike the Mayor of a municipal corporation in Uttarakhand, the Chairman of a municipality enjoys some real powers, and because of his/her political clout, is able to influence the officers and the staff more than the Executive Officer can do. Since most of the lower-level staff including the clerical staff is recruited locally, they owe their loyalty more to their 'benefactors' than the departmental heads and the Executive Officer. This tends to dilute the formal municipal authority structure and create obvious management problems in the running of the day-to-day municipal administration. The structure is shown at Figures 4.3A and 4.3B.

**Figure 4.3A: Nainital Municipal Council: Political Wing**



**Figure 4.3B: Organizational Structure of NNPP**



### ***The Executive Officer (EO)***

The EO functions under the general control and supervision of the Chairman. He looks after the entire executive administration of NNPP including municipal personnel management. He has to manage: (a) the affairs of the political wing: advising the Chairman, holding meetings of the board and the committees; (b) the professional, administrative wing: executing board and committee decisions, and overseeing the functioning of different municipal departments including field/site inspections; (c) doing the liaison function insofar as conducting external relations are concerned: keeping in touch with State Government including its field officials (e.g. DM, DC etc.), and the parastatals (like UPJN, UJS, NLRSA etc.); and (d)

public relations and the handling of public grievances. Nainital being a popular place for tourism, EO has often to attend to the visits of VVIPs/VIPs.

Because of local recruitment of the clerical and lower level staff, there is a close nexus between the local politicians and the municipal employees. This has adversely affected the authority structure of the municipality, whatever be the statutory position of the Executive Officer vis a vis the municipal personnel. Considering the variety and complexity of duties of the EO and the imperative need to deal with a wide network of organizations, there is a case for upgrading the post of EO of Nainital to give the city a greater degree of sound political and professional management.

### **Committee System**

NNPP has as many as seven committees whose domain of activities can be inferred from their names:

- |                           |             |
|---------------------------|-------------|
| 1) Finance Committee      | (5 members) |
| 2) Public Works Committee | (8 members) |
| 3) Hat Fund Committee     | (6 members) |
| 4) Education committee    | (7 members) |
| 5) Plot Committee         | (4 members) |
| 6) Health Committee       | (6 members) |
| 7) Library Committee      | (5 members) |

The water works and entire water supply system have been taken over by the UJS which is a parastatal agency. The need for continuation of the Committee on Water Works is thus not clear. The Health Committee may be renamed as Public Health Committee or solid waste management committee, as NNPP has little to do with curative aspects of health and its exclusive charge is now solid waste management. The committee system does not seem to have been developed rationally. With the transfer of SJSRY scheme to the municipality, a special committee on urban poverty alleviation has to be constituted for the purpose.

### **Ward Committees**

NNPP is yet to set up 'ward committees' since the 74th CAA has provided for such committee formation only for cities having a population of three lakhs and above. The Ward Committee is a participatory mechanism, the purpose being to associate the citizens with locality-level management of civic services such as maintenance of streets and drains, collection of garbage, maintenance of parks and open spaces, and street lights etc. Uttarakhand Municipal Act, if it is going to be enacted in future, may consider formation of ward committees for all municipal bodies. The formation of ward committees needs to be accorded priority not simply to conform to constitutional requirements; this will help institutionalize citizen's participation in grassroots civic services planning and management.

### **Functional Departments**

Among the major functional departments, public works department, solid waste management department, taxation department, and accounts department are bearing the brunt of municipal administration. The public works department is headed by a Junior Engineer. Considering the work load – roads construction and maintenance, removal of unauthorized constructions (which are numerous in the town) etc, Nainital needs a full-fledged Engineer of at least the rank of Assistant

Engineer. Status up gradation of the municipal engineer will help in external negotiations with his counterparts in other departments like the PWD, UPJN, UJS and so on.

The other functional department of importance is the solid waste management department which has the onerous duty of keeping the city clean by organizing collection, transportation and disposal of solid waste. The solid waste generated increases dramatically during the tourist season. Additional conservancy workers are engaged during the tourist season to cope with the sudden increase in work load.

The SWM department is headed by a Health Inspector. It is desirable that this department be headed by a public health engineer, which would be in conformity with the Supreme Court's guidelines on solid waste management. The entire solid waste management of Nainital needs to be properly planned and managed. There is also the need for generating public awareness about sound local garbage collection methods to persuade the general public not to throw garbage on to the streets (which is the general habit now). The taxation management – revenue mobilization – is in the hands of a Tax Inspector.

NNPP is dependent on state grant to the extent of 80 per cent of its ordinary revenue. Both in terms of valuation and collection, property tax management of the town needs to be thoroughly overhauled. It is suggested that the state government seriously think of setting up a commission/committee on rationalization of property taxation to provide a more rational, citizen-friendly and revenue-yielding basis for the levy of this tax.

The lighting department is currently being looked after by a Lighting Inspector on ad hoc basis who has no technical experience in this field. Looking after large number of polls throughout the length and breadth of the town is no easy task. Planning of lighting, procurement of fixtures and bulbs, man management, repairs and maintenance need a properly qualified person to head the department.

The SJSRY programme, basically for urban poverty alleviation, is looked after by the District Urban Development Agency (DUDA). It is presently located within the premises of NNPP. There are 10 slum areas within NNPP area constituting less than a quarter of the city's population. Since DUDA is to be annulled, and its functions transferred to the municipality, NNPP needs to have a poverty amelioration committee and a department on poverty alleviation.

Working within an extremely limited functional domain, NNPP has neither a forward looking political executive nor a dynamic, professionally committed, skill group. To move the NNPP toward a new era of planned city development as envisaged in the JNNURM, municipal administration of Nainital needs to be radically restructured both from the political and professional perspective. The city has to have a strong political executive – either a collegial body or a strong chairman supported by a senior professional executive. Similarly, as mentioned earlier, Nainital municipality needs dynamic modern-day professional management based on IT and computer application in different segments of city administration.

As per the present policy of the State Government, there are five kinds of officers and staff in the municipality:

- 1) State appointees

- 2) Officers belonging to Unified/Integrated cadres
- 3) Locally recruited staff
- 4) Staff recruited on contractual basis, and
- 5) Staff recruited on purely ad hoc basis.

In view of the new and challenging responsibilities of the Municipality as envisaged under the JNNURM, State Government has urgently to newly examine its traditional policy toward municipal personnel in order that municipal professional administrative strength can be substantially enhanced.

### ***Municipal Functions***

The functions of NNPP are listed in Uttar Pradesh and Uttarakhand Municipalities Act, 1916 (adopted by Uttarakhand in 2001). It provides for mandatory functions as well as discretionary functions of NNPP. The major functions of NNPP are: city cleanliness, solid waste management, maintenance of gardens/dividers/circles, street light, bio-medical waste, slaughter house, flood control, encroachment removal, stray cattle management, community toilets, community halls, storm water and waste water drainage, parking lots, development works, advertisement, sale of land, house tax, and licensing. Responsibility for water supply which is also provided for under the Act stands transferred to the UJN and UJS.

### ***Issues***

Table 4.2 provides a summary of issues relating to the functioning of Nainital Nagar Palika Parishad.

**Table 4.2: Sector Issues**

<b>Legal</b>	Devolution of more powers and functions to NNPP, in the spirit of 74th CAA. Need to have business allocation regulation for clear demarcation of function to be performed by cells/ department and sections of NNPP. No transfer of Infrastructure assets / services created by Line department or private developers Overlapping of functions; Implementation of Byelaws.
<b>Organization and functioning</b>	Lack of clarity for exercise of powers by committees, elected functionaries and nominated functionaries. Lack of clarity about the role to be performed by the officers and elected members of NNPP. Scattered structure of NNPP. No defined business rules for departments and sections. Lack of accountability and transparency in functioning of NNPP. Lack of experience in handling big infrastructure project.
<b>Finance</b>	Weak Financial Organizational Structure. Under-utilized financial and taxation powers. No proper budgeting system in place. Revenue collection system inefficient. Poor record maintenance and asset management.
<b>Human resource management</b>	NNPP does not have the required technical and skilled staff as per the status of the town. Need to redefine recruitment policies and guidelines. Need to prepare office manual.
<b>Data base and information management</b>	Poor Data Base and Information Management No asset management Traditional land record and registration system Need for use of technology in infrastructure monitoring and database management system

### **Inter Agency Coordination Issues**

For historical reasons (earlier being a part of Uttar Pradesh), Nainital has inherited a complicated local institutional profile that has aggravated the problems of inter-institutional coordination. The conventionally known 'local' municipal functional areas in the Nainital situation, have been pre-empted by a number of institutions, mostly parastatals who are administering pre-eminently 'local' functions such as roads, water supply, sewerage, storm water drainage, building regulations, housing and slums improvement. Issues of coordination, therefore, are linked to the historical process of institutional evolution in Uttarakhand State. The responsibility of provision of has been transferred to UPJN (planning and implementation of water supply schemes), and to UJS (operation and maintenance of water supply, and sewerage and storm water drainage facilities). This an old and state-wide arrangement. There are limited areas of coordination or conflicts between these agencies and the Municipality. This is not so in respect of Special Area Development Agency, which has been created exclusively for Nainital.

Created in 1989 specifically for the Nainital municipal area, NLRSA is entrusted *inter alia* with such municipal functions as building plan sanction, demolition of unauthorized structures, area development, housing, and internal road construction. A relationship of complementarity between the municipality and NLRSA was perceived when the later was created. The objective was to accelerate planned development of Nainital in partnership with the NNPP. This, however, did not happen. In the Foreword of a recent study on NLRSA<sup>3</sup> published by the Project Management Unit (PMU), the Divisional Commissioner, Kumaon Region, who presides over the PMU, has observed that (extracts from Hindi version): Due to .....lack of coordination, fundamental inter-institutional difference in policy and planning, and institutional (SUDA vs. NNPP) conflicts, the improved services as was expected when NLRSA was formed could not be delivered to the citizenry of Nainital. Because of their lack of institutional coordination co-ordination, and failure to orchestrate their activities, both the NNPP and NLRSA have failed to achieve the perceived development of the town. The situation is worrying the planners, administrators, and urban development specialists. Time has come to assess the causes of this failure.

NLRSA is a bureaucratic organization. Its seven member Board is constituted of government officials only. The Board is to nominate the municipal chairman, and chairman of the Town Area of Bhimtal. By implication NLRSA is, for all practical purposes, is a government agency that has encroached upon the functional domain of the municipality. Thus, the conflict between a representative organization (NNPP) and a government agency (NLRSA) is perhaps generic, More so because many of the responsibilities assigned to NLRSA cut across the functional domain of the NNPP.

### **Way Forward**

The present Municipal Act predates the 74<sup>th</sup> Constitutional Amendment Act. Any conformity legislation to be drafted in the near future is expected to 'municipalise' many of the functions which are presently outside the ambit of municipal administration (in terms of the 12<sup>th</sup> Schedule).

<sup>3</sup> Rakesh Sharma et al *Nainital Jhil Parikhsetra Vishes Chetra Vikas Pradhikaran Tatha Nagar Palika Parishad, Nainital Ke Pariporeksha Me Ek Adhayan*, Planning Management Unit – Urban Affairs, Administrative Training Institute, Nainital

There are three interrelated ways of looking at the *Coordination issues*:

- For practical reasons (since change in governmental system takes time), the present multi-institutional scenario, with minor adjustments, would be continuing for some more time,
- Even if 'big changes' would take time, some intermediate compromise measures have to be adopted, possibly meeting half way some limited functional transfers as per the 74<sup>th</sup> CAA to work out coordination solutions for the time being, pending longer term solutions, and
- In view of national policy of constitutionalization of local self-government reinforced by the JNNURM Guidelines, 'big' changes have to be brought about through enactment of 'conformity legislation' incorporating the essential mandate of the 74th Constitutional Amendment involving large scale functional realignment coupled with corresponding institutional overhaul.

Three successive stages of 'reforms' are suggested below:

**Table 4.3: Proposed Stages of Reform**

Stages	Proposed measures	Time frame (from the date of acceptance of the report)
Stage I	a) Formation of a strong standing coordination committee headed by the Divisional Commissioner – this is to be done of acceptance of this report.	Three to six months
	b) Limited municipalization of parastatal functions like building regulations transferred to municipality.	Three to six months
Stage II	a) standing coordination committee orchestrating the activities of multiple organizations	Six to 12 months
	b) More functions transferred to municipality,	Six to 12 months
Stage III	Full scale transfer of functions to the municipality in terms of 74th CAA – this should be completed within a year.	One to three years

**Table 4.4A: Balance Sheet of Actions: ULB-level**

S. No.	Initiative	Status
1	Accrual-based, double-entry accounting system	Being introduced
2	E-governance with IT applications like GIS, MIS etc.	Process started, computers in ULBs have been procured but the staff requires training plan
3	Property Tax reform to achieve 85% efficiency within 7 years	Under consideration
4	User charges for O&M cost recovery	Govt. order issued in this regard, under implementation
5	Budget-earmarking for basic services to the poor	New budget exercise required
6	Basic services to the poor, and security of tenure at affordable cost	ULB & Parastatal level interventions required

Similarly, status of state-level reforms in terms of JNNURM guidelines is shown in the table below.

**Table 4.4B: Balance Sheet of Actions: State-level**

S. No.	Initiative	Status
1	Decentralization measures as per 74 <sup>th</sup> CAA	Under active consideration with new draft Bill
2	Repeal of Urban Land Ceiling and Regulation Act	Since repealed
3	Reform of Rent Control Laws	Being examined
4	Rationalization of Stamp Duty to bring it down to 5%	Under consideration within constraints of State's revenue situation
5	Enactment of Public Disclosure Law	Disclosure Law can be part of new Municipal Bill now being drafted
6	Enactment of Community Participation Law	Participation Law is in place, but needs broadening
7	City planning function to be assigned to ULBs	Provision made in the draft Municipal Bill

### ***Institutional changes in Nainital Context***

Against the backdrop of these institutional changes, four kinds of change scenarios are proposed (Figure 4.4). Out of these four typologies, the inter-institutional 'network' scenario seems practically achievable in the short term. The ultimate objective should, of course, be to move toward the Constitutionally-mandated 'decentralization' initiatives, as per the guidelines of the JNNURM. In the Figure.4.4 explanations have been briefly provided within each box.

- Vision-Existing Situation,
- Journey-First Step,
- Intermediate Step,
- Full-Scale Adoption of 74<sup>th</sup> CAA Model.

The existing situation in (i) is just a descriptive presentation. Journey-First Step is the major first step toward institutional reform involving (a) limited transfer of functions from parastatals to NNPP, and (b) more importantly, constitution of a strong Standing Coordination Committee to be headed by the Divisional Commissioner (or any other sufficiently senior civil servant). Intermediate Step in (iii), is a further advance on First Step envisioning transfer of some more functions from Parastatals to NNPP at the second phase. Full-scale Adoption of 74<sup>th</sup> CAA model as shown in (iv) is self-explanatory. This would reflect complete and orthodox adoption of the Constitutional model. (This 'process' view has to emanate from the State level as a general policy for all the urban areas in the State.)

## **4.4 Role of Private Sector in Urban Infrastructure Provision**

Private sector participation in infrastructure provision in Nainital city is yet to emerge. But there are a number of potential areas where the PPP model can be applicable on the lines of similar efforts successfully made in many cities in India. Selective references, in this context are

- Solid waste management, especially transportation, disposal and composting
- Maintenance of parks and gardens
- Infrastructure creation such as off-street parking, roads and, bus stands
- Street lighting etc.

- Connecting tourist sites by ropeway.
- Provision of tourist attractions like heritage village, adventure tourism, resorts and so on.

## 4.5 Status Upgradation

Nainital, being an old hill station that attracts thousands of tourists from different parts of India, has its own issues and problems, which are similar to those being faced by any old hill station anywhere else in the country. Its unique problems of governance demand a unique institutional response rather than stereo typed solution. This deserves consideration as, in the near future, the functions such as planning and building regulations, water supply and sewerage etc., as envisaged in the 74th CAA, are likely to be transferred to the municipal body.

The devolution of functions may not happen overnight, but a process of 'municipalization' of the above functions has to start in a phased manner. This will necessitate rebuilding the NNPP's administrative-managerial set-up with appropriate departmentalization and organizational redesign.

All these are conventional municipal functions but internal managerial strength of NNPP would then have to be augmented in a planned manner. In other words planned capacity building of NNPP must precede any scheme of 'municipalisation' as might happen in future to conform to the constitutional (74<sup>th</sup> Amendment).

### **Community Participation**

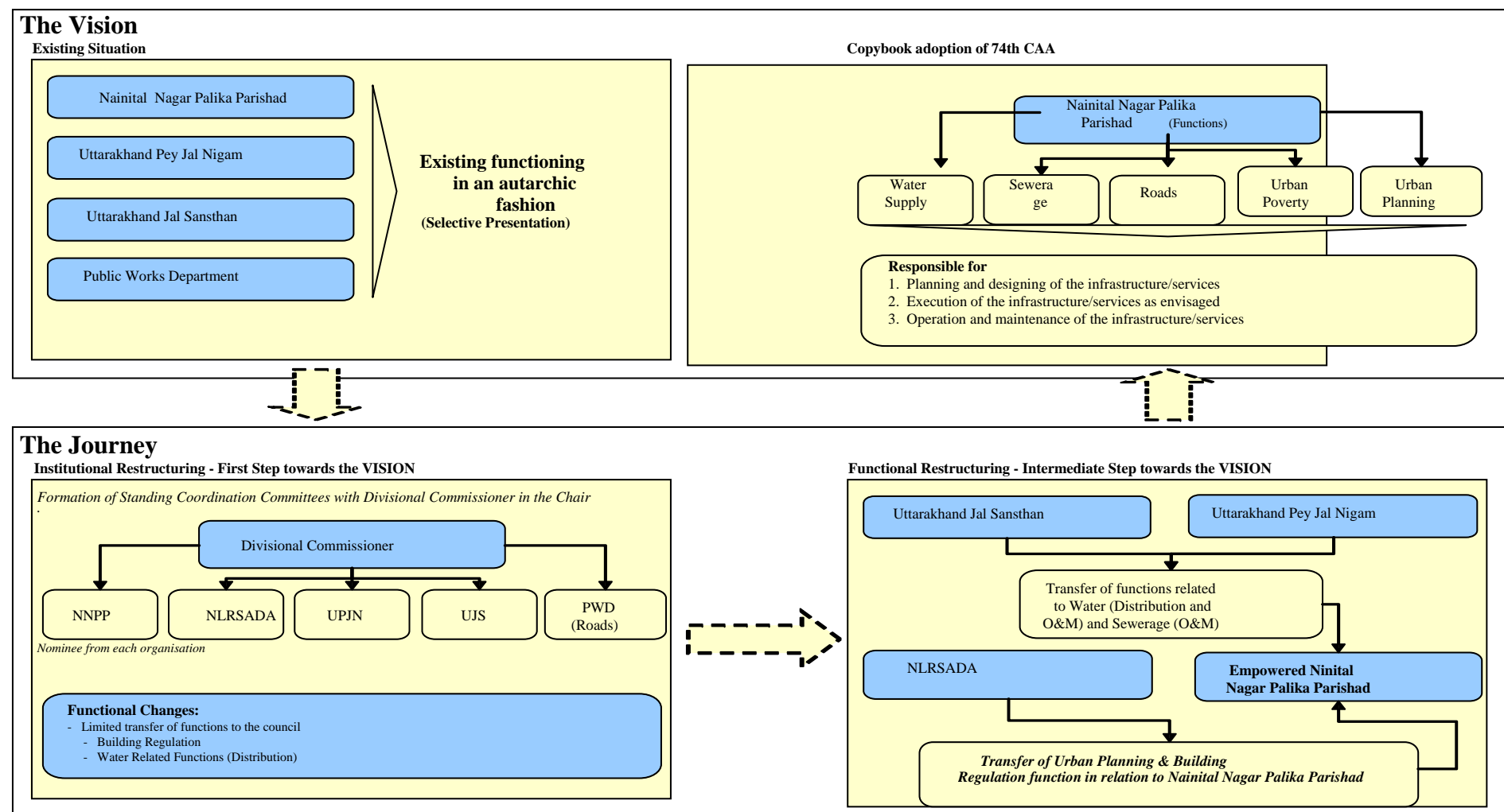
The concept of ward(s) committee in the 74th Constitutional Amendment is a revolutionary idea with the objective of deepening city democracy by making the citizens active participants in local area civic administration (e.g. local SWM, maintaining civic infrastructure such as street lights, parks and playgrounds, etc.).

Although ward committees have not been set up, a greater level of public participation in the functioning of the town is necessary. Committees need to be constituted for effective citizen's participation, and the composition of a Ward Committee will then have to be differently conceived, making it an amalgam of elected ward councillors and a cross-section of nominated local citizens: doctors, engineers and other professionals, some women members and SC/ST members etc. NNPP has to evolve a system of local community participation to harness the energy and support of the civil society and create, in the process, a sense of ownership of municipal institutions among the citizen.

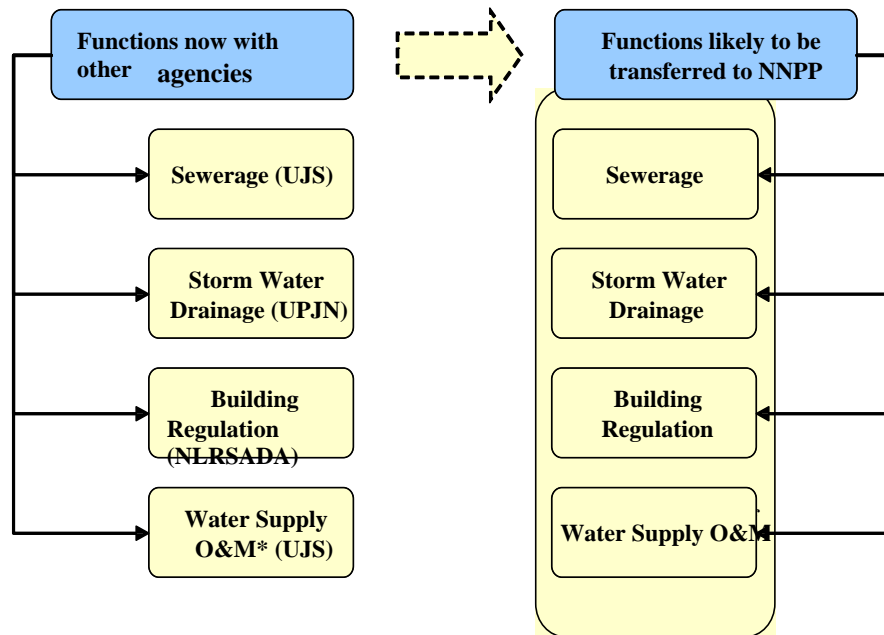
Community participation can be functionally as well as aurally organized. Almost all the existing municipal functions and those that might be transferred to the municipality in terms of the 12th schedule can have advisory/consultative committees with lay citizens and experts as members. Ward committee for every ward will allow room for more active citizen participation. There can also be constituted area/zonal committees with appropriate citizens' participation to consider and advise on issues involving wider area level problems, say, an open space or a large park or water body.



Figure 4.4: Change Scenarios



The networking arrangements shall continue even after the institutional changes (mergers etc) with restructuring of the set up

**Figure 4.5: Transfer of Functions to NNPP**

## 4.6 Training and Capacity Building Initiatives

‘Urban Development’ is a multi-disciplinary subject involving a cross-section of institutions and organisations. State-wide policy needs to be framed to take into account this macro issue. Uttarakhand does not have any training institution with exclusive focus on Urban Management, Planning and Development. If the current trend towards planned urban and municipal development would be continuing in the years to come, Uttarakhand will have to plan for the establishment of a Urban Planning and Management Institute at the earliest.

Pending establishment of such an institution (which may take time), a Training Cell may be constituted within the office of the Director of Local Bodies. Its task will be two-fold: (i) to launch a TNA exercise, may be, with some expert help, to ascertain with some precision the diverse training needs of ULBs; and (ii) to prepare a list of training institutions for sending employees on specific types of training programmes.

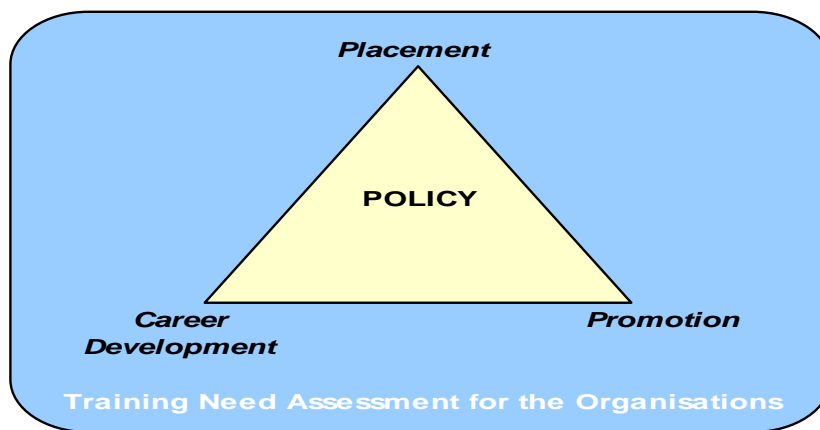
Within the State Administrative Training Institute, there is already a Centre for Urban Development. Its capacity can be enhanced with appropriate faculty induction. The technical expertise of IIT, Roorkee, Nainital Institute of Technology, engineering colleges in the State and other existing institutions can be roped in and mobilized for conducting specialized training programmes related to urban management.

So far as Nainital urban scene is concerned, the institutions that are directly involved in the planning and management of the urban area have to be more dynamic, forward looking and ‘management’ oriented. Also a culture of ‘networking’, not one of insular tunnel vision, has to be developed to bring about ‘convergence’ among sister/allied organisations. Common training schedules can be worked out for a cross section of staff and officers of different organisations. For instance NNPP’s Solid Waste Management wing can sit together with the *Jal Sansthan*’s officers involved in Sewerage and Drainage works. Similarly, Town

Planning Directorate can have joint programme with NNPP's Public Works Engineer and SWM Officer (Health Officer). There can be many such inter-institutional joint trainings/workshops focussed on Nainital's planned development.

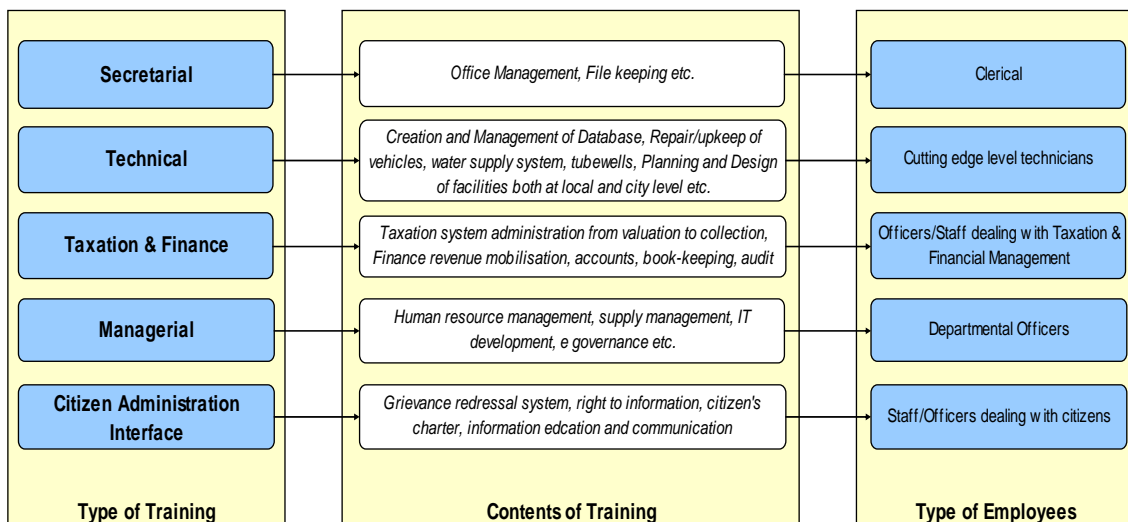
During discussions held with NNPP officers and the officers of UPJN and UJS, imperative need for training in many disciplines was emphasised by each and all. Training has to be properly designed and executed. A precondition can be to do an exhaustive Training Need Assessment exercise to find out the exact nature of 'training needs' of each organisation.

**Figure 4.7: Focus on Training Policies**



Training is likely to be of cosmetic value unless it is done on the basis of rigorous training needs assessment and tied up with placement, promotion and career development policies of the involved organisations (refer figure 4.8). A tentative training profile is presented below.

**Figure 4.8: Training profile for NNPP Personnel**

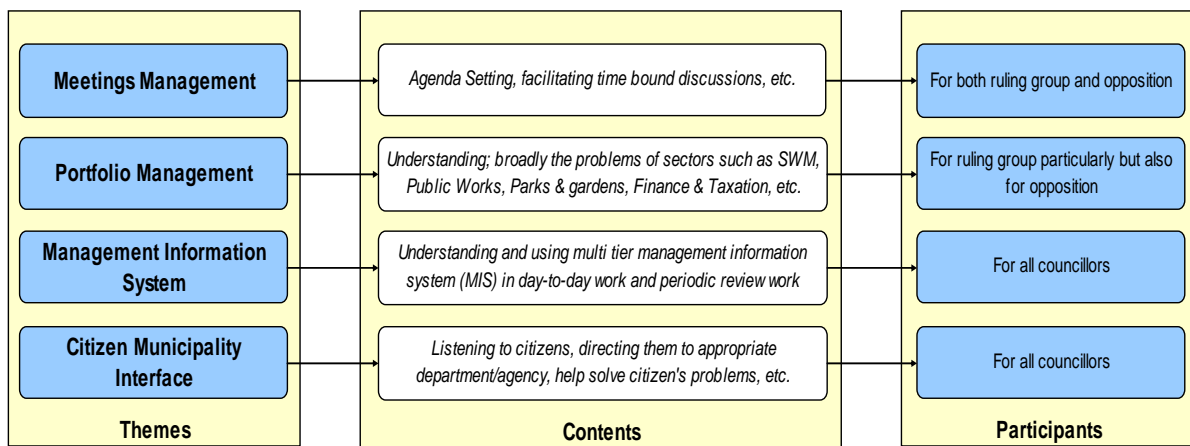


### Political Leadership

Capacity Building for political leadership is of paramount importance. Municipal Laws (and other institutional statutes), rules and regulations need to be clarified in easy language for proper understanding of the 'formalities' that are often not known to the politicians (leading to misgivings and apprehension and even conflict).

In a democracy, it is the capacity of political leadership to 'vision' the future, 'understand' the present and 'guide' future development that makes or mars development management at any level. Specially for NNPP leadership, following programmes (Training/workshop/seminars) can be imaginatively organised (Figure 4.9).

**Figure 4.9: Training/Workshops for NNPP's Political Leadership**



An able, understanding and sensitive political leadership, cutting across political lines, is an asset to municipal management and this kind of leadership is hardly ever self made; it has to be groomed through appropriate training programmes.

## **5. Financial Profile of Nainital Nagar Palika Parishad (NNPP) and Other Agencies**

### **5.1 Towards A City Development Plan – Financial Aspects**

This chapter on the financial aspects of the City Development Plan (CDP) of Nainital is anchored onto the primarily goal of the Jawaharlal Nehru National Urban Renewal Mission (JNNURM), namely, creating economically productive, efficient, equitable and responsive cities. It is divided into the following sections: Section 5.2 gives a review and analysis of the existing fiscal and financial situation of the city in terms of trends in revenues and expenditures of the concerned agencies. Section 5.3 aims to the financial performance of Nainital Nagar Palika Parishad (NNPP). Section 5.4 deals with the financials of Nainital Lake Region Special Area Development Authority (NLRSA). Section 5.5 deals with the financial performance of the Uttarakhand Jal Sansthan, Nainital Division.

### **5.2 Review of the Existing Fiscal and Financial Situation**

The purpose of this stage is to review and analyse the existing financial situation in terms of trends in the revenues and expenditures of the authorities concerned with the development of the city.

The urban services are provided by multiple agencies in Nainital. They are

- Nainital Development Authority (NLRSA),
- Nainital Nagar Palika Parishad, (NNPP),
- Uttarakhand Jal Sansthan (UJS),
- Public Works Department (PWD),
- Irrigation Department (ID), and
- Police Department - Fire Services (PD)

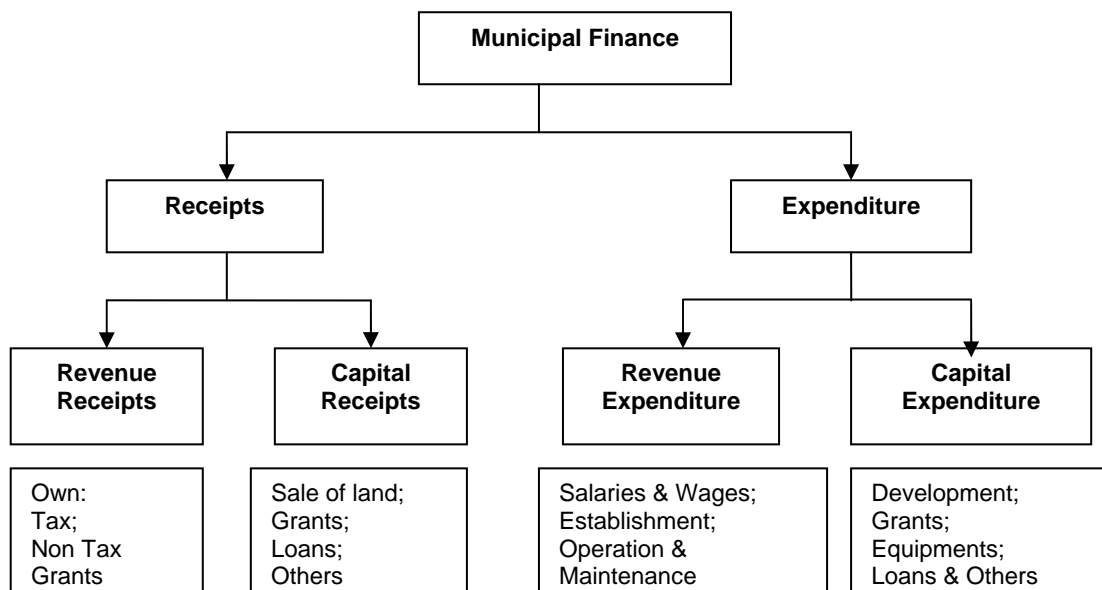
NNPP, UJS, and NLRSA are the three most important agencies responsible for the urban finance in Nainital. NNPP's revenue receipts (own) mainly comprises of property / house tax, sanitation (safai) tax, rentals and advertisement. UJS's revenue receipts are mainly water tax and water charges. NLRSA's revenue receipts mainly arise out of development and other charges, interest and miscellaneous receipts, deposits and loan recoveries. Capital receipts comprise of capital loan recoveries and grants from state and central governments.

### **5.3 Overview of NNPP Finances**

NNPP has been assigned a range of functions related to the provision of the urban services. NNPP is empowered to levy and collect taxes approved by the state government. They strive to meet the costs of constructing and maintaining urban facilities and services. The revenue receipts comprise of NNPP own sources (taxes and non-taxes) and state grants. Capital receipts include sale of land, general grants and loans. The revenue expenditure includes salaries and wages, establishment, operations and maintenance and interest and debt servicing. The accounts of the NNPP are maintained on single-entry system. The

process of conversion into accrual based double entry accounting system has been initiated.

**Figure 5.1: Structure of NNPP Finance**

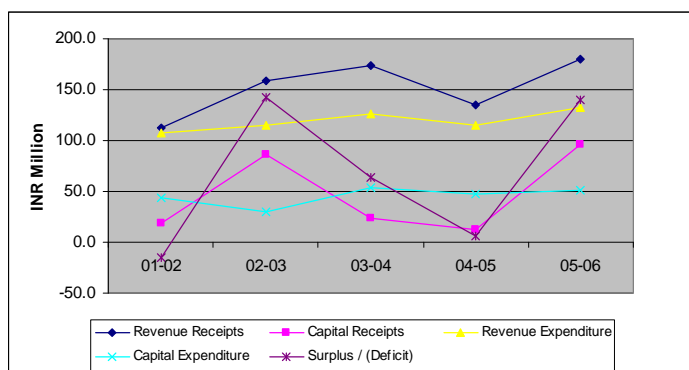


**Table 5.1: Summary Financial Profile of NNPP (FYs 2001-06)**

Items	Rs. Million						Contribution
	2001-02	2002-03	2003-04	2004-05	2005-06	Avg.	
Revenue Receipts	35.9	30.6	33.9	39.3	35.8	35.1	80.8%
Capital Receipts	1.1	6.8	11.5	11.0	11.4	8.4	19.2%
Total Receipts	37.0	37.4	45.4	50.3	47.1	43.5	100.0%
Revenue Expenditure	36.3	30.5	35.6	44.0	39.6	37.2	89.6%
Capital Expenditures	1.3	5.3	7.7	6.0	1.2	4.3	10.4%
Total Expenditure	37.5	35.8	43.3	50.0	40.9	41.5	100.0%
Surplus/ (Deficit)	-0.5	1.6	2.1	0.4	6.3		

Source: NNPP Yearly Financial Statements

Table 5.1 shows that there has been surplus in every year except in the year 2001-02. However, this does not take into account the unpaid liabilities towards power dues to Uttarakhand Power Corporation. NNPP Revenue is stagnant. However, revenue expenditure has shown an increasing trend which is met by the capital receipts.

**Figure 5.2: Income and Expenditure NNPP**

Source: NNPP Yeraly Financial Statements

### 5.3.1 Receipts Analysis

#### A. Revenue Receipts

##### Own Sources

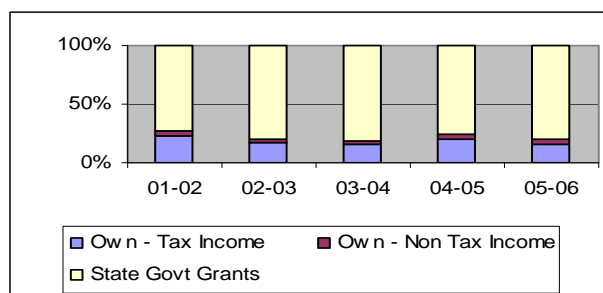
The revenues comprise of own tax and non-tax revenues, grants from the state government. NNPP's tax revenue include property/ house tax, sanitation (safai) tax, boat tax and show tax. They together contribute about 24 percent of the revenue from all sources.

Non-tax revenues include fees, licenses, etc contributing 27 percent. Grants from State Government constitutes largest portion, 49% of total revenues.

**Table 5.2: Summary Revenue Income by Source: FY 2001-06**

Items						Rs. Million	
	2001-02	2002-03	2003-04	2004-05	2005-06	Avg.	Contribution
Own Sources - Tax Income	6.2	8.3	9.2	9.0	9.4	8.4	24.1%
Own sources - Non Tax Income	7.3	7.9	8.2	13.7	9.8	9.4	26.8%
State Govt Grants	22.4	14.4	16.5	16.6	16.5	17.3	49.2%
Total Revenue Receipts	35.9	30.6	33.9	39.3	35.8	35.1	100.0%

Source: NNPP yearly Financial Statement

**Figure 5.3: Trends in Revenue Receipts**

### Composition of Own Sources Taxes

NNPP levies house tax and service based taxes of different types against the services provided by it to the citizens and income from such sources is known as receipts under own sources. Of the tax revenues house tax is the most important tax, followed by the sanitation (safai) tax. House / Property tax is levied at uniform rate of 12.5% of the Annual Ratable Value (ARV). Basis of determining ARV is based on market rent in some cases and based on five percent of cost of land and construction cost in other cases. Sanitation tax is levied @ 12% of ARV. On a five year average basis, this tax and house tax contribution to own tax revenue have been almost equal.

### Non-Tax Sources

**Table 5.3: Composition of Non-Tax Revenues: FY 2001-06 (Rs. Million)**

S. No.	Items	2001-02	2002-03	2003-04	2004-05	2005-06	Avg.	Contribution
1.	Rent	1.606	2.568	2.183	3.336	2.601	2.459	26.2%
2.	Nazul Rent	0.348	0.020	0.019	0.011	0.005	0.080	0.9%
3.	Educational Institutions	0.035	0.030	0.029	0.030	0.030	0.031	0.3%
4.	Fees & revenue from Projections	0.027	0.012	0.043	0.027	0.039	0.029	0.3%
5.	Library Fees	0.006	0.005	0.006	0.012	0.012	0.008	0.1%
6.	Slaughter House	0.043	0.059	0.055	0.055	0.053	0.053	0.6%
7.	Photocopy charges	0.039	0.027	0.038	0.027	0.043	0.035	0.4%
8.	Mix Licence	0.350	0.372	0.419	0.362	0.387	0.378	4.0%
9.	Dog Licence	0.000	0.000	0.000	0.002	0.001	0.001	0.0%
10.	Motor fee	3.996	4.217	4.564	7.871	4.766	5.083	54.1%
11.	Fines & Penalties	0.062	0.048	0.077	0.035	0.034	0.051	0.5%
12.	Interest on Investment	0.014	0.040	0.023	0.099	0.114	0.058	0.6%
13.	Others	0.759	0.533	0.736	1.851	1.762	1.128	12.0%
	Total	7.284	7.931	8.192	13.719	9.847	9.395	100.0%

Non-Tax income from revenue sources comprises various components like fess under municipal acts, penalties and other miscellaneous charges for provision of certain services. The income from non-tax revenue receipts has increased from Rs7.284 million in FY 2001–02 to Rs9.395 million in FY 2005 –06 (Table 5.3).

### State Government Grants

The largest source of revenue receipts is the grants from the State government. Over the years, there has been a steady decrease in the grants. Grants from the state government have decreased from Rs. 22.4 million in the year 2001-02 to Rs. 16.5 million in 2005-06 (Table 5.2).



### B. Capital Receipts

Capital receipts of NNPP mainly comprise bank loans and state government grants. They have increased from Rs1.1 million in FY 2001-02 to Rs.12.6 million in FY 2005-06. Capital receipts declined in FY 2004-05 (Table 5.4).

**Table 5.4: Composition of Capital Receipts: FY 2001-06**

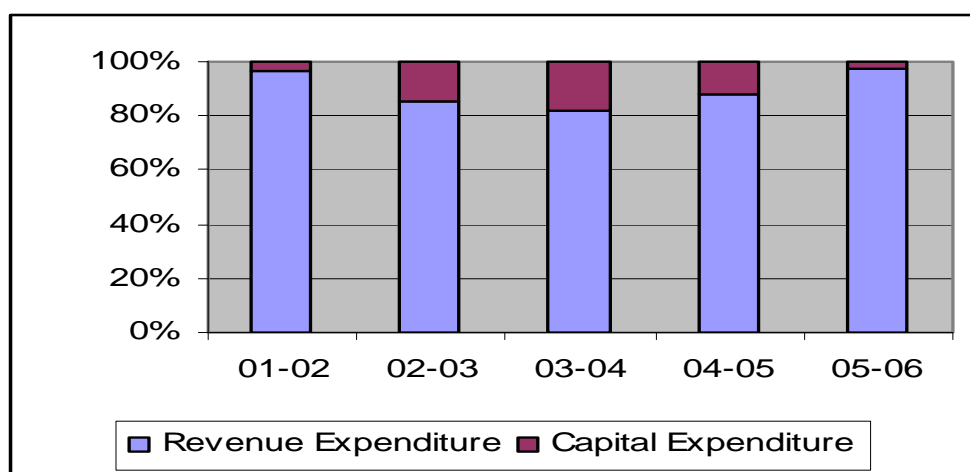
Items	Rs. Million				
	2001-02	2002-03	2003-04	2004-05	2005-06
MP/MLA Funds - Grant	0.174	0.458	0.699	0.288	0.393
Developmental Tax (Vikas Shulk) NLRSA	0.000	0.000	0.000	1.163	0.000
Survey (Pey Jal Nigam)	0.000	0.000	0.000	1.500	0.000
Avasthapan Development - Grant	0.000	0.000	0.000	0.000	9.242
2% State Transfer	0.000	0.000	0.000	0.000	0.348
Grant for Street Lights	0.150	0.000	0.000	0.000	0.000
Eleventh Finance Commission	0.000	1.014	1.977	2.028	1.348
Other grants - Library	0.000	0.028	0.001	0.000	0.000
Contractors' Deposits	0.012	0.002	0.013	0.023	0.024
Stamp Duty	0.000	0.000	1.147	0.000	0.000
From Banks	0.750	5.300	7.700	6.011	0.011
Received on sale / realisation of investments	0.000	0.000	0.000	0.000	1.200
Total	1.087	6.801	11.536	11.013	12.566

### 5.3.2 Expenditure Analysis

As regards the expenditure of NNPP, total expenditure has risen from INR 37.5 million in FY 2001-02 to INR 40.9 million in FY 2005-06 that is at about 2.2 percent per annum (Table 5.1).

Figure 5.5 suggest that more than 90% of the expenses are incurred under revenue expenditure and the remaining goes to the capital expenditure side.

**Figure 5.5: Share in Expenditure (%)**



### C. Revenue Expenditure

Revenue expenditure comprising salaries and wages, establishment, operation and maintenance and interest payments, has been rising faster than the capital expenditure.

**Table 5.5: Composition of Revenue Expenditure: FY 2001-06**

Rs. Million							
Items	2001-02	2002-03	2003-04	2004-05	2005-06	Avg.	Contribution
Salaries & Wages	33.0	27.6	32.4	34.5	42.1	33.9	87.3%
Establishment	0.1	0.2	0.3	2.0	2.0	0.9	2.3%
Operation & Maintenance	3.2	2.7	2.9	7.5	3.8	4.0	10.3%
Others	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
Total	36.3	30.5	35.6	44.0	47.9	38.9	100.0%

Source: NNPP Income Statement

There is wide gap between the various components of revenue expenditure. The wage bill has been growing at 6.3 percent per annum accounts for 87% of the total revenue expenditure on average basis. Establishment expenses are growing at nearly 107 percent per annum. Establishment expenditure accounts to 2% of the total revenue expenditure on average basis. (Table 5.6). Operation & Maintenance is showing an increasing trend, growing at 4.8% and accounts for 10.3% of total expenditure on average basis.

### 5.3.3 Key Indicators

This section gives the financial indicators which helps in analysing the efficiency and operational performance. These have been calculated as an average over a period of five years, which provides a more realistic picture. The fiscal health of the NNPP is brought out clearly by the fiscal indicators in Table 5.6.

**Table 5.6: Fiscal Health Indicators: FY 2001-06**

Fiscal Health Indicators – NNPP 01-02 to 05-06		Average
Resource Mobilisation		
Share of Own Revenue in Revenue Income		50.8%
Growth in Revenue Income		-0.1%
Growth in Own Resources of Revenue Income		9.3%
Share of Non Tax in Revenue Income		26.8%
Share of House Tax in Revenue Income		12.1%
Expenditure Management		
Share of Expenditure on Salaries & Wages in total Revenue Expenditure		87.3%
Share of Expenditure on Salaries & Wages in total Revenue Income		96.6%
Performance Assessment		
Revenue Account Balance (Rs. Million)		-2.1
Capital Account Balance (Rs. Million)		4.1
Operating Ratio (Rev Expenses/ Income)		1.11

Fiscal Health Indicators – NNPP 01-02 to 05-06		Average
	Establishment Cost / Revenue Receipts	0.03
	Capital Utilisation Ratio	0.51
	Debt Repayment / Own Receipts	0.23

NNPP's performance with respect to resource mobilisation and expenditures been average during the last five years as the revenues falls short of revenue expenditure. Share of salaries and wages are 87% of all revenue expenditure, which is very high. House tax contributes only 12% in the total revenues, which is very low as compared to many other states.

**The operating ratio**, which is the ratio of revenue expenditure to revenue income, is an indicator of profitability of the operations of a local body. For NNPP, it is more than unity indicating that the revenue expenditure is not fully met by revenue income.

**Capital Utilization Ratio** is the ratio of capital expenditure to the capital income. This ratio indicates the performance of the local body in terms of utilization of capital income – it also serves as an indicator of the local bodies' capacity to utilize capital resources. Capital utilization ratio of greater than unity indicates that revenue account surplus has been utilized for capital works, which is a positive feature. A capital utilization ratio below unity indicates that either capital income is being diverted for revenue expenditure or that part of capital income is unspent during the FY under consideration. In case of NNPP, the capital utilization ratio is lesser than unity.

#### 5.3.4 Nainital Nagar Palika Parishad - Issues

Overall, there appears to be lack of experience in handling big infrastructure project. NNPP still depends largely on state government grants for meeting its revenue expenditure.

Efforts are under way for converting the accounts into accrual system of accounting. There is a need to provide suitable training on double-entry accounting/accrual system of accounting.

The arrears (accounts receivable) need to be reduced by streamlining the collection machinery. The revenue collection system is inefficient and the asset management and maintenance is inadequate. There is lack of financial and taxation powers, the NNPP cannot borrow from the market. There is considerable room for review and revision of the current tax rates. The data base and information management is poor and there is a lack of use of technology in infrastructure monitoring.

Newly developed areas have yet to be brought under property / house tax assessment coverage. At present the number of properties assessed as per NNPP records are about 4,923.

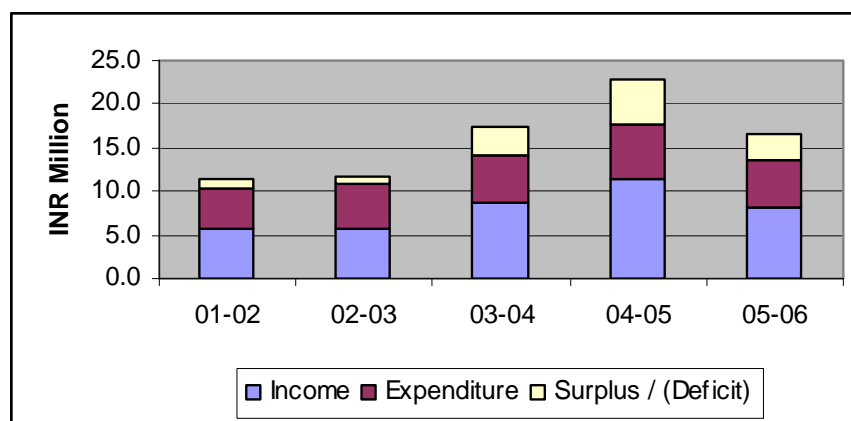
The demand, collection and balance details of NNPP in respect of tax revenues are given in Table 5.7. The tax collection efficiency needs to be improved.

**Table 5.7: Demand, Collection and Balance Status**

Particulars	Rs. Million			
	2002-03	2003-04	2004-05	2005-06
Opening Balance	88.3	80.6	49.6	35.2
Current Demand	90.0	90.0	90.0	120.39
Total Demand	178.3	170.6	139.6	155.58
Total Collections	97.7	121.0	104.5	65.8
Out of which:				
against current demand	56.7	63.5	59.1	29.23
against arrears	26.4	28.2	30.8	18.26
Discounts / rebates	14.6	29.3	14.6	18.3
Closing Balance	80.6	49.6	35.2	89.75
Collection Recovery Trends (%)				
Collections against current demand	63.0%	70.6%	65.6%	24.3%
Collections against arrears demand	29.9%	34.9%	62.0%	51.9%
Total Collections against Total Demand	54.8%	70.9%	74.8%	42.3%

## 5.4 Overview of Nainital Development Authority (NLRSDA) Finances

The income sources of NLRSDA include development charges, compounding fees, conversion charges, interest etc. Over the years the income and expenditure have shown an increasing trend. NLRSDA's income grew at 9.4% and expenses at 4%. Figure 5.7 summarises the financial results for Years 2001-06.

**Figure 5 7: Income and Expenditure of NLRSDA**

Source: Audited accounts

### 5.4.1 Composition of Income

The composition of income of NLRSDA, as per the accounts for the years 2001-02 to 2005-06 is presented in the Table 5.8. The development charges, at 25.8%, contributes maximum to the revenue of NLRSDA followed by sub-division charges (23.7%), compounding fees (16.9%) and interest (16.8%).

**Table 5.8: Composition of Income**

Rs. Million

Income	2004-05 Actual	2005-06 Actual	2006-07 Actual	Avg	Contribution
Sale of Application Forms	0.027	0.041	0.045	0.034	0.3%
Map Fees	0.226	0.257	0.400	0.242	2.5%
Development Charges	3.111	1.982	2.500	2.547	25.8%
Sub-Division Charges	2.554	2.122	3.000	2.338	23.7%
Survey charges	0.000	0.067	0.100	0.034	0.3%
Outside Development charges	0.000	0.050	0.100	0.025	0.3%
Compounding Charges	2.228	1.112	3.000	1.670	16.9%
Appeals Fees	0.010	0.012	0.050	0.011	0.1%
Photocopy charges	0.001	0.001	0.010	0.001	0.0%
Waste Disposal fees	0.459	0.327	0.400	0.393	4.0%
Sale of tender forms	0.024	0.032	0.100	0.028	0.3%
Parking fees	0.153	0.223	0.282	0.188	1.9%
Interest income	1.779	1.540	2.000	1.660	16.8%
2% stamp duty	0.846	0.256	0.500	0.551	5.6%
Rent of properties	0.021	0.014	0.010	0.018	0.2%
Other receipts	0.006	0.231	0.300	0.119	1.2%
Total	11.445	8.267	12.797	9.856	100.0%

Note: All contribution percentages have been determined on average of last three years.

#### 5.4.2 Expenditure

Table 5.9 shows the composition of expenditure of NLRSDA. Out of the total expenses, salaries & wages forms the largest portion at 59.2% followed by waste disposal at 8.4%.

**Table 5.9: Composition of Revenue Expenditure**

Rs. Million

Expenditure	2004-05 Actual	2005-06 Actual	2006-07 Actual	Avg	Contribution
Salaries, wages etc	3.621	3.212	4.500	3.417	59.2%
Office furniture, equip and photo	0.264	0.203	1.500	0.234	4.0%
Petrol and Vehicle maintenance	0.241	0.352	0.450	0.297	5.1%
Waste disposal	0.967	0.005	0.300	0.486	8.4%
Others	1.149	1.519	2.675	1.333	23.3%
Total	6.242	5.291	9.425	5.767	100.0%

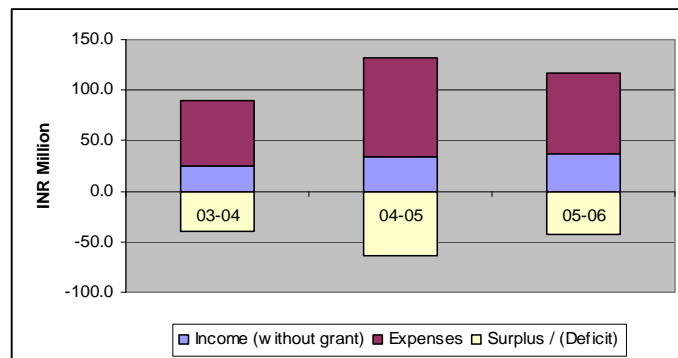
Source: Audited accounts

### 5.5 Financial Performance of UJS (Nainital Division)

Summarised financial position of Nainital division of UJS is presented in Table 5.10. The income does not include operational grant received from State Govt, and the power charges payable to Electricity Board. A review of past 5 years' power charges shows that average annual power charges were about Rs. 22 million.

**Table 5.10: Financial Summary**

Rs. Million			
Financial Summary	2003-04	2004-05	2005-06
Income (without grant)	24.916	34.050	36.639
Expenses	64.174	97.500	80.021
Surplus / (Deficit)	(39.258)	(63.450)	(43.382)

**Figure 5.8: Financial Summary**

As per the information available all the power dues have been settled during the current year with grants received from the State Government. Composition of Income of Nainital Division of Jal Sansthan is given in the Table 5-11

**Table 5.11: Composition of Income – Nainital Division**

Rs. Million			
Income	2003-04	2004-05	2005-06
Water tax	3.854	7.644	5.003
Water charges	18.651	23.302	27.044
Meter rent	0.219	0.069	0.079
Standpost charges	0.382	0.012	0.593
Sewer tax	0.663	1.476	1.029
Other revenues	1.148	1.547	2.892
Total Income	24.916	34.050	36.639

Source: accounts statement

Composition of expenses of Nainital Division of Jal Sansthan is given in Table 5.12.

**Table 5.12: Composition of Expenses – Nainital Division**

Rs. Million			
Expenses	2003-04	2004-05	2005-06
Operational expenses	48.634	81.071	62.696
Operation & maintenance	0.310	0.283	0.458
Establishment	14.818	15.891	16.296
Office expenses	0.412	0.255	0.571
Total	64.174	97.500	80.021

Source: accounts statement

Collection efficiency of the Nainital Jal Sansthan is 67.5% of the total demand. This needs to be improved to achieve minimum 80%. The Table 5.13 depicting

the demand, collection and balance in respect of various items of revenue of this division for the year 2005-06 is given in Table 5.13.

**Table 5.13: Demand, Collection and Balance Statement**

Income Head	Opening balance	Current Demand	Total Demand	Collection	Rs. Million
					Balance 31.3.2006
Water tax	8.423	5.003	13.426	6.530	6.896
Water charges	8.177	27.044	35.221	27.192	8.029
Standposts charges	1.725	0.593	2.318	0.362	1.955
Sewer tax	1.377	1.029	2.406	1.236	1.170
Other charges	0.356	2.970	3.326	2.970	0.358
Total Income	20.058	36.639	56.697	38.289	18.409

Source: accounts statement

## 6. City SWOT Analysis and Vision

### 6.1 City Perspective

Nainital city started its journey from a summer capital of the Northern Province in the mid nineteenth century to a popular tourist destination of to-day. What was once an abode of rich and mighty has become a place to take a break from the burning plains of north during summer, the lake being the centre piece offering beauty and serenity. Along with tourists, came the hotel industry, shopkeepers and traders, raising population, putting pressure on land and urban infrastructure. In addition to the human pressure, the natural formation has undergone changes, some of it is in the form of siltation in lake, landslides along adjoining hill slopes and changes in topsoil and vegetation. A stage was reached, when the hon'ble court had to intervene to stop any further construction in certain areas. Virtually, buildable land within city municipal limits is hardly available.

To-day the city is still growing, obviously shifting the growth southwards to wherever buildable land is available. The citizens of Nainital, who grew-up with the lakes and hills, is not too pleased with the present state of affairs and the forces affecting their ifestyle and expectations. They want to 'retain' the ecologically sound and beautiful character' of Nainital, yet seek an efficient urban management with a progressive and healthy economy.

Clearly, the city needs a well directed growth to sustain the economy, primarily based on tourism. Protecting natural environment, which is the main asset of the city becomes all the more important towards sustainability of the city.

### 6.2 SWOT Analysis

The existing situation analysis were carried out first by using all available data and information from various departments and agencies concerned with urban services and functions. Data gaps were identified and these information gaps were bridged and supplemented (i) through extensive discussion with the concerned departments and agencies and (ii) by conducting a city-wide survey. The survey was carried out to supplement information and data available from various departments and agencies. Further, first-hand information about citizens' satisfaction and opinion about urban services, priorities and willingness to participate in development were also obtained from the survey. Simultaneously, extensive participatory consultation with all stakeholders were carried out in Nainital.

Based on the existing situation analysis and extensive participatory consultation with primary and secondary stakeholders, City's strengths, weaknesses, opportunities and threats are given in the following table. Table 6.1 presents the SWOT analysis done at City level and Table 6.2 presents the SWOT analysis for the specific urban sectors.



Table 6.1: City Level SWOT Analysis

<p style="text-align: center;"><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>❑ Nainital is well known for its lakes surrounded by Himalayan mountains</li> <li>❑ Its pristine natural beauty attracts tourists from all over the country and the world</li> <li>❑ Old hill station in the northern tourist circuit</li> <li>❑ Good connectivity to Delhi and neighbouring tourist destinations by road</li> <li>❑ An important seat of administration and institutions such as High Court, ATI, Kumaon University, etc</li> </ul>	<p style="text-align: center;"><b>WEAKNESSES</b></p> <ul style="list-style-type: none"> <li>❑ Lack of developable land. Most of the area lies in ecologically sensitive zones</li> <li>❑ Lack of high end tourism infrastructure</li> <li>❑ Hurdles in creating connectivity by trains and Air</li> <li>❑ Increased pressure on existing infrastructure services especially transport, parking due to heavy tourist flow</li> </ul>
<p style="text-align: center;"><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>❑ Potential to restore the built heritage and natural resources to tap high end tourism</li> <li>❑ Excellent potential to develop eco tourism, adventure tourism , etc</li> <li>❑ Strategic location for tapping tourism potential in the region - <i>Bhimtal, Naukutchiyatal, Saattal</i>, etc</li> <li>❑ Potential for developing residential schools and institutions of higher studies</li> </ul>	<p style="text-align: center;"><b>THREATS</b></p> <ul style="list-style-type: none"> <li>❑ Unauthorised construction activities in ecologically fragile zones</li> <li>❑ Surrounding hills are prone to landslides</li> <li>❑ Disaster prone area</li> <li>❑ Increasing water pollution in <i>Nainital</i></li> </ul>

Table 6.2: SWOT Analysis of Urban Sectors

Sectors	Strengths	Weakness	Opportunities	Threats
<b>Physical Growth and Environmental Aspects</b>	<ul style="list-style-type: none"> <li>▪ Scenic beauty of surrounding hills, mountains, lake and green areas</li> <li>▪ Better connectivity with other tourist destinations in Kumaon region</li> <li>▪ Presence of many institutions including High Court, Kumaon University, ATI, etc</li> </ul>	<ul style="list-style-type: none"> <li>▪ Physical growth restricted by hills, forests and water bodies</li> <li>▪ Deterioration of buildings and infrastructure services in old city areas</li> <li>▪ Encroachments in hilly areas</li> <li>▪ Lack of developed land for urban growth in NNPP Boundary</li> <li>▪ Growth of slums and squatters on hills leading to environmental degradation</li> <li>▪ Non Compliance with development controls</li> </ul>	<ul style="list-style-type: none"> <li>▪ Suitable terrain and better accessibility towards south and west for future development</li> <li>▪ Opportunity to develop satellite townships in areas such as Khurpatal</li> <li>▪ Good potential for development of educational institutions around Nainital</li> <li>▪ Better scope for regional development as NLRSDA covers all the major five lakes in the region</li> </ul>	<ul style="list-style-type: none"> <li>▪ Unauthorised construction in areas earmarked as 'prohibited areas' which are declared as unsafe for any construction activity</li> <li>▪ High incidence of landslides in surrounding hills</li> <li>▪ Disaster prone area</li> <li>▪ Unplanned growth could lead to degradation of eco-system</li> <li>▪ Increasing water pollution in Nainital</li> </ul>
<b>Water Supply</b>	<ul style="list-style-type: none"> <li>▪ Good quality water available from tubewells and infiltration well.</li> <li>▪ Assured source – tubewells and infiltration wells along lake.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Supply dependent on pumping.</li> <li>▪ Water charges too low against high cost of production.</li> <li>▪ Old Pipeline in the city in a dilapidated condition.</li> <li>▪ Data base on existing pipeline network not available.</li> <li>▪ Huge UFW loss.</li> <li>▪ Zones being open – cause unequal distribution.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Stakeholders willing to pay more for better services</li> <li>▪ State Government and Institutions have shown a strong commitment to improve the town (during vision exercise)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Water tariff revision may face some opposition from Consumers.</li> <li>▪ Tampering with the sizes of sanctioned connection by some consumers</li> </ul>
<b>Sewerage</b>	<ul style="list-style-type: none"> <li>▪ More than 80 % Sewerage network</li> <li>▪ Highly aware and sensitive public on lake Pollution.</li> <li>▪ Many ongoing project on lake conservation the Government of India.</li> <li>▪ Strict enforcement measures due to the location of high courts.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Landslide prone areas.</li> <li>▪ No comprehensive lake water balance and water quality model.</li> <li>▪ No existing sewage treatment plants.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Better Environment for residents and tourists.</li> <li>▪ Treated sewage and sludge could be effectively reuse for agriculture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Complete dependence on grant from GoU for O &amp; M expenditure</li> </ul>

Sectors	Strengths	Weakness	Opportunities	Threats
<b>Drainage</b>	<ul style="list-style-type: none"> <li>Adequate natural gradients are available for achieving self cleansing velocities for open and under ground drainage system.</li> <li>Existence of good basic infrastructure of drainage system</li> </ul>	<ul style="list-style-type: none"> <li>Habits of discharging domestic waste and dumping garbage into drains.</li> <li>Uncontrolled encroachment of drains</li> <li>Diversion of road side drains in to sewers</li> </ul>	<ul style="list-style-type: none"> <li>Willingness of the stake holders to bring about positive change in the system and ready to bear some of its responsibility.</li> <li>Availability of funds under JNNURM and ADB loan package.</li> </ul>	<ul style="list-style-type: none"> <li>The improvement programme may meet some opposition from encroachers and commercial quarters who will have to arrange for alternative disposal systems which may be more costly.</li> <li>The present momentums getting lost due to undue delay in implementation.</li> </ul>
<b>Solid Waste Management</b>	<ul style="list-style-type: none"> <li>Support available from GoU</li> <li>Desire of citizens for a clean city</li> </ul>	<ul style="list-style-type: none"> <li>Non availability of suitable disposal site near the city</li> <li>No segregation at source</li> <li>Poor primary collection</li> <li>Indiscriminate dumping of waste in stormwater drains, lake, streets and open spaces</li> <li>No scientific disposal of solid waste exists</li> <li>Waste remains unattended due to inaccessibility of considerable parts of city by the existing SW transport vehicles</li> <li>Inadequate and improper vehicles and equipments</li> <li>Lack of awareness and motivation among citizens</li> <li>Lack of knowledge and training among existing staff to manage the city waste</li> </ul>	<ul style="list-style-type: none"> <li>Scope for segregation of bio degradable waste</li> <li>Scope for decentralisation of waste processing/treatment</li> <li>Improvement of existing collection and transportation either by augmenting the present vehicles and equipment or by engaging community and private sectors</li> <li>Wide scope for betterment of SWM systems to keep the city clean which attracts many tourists</li> </ul>	<ul style="list-style-type: none"> <li>Lack of technical expertise in planning, implementation and O&amp;M</li> <li>Widespread use of polythene</li> <li>Poor participation from community, NGOs and private sector along with limited capacity of NPP, degradation of city environment and aesthetics</li> </ul>
<b>Roads, Parking and Public Transportation</b>	<ul style="list-style-type: none"> <li>GoU is committed to improve the roads and transportation</li> <li>Tourists are willing to pay user charges in the form of parking and</li> </ul>	<ul style="list-style-type: none"> <li>Lack of space to build roads</li> <li>Huge pressure of traffic vis a vis availability of roads and</li> </ul>	<ul style="list-style-type: none"> <li>GoU is ready to provide funds</li> <li>Move to decongest town is already on</li> </ul>	<ul style="list-style-type: none"> <li>Conflict of interest between residents and tourists</li> <li>Public resistance towards</li> </ul>

Sectors	Strengths	Weakness	Opportunities	Threats
	entry fee	alignments <ul style="list-style-type: none"> <li>Higher cost of construction due to hilly terrain</li> </ul>		acquisition of land for construction of bypass and off street parking <ul style="list-style-type: none"> <li>Limitations due to geological features</li> </ul>
<b>Urban Poor</b>	<ul style="list-style-type: none"> <li>Poverty pockets are relatively less in number</li> <li>Good awareness level in some pockets</li> <li>Coordination with DUDA</li> </ul>	<ul style="list-style-type: none"> <li>Inadequate housing provision</li> <li>Inadequate level of basic services</li> <li>Nonfunctional streetlights</li> <li>Lack of regular maintenance of facilities</li> <li>Lack of clear policy with regard to land tenure</li> <li>Non adherence to master plan</li> </ul>	<ul style="list-style-type: none"> <li>Scope for reactivation of existing community groups and formation of new ones</li> <li>Scope for NNPP to establish urban poverty alleviation cell</li> </ul>	<ul style="list-style-type: none"> <li>High level of encroachment in open areas, hill slopes</li> <li>Insecurity of uprooting of squatter settlements</li> <li>Unsanitary conditions leading to poor health and hygiene</li> </ul>
<b>Governance and Institutional</b>	<ul style="list-style-type: none"> <li>Initiative of the state to bring about reforms in the present institutional structure to improve urban governance</li> <li>Administrative Training Institute is located in Nainital</li> <li>Level of awareness among citizenry is relatively high</li> </ul>	<ul style="list-style-type: none"> <li>Major municipal functions have not been devolved to NNPP</li> <li>Multiplicity of development authorities</li> <li>Lack of coordination among authorities</li> <li>Poor Institutional capacity</li> <li>Inadequate capacity of the NNPP to provide essential services</li> </ul>	<ul style="list-style-type: none"> <li>New Municipal Law drafted by GoU is expected to empower the ULBs in conformity with the provisions of 74th CAA</li> <li>Uttarakhand being a new and a special category state, lot of scope for innovative approaches for streamlining development process</li> </ul>	<ul style="list-style-type: none"> <li>Gradual narrowing of the role of Nainital NPP due to increasing number of parastatal bodies</li> <li>Capacity building of all the government organisations if inadequate would result in non-implementation of several reforms</li> <li>Continuation of centralized approach</li> </ul>
<b>Municipal Finance</b>	<ul style="list-style-type: none"> <li>Nainital is the tourist hub of the special category state of Uttarakhand and thus eligible for higher percentage of grants from GoI for tourism developmental projects</li> </ul>	<ul style="list-style-type: none"> <li>Low capacity to generate revenues from own revenue sources</li> </ul>	<ul style="list-style-type: none"> <li>Potential for higher revenue generation from tourists</li> </ul>	<ul style="list-style-type: none"> <li>Capacity building of all the government organisations if inadequate would result in non-implementation of several reforms</li> <li>Fiscal reforms are key for carrying out projects and provision of infrastructure in a sustainable manner</li> </ul>

### 6.3 Stakeholders Consultations – Vision Exercise

The City vision and the sector strategies have been developed considering the issues identified in the SWOT analysis in consultation with primary (elected representatives of people) and secondary stakeholders. The consultation process included public workshops and discussion groups at each stage of strategy and action plan preparation. All the relevant state-level stakeholders (e.g., Secretaries and top echelons of para-statal those who guide policy formulation). The Nainital NPP and many of the important City-level government institutions, e.g para-statal organizations like the UJS and UPJN, NLRSA have contributed to the preparation of the vision as have NGOs, eminent citizens and private sector representatives.

**Figure 6.2: Pictures Showing Vision Workshop led by Chairperson**



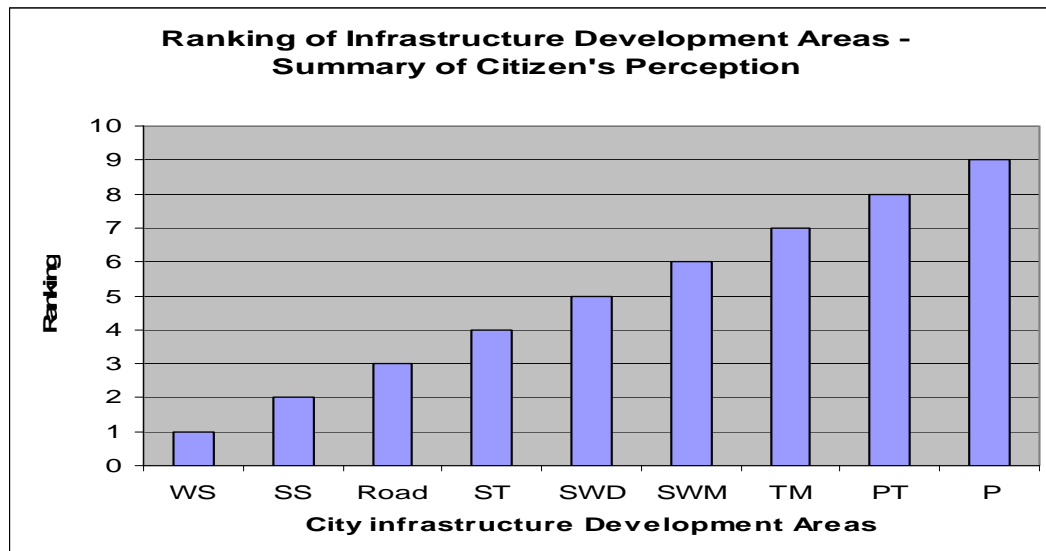
The “City Vision” has thus been developed in a collective, conscientious and participatory manner.

#### 6.3.1 Stakeholders’ Perceptions

Questionnaire, designed specifically, were distributed to citizens present in the vision meeting. The format of the questionnaire is available in Annex 6. Based on the rankings given by the participants, the ranking of the City infrastructure development areas have been carried out. Table 6.3 provides the details and the result is depicted in Figure 6.2 below.

**Table 6.3: Summary of Citizen's Perceptions**

City Infrastructure and Development Areas	CIDA	Ranking (1-most important, 9-least important .)	Summary / Average
Water Supply	WS	1	2.3
Sewerage and Sanitation	SS	2	2.9
Road	Road	3	5.1
Street lighting	ST	4	5.2
Storm Water Drainage	SWD	5	5.2
Solid Waste Management	SWM	6	5.5
Traffic Management	TM	7	5.5
Public Transport (Bus, Vikram, 3 wheeler, cycle Rickshaw, any other)	PT	8	6.4
Parking	P	9	7.1

**Figure 6.2: Ranking of Infrastructure Priorities**

Views of stakeholders on city vision are summarised below::

- Nainital - a city of peace, prosperity and balanced development with all public facilities
- Nainital should be clean, pollution free and free of encroachment.
- Tourist destination with planned development of infrastructure
- Nainital city to have proper electricity & water supply
- Well managed city
- City should be clean, green with proper parking place, water supply and electricity. Encroachment should be checked
- Clean and green city
- Beautiful city with all facilities
- Development in all sectors
- Development with ecologically safety
- Economic development through regional tourism development

Views of stakeholders on overall city development issues are summarised below:

- Good governance and community participation in decision making
- Controlled development
- Strict compliance of rules and regulations
- Co-ordination among different organization for achieving the goal for city development.
- Citizens are willing to pay for better city services.
- Increased economic development opportunities
- Bye pass road which proposed by PWD Nainital to be considered in CDP
- Better connectivity and road infrastructure for development of tourism
- New construction to ensure safety against earthquakes
- Sukhatal must be revived and developed as a recharge lake for main lake
- Maintenance of drainage system
- Development of parking areas for small & big vehicles.
- Development of satellite townships especially for EWS
- Tourism development to increase stay of tourists in Nainital
- Lake Aeration Plan and Lake Silt Siphon Plan (already consider by LDA)
- Preparation of heritage conservation plan
- Development of tourist haat
- Promotion of horticulture which would also promote tourism
- Underground cabling for street lighting, communications etc
- Launch pilot projects for door to door collection of solid waste on PPP and scaling up to town level
- Evolve accountable on responsive institutional mechanism for service delivery
- Lake conservation, protection and development
- Development of built and natural heritage sites
- Ropeway from new club to snow view
- Provision for retaining walls on slopes prone to land slide
- Promote tourism as an industry. Identify projects to promote regional culture.
- Few initiatives/projects which can be taken in this direction include:
  - (a) Package tourism
  - (b) Adventure sports/ National events
  - (c) Quality hotels
  - (d) Culture events
  - (e) Good lighting in the town

## 6.4 Vision Statement

The views of stakeholders have been consolidated to form the city vision. The vision statement of Nainital from the perspective of the primary stakeholder who is the citizen of Nainital as adopted in the vision meeting is presented below:

**"I want to live in an ecologically sound and beautiful Nainital that is well managed with efficient public services, a healthy economy and a natural and built environment that retains its unique character"**

## 6.5 Sector Vision and Goals

Six working groups were formed to discuss sector vision and goals. The sub-groups were as follows:

- Institutional and Finance
- Solid Waste Management and Environment
- Roads, Traffic and Transport
- Water, Sewerage and Sanitation
- Urban Planning, Tourism and Industries
- Urban Poor and Slum Development

These groups held focussed group discussions. Each sub-group comprised of citizens, representatives of CBOs/NGOs, officials of para-statal bodies (e.g., for Roads & Transportation group, representatives from PWD, Police (traffic), Nagar Palika Parishad etc.) and Consultants' subject experts. After discussions on the sector vision over the next 20 - 25 years, interventions were discussed, identified and consensus was reached in prioritizing them. The vision and strategies for each sector is presented in the next chapter.

**Figure 6.3: Group Discussions - Consultants Team and Stakeholder**





## 7. Sector Strategies and Identification of Projects and Programme Interventions

In this chapter, each sector is discussed commencing from the sector vision, goals and strategies to achieve the vision leading to intervention and action plans for each sector. Projects have been identified wherever relevant and prioritised as short term, medium term and long term. These projects have been costed and the estimated costs leading to a City Investment Plan, presented in Chapter 8.

### 7.1 Economic Development

Due to its hilly terrain there is no visible possibility of reckonable growth in the secondary sector of the economy of Nainital. On the other hand, evidently the tertiary sector seems to be the engine of economic growth in this town. Most of the activities under the tertiary sector is related to tourism. In the year 2005, the tourist arrivals in Nainital exceeded 5 lakhs as compared the regular population (estimated) of 44,000 in that year.

In its Vision statement in the New Industrial Policy – 2003, the State Government emphasizes tourism development in the following words:

**‘To promote tourism as a focus area and develop Uttarakhand as a tourism premier global tourism destination.’**

#### 7.1.1 Economic Development Strategy

##### ***Infrastructure Development***

- To provide for uninterrupted power supply.
- To upgrade road connectivity.

##### ***Promotion of Private Sector Investment or PPP***

- To develop and upgrade infrastructure.
- To provide more resorts and star hotels for high spending tourists
- To promote supply of economic accommodation and provision of affordable amusements for middle class tourists.
- To promote and develop facilities for tourism activities like trekking, adventure tourisms, high altitude games, etc. .
- To develop ropeways for reaching high altitude tourist destinations
- To promote shopping complexes and recreational centres.

##### ***Facilitate Research and Development of Herbal Medicines***

##### ***Conservation of Built Heritage***

An aspect of tourism that has the potentiality of contributing significantly to the economy of the city needs special mention. The critical of issue heritage conservation has not yet been addressed. Besides the pre-dominant natural heritage, Nainital’s built heritage is reckonable. The first cottage constructed after Mr Barron discovered this site of pristine beauty in 1841, .is now at the verge of extinction; and the residence of famous and immortal Jim Corbett is in a dilapidated condition now. There are many old churches about which the tourists are not aware due to lack of

publicity. These are only a few examples of built heritage sites that have high potentiality of tourist attraction.

Social and cultural heritage is another area that attracts attention. The old narrow lanes with steep rise and slopes, lined with small houses and shops – including those of local handicrafts, and so on that permits a glimpse of the typical traditional life style of the local hill people could be an attraction for those who are interested in heritage tourism. Again, a heritage village, like the ones that have experienced tremendous success in some other Asian countries (e.g. Chiangmai in Thailand) could boost tourism, particularly high end tourism.

Conservation of built heritage, developing social and cultural tourist attractions, their promotion and marketing, and of course development of infrastructure together would ensure substantial positive impact on the economy of Nainital city and its growth, particularly on the tertiary sector, which is and will remain the dominant economic sector in this town.

## 7.2 Urban Renewal, Area Development and Environment

The vision and strategies for urban renewal and area development are summarised in the following table:

**Table 7.1: Vision and Strategies for Urban Renewal and Area Development**

Vision	Issues	Strategies
Planned Physical Development in Nainital which respects the nature, safeguards the lives of its citizens and improves their quality of life	<ul style="list-style-type: none"> <li>• Lack of developable land in Nainital NPP</li> <li>• Unauthorised construction in Ecologically Fragile Areas</li> <li>• Vulnerable built structures in old city areas</li> <li>• Shortfall of EWS Housing</li> <li>• Growth of Squatter settlements</li> <li>• Unsafe construction specifically by lower income groups</li> </ul>	<ul style="list-style-type: none"> <li>• Strict enforcement of development controls to restrict construction in Prohibited areas</li> <li>• Decongest high density areas in city by relocating the activities out of Nainital to a suitable and environmentally safe place</li> <li>• Upgrade services in old congested city areas</li> <li>• Identify vulnerable structures in the city and take immediate measures for relocation or retrofitting of dangerous buildings</li> <li>• Provide serviced land in surrounding areas for residential development with efficient public transport to accommodate future population growth</li> <li>• Implement measures to check waste disposal on the hill slopes and water bodies</li> <li>• Ensure safe construction practices by training masons and labour</li> <li>• Promote conducive architecture using local material</li> </ul>

### **Environmental Management Strategies**

The environment of a city is a critical determinant of the health of its inhabitants and consequently productivity. The environmental pollution in the city is becoming a major concern due to increase of population, urbanization and transportation in the recent years. To protect environment and mitigate urban environmental pollution, the following strategies are suggested:

- The concerned authorities should provide adequate provisions for parks, green belts and plantation of trees at the planning stage for development of an area.
- Protection of environmental resources such as forest, land, water body etc.
- Government of Uttarakhand (GoU) should frame bye laws to incorporate environmental protection laws.

- GoU should take necessary measures to make it mandatory for use of alternative fuels (i.e. CNG, Battery operated vehicles etc.) for public transport vehicles and improve traffic management system of the city, particularly in the Mall Road for mitigation of air pollution.
- Compliance of the MSW (Management & Handling) Rules, 2000 including identification and selection of alternative sites for landfill and composting for safe disposal of MSW of the city.
- Wider coverage of the city by sewerage network and house connections and providing treatment facilities of the sewage for its safe disposal.
- Proper maintenance of the existing sewers and water supply pipelines to ensure minimum leakage.

### **Identification of Projects**

This section details out various project interventions for urban renewal, new area development and environmental upgradation.

- Improvement works in old city areas – In the old congested areas of the city, interventions such as underground cabling, paving of streets, refurbishment of steps, removal of encroachments are required. Following areas have been identified for the above mentioned improvement works after field visits and stakeholder consultations:
  - Mallital Bazaar
  - Beech Ki Bazar
  - Jailal Shah Bazar
  - Tallital Bazaar
  - Bakery Area
- Relocation plan for identified vulnerable structures in old city areas. This would require following specific sub projects:
  - Survey of buildings in old areas and identification of vulnerable buildings.
  - Feasibility study to explore the mechanism of Transferable Development Rights (TDRs) for citizens who want to relocate to other sites
  - Relocation Plan using TDR and a secondary option which will provide partial financial assistance from the government funds to citizens who are willing to retrofit their buildings. The funds are proposed to be channelised through NLRSA
- New Area Development (sites and services) in surrounding areas such as Khurpatal, etc., in addition to provision for urban poor. Provision for development of Sites and Services for the identified 4,800 EWS housing and for new area development in surrounding areas for the housing requirement upto 2025 (Population 79,000) has been made. The provisional amount has been calculated keeping in view the needs for group housing in the identified areas. This also includes requirements of sites for families relocated out of identified old, dilapidated buildings in NNPP area.
- Lake Front Development with flowerbeds, walkways and other such areas for public utility
- Protection of soil erosion and land slides by slope stabilization and treatment of surrounding hills such as Cheena Ridge, Alma Ridge, Sher Ka Danda Ridge and Rajbhavan Ridge
- Comprehensive lake water balance and water quality modeling studies for controlling Eutrophication in the lake.

### 7.3 Water Supply

In order to prepare a strategy to achieve the sector vision it may be advisable to refer to the National and State Policies on water. The National Policy emphasises on:

- Drinking water must get the top most priority on water allocation.
- Adequate safe drinking water must be provided to the entire population.
- Need to ensure that water charges must cover at least the operation & maintenance cost part of the capital cost subsequently.
- Private Sector participation in planning and management should be encouraged where ever feasible.

The State policy of Government of Uttarakhand is under preparation. It is understood that the GoU, keeping in view the difficulty of hilly terrain and low per capita income, is working on an appropriate policy to provide clean, potable water in adequate quantity for all in the whole of rural and urban areas of Uttarakhand. This generally follows the national policy.

#### ***Suggested Intervention to Achieve Sector Vision***

##### **Assessment of Future Water Demand**

While assessing the per capita water demand for floating population, it is considered that their demand will be less compared to the resident population. Accordingly, a reduction factor of 0.5 till 2011 and 0.55 for subsequent years has been applied. The reduction of losses over a period of 15 years has also been assumed as a result of continued system improvement. Based on these assumptions and design parameters, the water demand of Nainital is calculated as follows:

**Table 7.2: Assessment of Water Demand**

Year	Total Population (000)			Total Population (000)	Water demand [@ 135 lpcd] mld	Add allowance for losses mld	Total Water Demand mld	Present Production mld	Deficit mld
	Permanent	Floating <sup>4</sup>	Total						
2006	45.32	(0.50) 56.7	73.7	74.0	9.99	30% 4.28	14.27	14.32	+0.05
2011	52.54	(0.52) 63.0	85.3	85.0	11.54	25% 3.84	15.39	14.32	-1.07
2016	60.91	(0.56) 69.6	99.9	100.0	13.50	20% 3.37	16.80	14.32	-2.48
2021	70.61	(0.56) 76.9	113.6	115.0	15.50	15% 2.73	18.26	14.32	-3.94
2036	98.23	(0.56) 103.5	156.2	157.0	21.19	15% 3.74	24.93	14.32	-10.61

##### **Storage**

Based on the water demand as estimated above the capacity requirement of water storage reservoirs are assessed in the table below.

<sup>4</sup> Reduction factor for conversion to equivalent resident population shown in parenthesis

**Table 7.3: Assessment of Storage**

Year	Total Population (000)			Water demand mld	Total Storage Capacity Required @ 10 hours Storage kl	Total Storage Available kl	Shortfall kl
	Permanent	Floating	Total				
2006	45.32	(0.50) 56.7	73.7	14.27	5945	5754	191
2011	52.54	(0.52) 63.0	85.3	15.39	6412	5754	658
2016	60.91	(0.56) 69.6	99.9	16.80	7000	5754	1246
2021	70.61	(0.56) 76.9	113.6	18.26	7608	5754	1854
2036	98.23	(0.56) 103.5	156.2	24.93	10387	5754	4633

Note: At present total storage capacity is 5754 kl in addition to this a new reservoir of 900kl is under construction which shall make the total reservoir capacity is equal to 6654kl and shortfall shown above will be decreased by 900 kl.

### **Phased Interventions**

Interventions to realize the vision of health, water supply and protection of environment and their implementation has proposed in a phased manner. The first phase i.e., to satisfy the requirement till 2021 will be implemented during 2007-13. Requirements beyond 2021 and till 2036 is proposed to be implemented during 2014-25. These phased interventions have been included in this plan. This has been developed after series of discussions with UJS and UPJN, and also primary stakeholders.

Due to steep slopes and great difference in the elevation of different areas big reservoirs are not practicable. Space also being a big problem in Nainital special provision for the cost of land has been made for facilities such as reservoirs, tubewells and building works etc.

The provision of water has been made @135 lpcd keeping an extra allowance of 15% for wastage.

### **Phase 1 Works**

Immediate requirement of the water supply system needed for proper running and maintenance along with the works needed for the population the year upto the year 2021 have been included in the Phase 1. These works are proposed to be completed by the year 2012-13 These works include:

- construction of new tubewells or infiltration wells,
- CWR's for the requirement of 2021 population,
- reorganisation of distribution system in old affected areas,
- replacement of old pipes in dilapidated condition,
- replacement of rising mains,
- rehabilitation of old water works, and
- provision of water softening plant SCADA with complete automation and installation of bulk water meters etc.

#### **1. Replacement of Pipelines**

##### **a) Replacement of Old and Damaged Distribution Mains in Old City Areas**

The following areas in the old city in which such replacement is required are listed below. The range of diameter varies from 40 mm to 150 mm. Total length estimated is 50 km.

Mallital Bazar 2. Tallital Bazar 3. Tonchy 4. All the lanes of Old Nainital and other areas.

In addition to the above, pipelines, which have come under stone pavements in various localities of Nainital has also been included in Phase 1 intervention.

**b) Areas of City where Pipeline in Proposed to be Reorganised**

1. Charlton lodge compound. 2. Back of Nainital Club, 3. 7 No. Residential Area, 4. Mallital and Tallital area, 5. Long view, 6. Mohan Park etc.

**Table 7.4: List of Works in Phase 1**

S.No.	Project Component
1.	Construction of Tube well / Infiltration well, including Pump house, Pumping Plant rising main etc. and all works needed for the Commissioning of 2 Nos plants of 2 mld each.
2.	Reorganisation of distribution system 15 km long, 65mm to 150mm (Av dia 100 mm) @ Rs. 850/m.
3.	Leak detection and water and power audit
4.	Establishment of a fully equipped water testing laboratory
5.	Replacement of old and damaged distribution mains (40 mm to 150 mm Dia.) in the old city-50 km
6.	GIS based pipeline network mapping in Naintal
7.	Replacement of pipeline which have come under road or stone masonry stairs in the lanes. 10 km av. Dia 80 mm @ 400/m
8.	Replacement of rising mains av. dia 200mm 20 km
9.	Staff Quarters Tax collection Centres Office Buildings etc.
10.	Installation of India mark-II H.P. 25 Nos. for floating population
11.	Development & repairs of 6 Nos. old Tubewells & cleaning of one No. infiltration well
12.	Replacement of old steel CWR's at 4 places (pilgrim, Tonchy, Inter china, Ayarpata) Total capacity 2000 kl
13.	Energy meters at 50 pumps @ Rs. 10000 / each
14.	Stand by Pumps 5 Nos. (40 HP to 100 HP) @ 25.0 Lac each
15.	Renovation & replacement of old filter plants (1955) 8 mld
16.	Procurement of spare parts for existing pumping plants and their repairs
17.	Construction system control rooms 4 nos.
18.	Conversion to online Billing & collection system
19.	Reconstruction of old pump house housing 17 Nos. pumping plants at old Water Treatment Plant
20.	Construction of break pressure tanks - 10 Nos.
21.	Provision of two water softening plants 5 mld each.

**Phase 2 Works**

Additional works needed beyond 2021 for the requirement of population upto 2036 have been taken in the next phase of intervention. These works include tapping of new surface source of water construction of additional tubewells/ infiltration wells and CWR's for 2036 population. Installation of SCADA, replacement of old pumping plants and installation of bulk water meters have also been included in these works. The list of works is given in Table 7.5.

**Table 7.5: List of Works Required for Population upto 2036**

S.No.	Project Components
1.	Tapping of new sources of surface water, including filtration if necessary, Pump house, Pumping Plant rising main etc. and all works needed for the Commissioning 11 mld
2.	Construction of CWR various capacities total capacity 3733 kl
3.	Installation of SCADA System on the pumps for new sources 10 mld
4.	Replacement of Damaged / Old Pumping Plants (50 to 200 HP) 10 Nos.
5.	Supply and Installation of mechanical bulk water meters 4 Nos CWR's & 2 Nos. Tubewells

## 7.4 Sewerage

### *Vision*

**‘100 % sewage collection, sustainable treatment and reuse by the year 2025’**

### *Action Plan For Nainital Sewerage System*

To cater the current service gap as well as medium term needs of the estimated population by 2021 an additional new 9.0 km of sewerage network is proposed to be put in place by 2011-2012. In addition augmentation old sewer network of 5.0 km length is proposed. Two new small scale decentralized STP of 2 + 2 MLD capacity based on SBR or other advanced aerobic technology is proposed for Zone II and Zone IV. However, due to very less sewage generation from Zone III, a 0.4 MLD STP based on package system (Anaerobic-Aerobic Type) was recommended. Due to the consistent eutrophication of lake, comprehensive water quality and balance studies along with GIS mapping of the existing sewerage system is proposed. In addition sewer cleaning equipments and slope stabilization is also proposed. In this manner, the total investment would be Rs 1750 lacs.

**Table 7.6: Identified Projects for Sewerage**

Zones	New Projects
Zone I Nainital lake Catchment Zone	Augmentation of old sewer network = 5 km sewer length GIS based mapping of the existing sewerage system Sewer cleaning equipments such as suction machine, PGM etc. Slope stabilization of outfall sewer with advanced nailing and short crete technologies (4000 m2 @Rs 5000/m2)
Zone II Sukha Tal Zone	New 2 MLD decentralized STP for Sukha Tal Zone (MBR or SBR Based)
Zone III Narayana Nagar Zone	New Sewerage scheme for Narayana Nagar area= 2 km sewer Length New 0.4 MLD STP based on package system (Anaerobic-Aerobic Type)
Zone IV Hari Nagar-Krishnapur Zone	New Sewerage scheme for Hari Nagar area= 2 km sewer Length New Sewerage scheme for Krishna Pur area= 5 km sewer Length New 2 MLD STP based on SBR Technology

**Table 7.7: Action Plan for Implementation**

Capital Facilities	New Sewerage Schemes. (9.0 km)
	Old Sewer Network augmentation by about – (5.0 km)
	New STP's 4.4 MLD
	Slope stabilization of outfall sewer with advanced nailing and short crete technologies.
	Sewer cleaning equipments such as suction machine, PGM etc
	GIS based mapping of the existing sewerage system:
Sector Notes	<p>Action plan for the prevention of landslides should be undertaken.</p> <p>Prevention of entering municipal solid waste and silt in the sewer line.</p> <p>Prevention of lakeside walking along with pets.</p> <p>Prevention of open defecation around lakes.</p> <p>Keep sewer at reasonable distance from water line to avoid contamination.</p> <p>Improve and ensure access to sanitary services for the urban poor and slum dwellers.</p> <p>Encourage pay and use category of public conveniences with community involvement in the maintenance of the same.</p>
Performance Monitoring Indicators	Cost recovery on service is possible only through the introduction of sewerage charges directly or in the form of tax or introduction of sewerage surcharge in the water bills from local and tourists. This however needs political will.

**New Sewerage Schemes For Proposed Areas**

Proposed Location of Sukha Tal STP (Zone II)



Proposed Sewerage Schemes for Narayana Nagar Area (Zone III)



Proposed Sewerage Schemes for Hari Nagar &amp; Krishnapur areas (Zone IV)



## 7.5 Storm Water Drainage

The sector vision clearly states that the GoU is fully aware of the sector goal to have a problem free storm water drainage system in the whole of the town. The strategies that ought to be in place are:

1. Strict control against dumping of garbage in the drains.
2. Awareness campaign to educate the masses.
3. Regular cleaning and maintenance of drains.
4. Banning the use of plastic bags.
5. Discontinue the practice of connecting the toilet outlets to the drains.
6. The practice of diversion of surface drains in to sewers should be stopped.

The problems were discussed with UJS, UPJN and Nainital Nagar Palika officials along with public representatives in addition to the field visits.

### ***Works under Lake Conservation Programme***

Under National lake conservation and management project, several works are under implementation at Nainital. A brief description of works related to storm water drainage system and its performance is given below:

1. Disconnection of drainage system from sewers as 36 points list provided in Annex 3.4.2.
2. Balia Nalla protection works.
3. Outlet works at Tallital.
4. Construction of community toilets in catchment area.

In consideration of above, the works mentioned at serial No. 1 and 2 i.e. disconnection of drainage system from sewers and Balia *Nalla* protection works have not been included in this Plan. Out of 36 points, approximately 28 to 30 are already complete, rest are in progress

The following main proposals are recommended as part of the Phased Action Plan:

1. Reconstruction of road side surface masonry drains in damaged portions
2. Rehabilitation of existing main drains
3. Removal of obstruction from the drains
4. Slab culverts for internal roads
5. Precast covers over the drains
6. Construction of crosswalls and catchpits
7. Provision of fine screens with platforms for cleaning
8. Laying of under ground 450mm pipes in small lengths
9. Provision of manholes of 900mm or other openings where existing
10. Drains have been permanently covered other misc. works
11. Outfall structures

It may be ascertained at the DPR level that if any part of the works concerning item No. 3 and 10 have been taken up under lake protection works, the same may not be

included for the preparation of the DPR. The list of works proposed showing approximate quantities under Phase 1 (2007-13) is shown in Table 7.8.

**Table 7.8: Storm Water Drainage Projects under Phase 1 (includes Costing Criteria)**

S. No.	Projects	Unit Cost (Rs.)	Quantity
1	a) Repairs of beds and sides of main drains and catchpits in stone masonry av. section 1.8 m (Width) x 1.5m (Depth) 4.2 km length	10000	28 km
	b) Reconstruction of RCC drain (Fairy Hall, Sher Ka danda area drains av. section 5m x 4m)	15000.00 /m	3 km
	c) Reconstruction of KC drains	800 /m	59km
2	Rehabilitation of existing Nala (PCC lining)	1500	10 km
3	Slab culverts	1.00 Lacs	60No.
4	Precast covers / steel greatings	2500	10km
5	Outfall Structures	4.76 lacs / each	21 No.
6	Laying of under ground 300 mm pipes in small lengths	1500	670 /m
7	Provision of openings where existing drains are permanently covered.	25000	100 Nos
8	Construction of Crosswalls / check dams	1.00 lacs each	50 No.
9	Construction of Grit Chambers.	1.00 Lacs	50Nos
10	Construction of MS screens at outfalls		
	a) Coarse Screens with platforms for cleaning.	40000	100 No.
	b) Fine Screens with platforms for cleaning.	40000	40 Nos.
11	Removal of obstruction of road side drains due to encroachment and associated repair works.	L.S	

Similar interventions proposed under Phase 2 (2014-25) have also been worked out and estimated costs shown in Section 8 (Table 8.4)

## 7.6 Solid Waste Management

In order to achieve the city vision in the Solid Waste Management sector, NNPP may adopt the following strategies for SWM:

- Conduct long term campaign to propagate the concept of segregation of waste at the household level, waste minimization and advocating the method of home composting and dispensation of waste generation habits.
- Carry out detailed waste quantification and characterization study for scientific and representative assessment of quality and quantity of MSW.
- Improvement in the primary waste collection by introduction of door-to-door waste collection system to cover the entire city including the slums. This can be implemented in the following way:

Restricting the formation of MSS within the slums areas and make them responsible for collection of waste and street sweeping within the “Mohalla” and transfer the waste to nearby community container or load to the NNPP’s solid waste transportation vehicle for onwards transportation to the disposal site. In slum areas the service charge may be subsidized.

Contracting out the primary collection system in phases for bulk portion (about 60-70% of the city population) of the city to private agencies or NGOs and NNPP shall act as a monitoring agency. This can be implemented by imposing service charges to the households to make the system self sustainable. NNPP may decide on a uniform service charge for this purpose and earmark areas for the private agencies or NGOs.

NNPP workers may be engaged to cover the remaining portion of the city.

In Nainital about 50% area is inaccessible by vehicles. Primary waste collection in these areas is either absent or irregular. Wastes in these areas mostly remain unattended. Door-to-door collection of waste from these areas may be introduced by engaging Backpackers (person carrying bin on his back) who would collect MSW from the households and carry the collected waste to the nearest vehicle accessible road and unload the same to the solid waste transportation vehicles. NNPP may introduce the system initially on pilot basis and upscale it gradually to cover the entire vehicle in-accessible areas by contracting out the system to private agencies or NGO.

Existing 'rag pickers' may be organized and NGOs/ Private agencies may be involved for collection and transportation of the re-cyclable wastes for further processing.

The following benefits are expected from the above primary collection system:

- Segregation of waste will reduce its quantity to be transported to the disposal site, thus reducing land requirement for disposal of waste. It will also help in better processing of waste.
- Encourage more community and private involvement
- Reduce financial and manpower burden of the NNPP
- Improve revenue generation of the NNPP
- More organized system of waste collection, and improvement of the environment
- Reduction in multiple handling of waste thus minimizing risk of exposure of the workers to health hazards

An outline for primary collection of MSW from various sources of generation is provided in Annexure 7.1.

- Improvement of present solid waste transportation system by:
  - Efficient route planning of the MSW transport vehicles and increasing number of daily trips of the vehicles.
  - Effective covering of the vehicles to avoid exposure of waste and its littering during transportation.
  - Replacement of old vehicles and equipment by new one.
  - Providing vehicle depot and workshop facilities for better O&M of the vehicles and equipment.
  - Outsourcing a part of the transportation activities to private agencies.
- The existing solid waste disposal site at Hanumangarh on Nainital Kathgodam Road should be discontinued for land filling provided the site is properly developed as a sanitary landfill site. NNPP needs to identify suitable alternative land for future solid waste disposal. About 4 hectare of land is required for future land filling. NNPP may consider the following for improvement of the present MSW disposal system:
  - Selection of disposal site based on selection criteria, conduct EIA study

followed by environmental approval from the concerned authority.

- Decentralized composting of organic wastes after selection of sites in each of the three SWM circles for composting of bio-degradable wastes generated from the individual circle. Composting of waste in these sites can be contracted out on Built Own and Operate (BOO) basis.
- Disposal of Recyclable waste through recyclable waste processing units.
- Disposal of segregated inorganic waste for filling of low lands, land fill site, road construction etc.
- Providing following facilities at the MSW disposal site:
  - Access and internal roads for movement of vehicles and equipment.
  - Weighbridge for keeping day to day record of waste.
  - Earthmoving equipment for leveling of waste and soil covering.
  - Workshop facilities for cleaning and maintaining of vehicles & equipment.
  - Staff Office including waste monitoring facilities.
  - Fencing the disposal site to prevent entry of unauthorized persons, rag pickers and cattle.
- Provision for treatment and safe disposal of leachate.
- In addition to manage the city solid waste, the existing Health Department (HD) of NNPP are also responsible for functions such as death and birth registration, monitoring of public water supply, food inspection and sampling and control of communicable diseases. NNPP should set up a cell which will exclusively manage the city solid waste activities.
- NNPP should avail training programs to upgrade the knowledge and skill of their staff.
- State Government should frame bye-laws to comply with the MSW (Handling & Management) Rules, 2000 and empower the NNPP to strictly implement the same to the offenders.
- NNPP should take Adequate protective measures of the workers against health and hygienic risk caused due to exposure to the waste.

Preparation of a comprehensive Solid Waste Management Master Plan for the city is essential before implementation of the above mentioned strategies. A phased programme of intervention has been worked out, the costing of which is presented in Section 8, Table 8.5.

## 7.7 Roads and Transport

To design and suggest a better and safe transport system keeping in mind that Nainital city is a prime tourist destination so large number of tourist visit Nainital. Given the complexity of the problem due to more tourist, it is evident that isolated solution directed several facts such as alternate new road, bypass, elevated road through Nala, road widening, safety measures, sufficient parking lots, new Ropeway etc. will ease the traffic and transportation system.

### ***Vision***

**‘Efficient, Safe and Eco friendly to the sensitive geological environmental nature of the area.’**

The vision of the Road and Transport for the Nainital City is to provide with the safe and reliable transport system that is sustainable, environmental friendly especially

keeping in mind the comfort of the visitors. Also to improve the share and quality of public transport service that will improve the traffic management.

### **Strategies**

- Ensure free flow of traffic through junction improvement and providing sufficient off-street parking
- Ensure free and safe movement of pedestrian providing footpaths and Side Protection Barriers
- To provide alternate roads, elevated road through Nala and alternate ropeway
- To provide better and affordable public transport system

### **Major Initiatives/ Projects**

#### **Junctions Improvement**

Following junctions are proposed for the improvements on the basis of observation and with consultation of PWD Officer, Traffic Police of Nainital City.

- Tallital Bus stand junction
- Mallital Rickshaw stand junction
- Municipal council junction
- Telephone exchange junction
- Manu Maharani junction
- Sherwood junction
- Junction near Masjid
- Junction of Ramsay Road and Thandi Sarak (near Phansi Gadhera)

Intersections must be designed and operated for simplicity and uniformity. The design must keep the capabilities and limitations of drivers, pedestrians and vehicles using intersections. It should be based on knowledge of what a driver will do rather than what he should do. All the traffic information on road signs and marking should be considered in the design stage prior to taking up construction work. Any location having merging diverging or crossing maneuvers of two vehicles is a potential conflict point. The main objective of the intersection design should be minimising conflict points. The improvement measures normally include:

- Proper channelisation for the free left turn
- Foot path on approaches of the junctions
- Planned pedestrian zebra crossing
- Shifting of electric poles and cutting of trees
- Land acquisition / removing structures
- No parking on the approaches of the junction for at least 50 m
- Adequate and safe turning radii
- Appropriate gradient of the road at the intersection

#### **Traffic Improvement Plan and Traffic Enforcement**

As it is observed that there is haphazard on street parking which reduces road capacity causing traffic congestion. Following areas are proposed for No Parking Zone.

- Upper Mall Road

- Lower Mall Road
- Upper Kaladungi Road
- Middle Cheena Road
- Upper Cheena Road
- Ramsay Road
- East Laggan Road
- Osley Road
- Upper Ayarpata Road

### ***Proposed One - Way, Clockwise Traffic Movement***

It is proposed to make the loop starting from Municipal Council Junction, Masjid, Metropole Hotel, Telephone Exchange, state Guest House (Nainital Club), Mohan Co., B D Pandey Hospital and back to Municipal Council Junction as One - Way in the clockwise direction.

This would entail removal of the road barrier near State Guest House. With this One – way system in force, the congestion on the road between telephone exchange and B D Pandey hospital would be removed. This system would necessitate removal of all encroachments and construction of elevated side walks of minimum 1 m width over the drain on either side of roads.

Simultaneously the stretch of road between Mohan Co. and Municipal Corporation Office can be widened by about 2.0 m by acquiring land from the raised land on the western side which is presently only being used as a walk way by the abutting houses.

### ***Traffic Restrictions***

The traffic restrictions on the Mall Road to stay as present. However, in summer peak period, during 1800-2100 'No Vehicle' Period on Mall Road, 2 – Way Rickshaw movement may be allowed on lower Mall Road.

### ***Traffic Enforcement and Regulations***

It is necessary to strengthen traffic police with trained manpower and equipments for effective enforcement and monitoring of traffic. As per observation and discussion with traffic police, there is huge gap between existing strength of traffic police and demand in the city. To improve the improvement of traffic enforcement in the city, following are required;

- Independent consultants (to conduct study for 5 years)
- Development traffic education modules
- Development of traffic training park
- Traffic education programme for 10 years
- Mall Road to be declared as Zero Tolerance Zone
- Parking Restrictions to be strictly enforced with increased police patrol
- All roads to be cleared of encroachments. No fresh encroachments – even minor ones such as encroaching upon drain/ footpaths to be allowed
- No overtaking to be allowed on Mall Road
- Rickshaws to be heavily challaned for overtaking and moving outside designated

rickshaw lane

- Creation of a special traffic cell from local agencies to monitor and implement traffic control and road development measures
- Innovative and more comfortable rickshaw design to be explored

### ***Pedestrian Facilities and Safety Measures***

Pedestrians are most vulnerable road users in cities. It is therefore necessary to provide better facilities for pedestrian movement in areas where pedestrian movement is predominant. Pedestrian facilities in terms of providing footpaths free of encroachment. Barriers on side of roads. On the basis of observation and discussion with PWD officers, following footpath, guardrails, side protection barriers are proposed.

### ***Footpath***

Most of the roads are having road between 2.0 m to 3.5 m therefore providing footpath is not possible.

**Table 7.9: Detail of Footpath Proposed**

S. No.	Road Section	Length of Footpath (Both sides km)	Length of Guardrail (km)
1	Upper Mall Road	2 X 1.725 = 3.550	3.55
2	Lower Mall Road	2 X 1.434 = 2.868	2.87
3	Total	6.42	6.42

### ***Side Protection Barriers***

As most of the roads in Nainital city are having steep gradient and the width of the road is also very less, therefore for the pedestrians the roads are not safe especially during rainy season the roads become slippery. Side protection barriers are either absent or inadequate. Therefore it is necessary to provide side protection barrier.

Side Protection Barriers are available on following Roads.

**Table 7.10: Details of Side Pedestrian Barrier Available / Not Required**

S. No.	Name of Required	Length	Available / Not Required
	Lower Mall Road	1.434	Available in 10 % length
	Middle Cheena Road	2.373	Available in 10 % length
	Malden Road	0.400	Available in 20 % length
	Upper Cheena Mall Road	5.244	Available in 20 % length
	Snow view Road	1.159	Available in 20 % length
	Mall rose Road	0.350	Available in 20 % length
	East Laggaon Road	1.810	Available in full length
	Osley Road	1.710	Available in full length
	Dandolabad Road	0.450	Require only on 50 % length
	Pant NLR SADan Road	1.500	Require only on 50 % length
	Ramsay Road	0.310	Not required

### ***Off Street Parking***

The phenomenal growth of vehicles has lead to increased demand for parking. Being

an important tourist centre there is a sudden increase of floating population during summer. The problem is further aggravated by the absence of adequate off street parking facility in the proximity of hotels. Following off street parking lots are proposed to ease the acute parking problem.

- Metropol Hotel has immediate available space for more than 250 car parking, The Nazul land between Hotel Meteropol and Gadhera may be cleared of encroachments and stilted parking may be constructed.
- On vacant hill side near St. Mary's Convent School
- Land vacated by shifting out of Ghora stand along the Municipal Corporation Office
- Land between Municipal Office and Gandiel Road upto back of Ashok Cinema
- At *Flats* (Multi level) – on the land which is already in use for car parking
- Bus/ heavy vehicle parking on Haldwani Road. Construction of Bus/ heavy vehicle parking with facilities of rest room is proposed on land near Dharamshala on Haldwani Road
- Bus/ heavy vehicle parking on Bhowali Road. Construction of Bus/ heavy vehicle parking on land near pine and on Bhowali Road

#### ***Improvement of Existing Kharanja Road and Kutcha Road with CC***

At present 7.26 km and 10.17 km roads are kharanja road with municipal Corporation and PWD respectively. Similarly 1.51 km, 5.35 km road are kutcha with Municipal Corporation and PWD. These roads need improvement. Improvement by laying cement concrete layers is proposed.

#### ***Passing Places on Existing Roads***

The road width of most of the road is very less and it is not possible to wide these road further therefore it is not proposed to provide passing places at appropriate places either by hill side back cutting (possibilities is less) or by providing RCC cantilever.

#### ***Widening and Strengthening of Existing Road***

The Upper Mall and the Lower Mall serve as the prime arterial road for the Nainital city. The Upper Mall road is sinking and slopes have become negative in many places. The Lower Mall road is very narrow at places and these bottle necks poses dangerous traffic hazards. It is suggested to incorporate width adjustment between the two roads so as to widen the lower Mall road at narrow stretches. Provide RCC R/W in places of existing R/W made of stone. Similarly RCC R/W are required on the lower Mall road towards lake side as road is sinking at many places. Then strengthen by overlaying.

Thandi Sarak is at present kutcha road used by resident / tourist for morning walk. It is proposed to lay interlock tiles to make it smooth.

#### ***New Bypass***

To overcome congestion of Haldwani Road and to ease pressure of traffic on Mall Road, a second entry from Haldwani Road is much required. It is proposed to construct a bypass from Haldwani road (NH 87) near Baldiakhn which will join Kaladungi Road (SH 13) near Sadiatal.



Reserve Forest will come in the alignment of Bypass for which clearance from the Forest Department will be needed. PWD Officers told clearance from the Forest Department is already in process, hopefully clearance will be available within few months time.

### ***New Road***

New Road covering Nallah no. 23 from *Flats* (near masjid) upto Telephone Exchange junction is proposed. The proposed major roads and transport projects are shown in Map 7.1.

### ***Elevated Road***

As there is lot of traffic pressure on Mall roads at present. The problem will further aggravate with traffic increase in future. Widening of these roads is not possible so elevated 2-lane road with footpath parallel to lower Mall and by passing the existing structure is proposed through Lake.

### ***Bus Stand***

New Bus Stand can be located on Kaladhungi Road near Char Khet Village. The location will be appropriate as proposed bypass joining Haldwani Road and Kaladhungi Road will be about 2-3 kms from Proposed Bus Stand.

### ***New Ropeways***

With a view towards tourism development and giving an alternate mode of transport to the local population following new ropeways are proposed.

Harinagar – Hanumangarhi – Tallital; Kilburg – Barapathar – Tiffin Top

A circular Ropeway surrounding the lake at an elevated level connecting zoo, tiffin top etc. is also proposed.

### ***Intermediate Public Transport***

Presently Intermediate Public Transport (IPT) system is absolutely missing in the city only few taxis are available which charge very high tariff and cannot be afforded by the local residents and even by budget tourists also. Few rickshaws are also available which are operated on Mall road for restricted period. There is no local transport facility available from 3 entry points and from existing parking places. Therefore introducing low pollution light good vehicles for intra city movement and good vehicles for inter city movement e.g. between Bhowali, Bhimtal, Sattal, Nakuchital and Nainital etc. is also very much required.

### ***Phased Intervention Programme***

A phased programme of intervention has been worked out, the costing of which is presented in Section 8, Table 8.5. All works mentioned above (except New Ropeways) are proposed under Phase 1 (2007-13). The works for New Ropeways are proposed to be undertaken in phase 2.



## 7.8 Street Lighting

Street lighting is primarily intended to enable the road users (motorists and pedestrians) to see accurately and easily the carriageway and the immediate surroundings in the darkness. In city streets, therefore, there is a need to illuminate the carriageway and its immediate surroundings so that the use of head- lights can be avoided or minimized. A large number of road accidents are caused in the night due to poor and unsatisfactory street lightings.

Improved visibility at night by means of artificial lighting lessens the strain on driving and ensures comfort and also speed of traffic improves with better lighting and hence improves traffic flow conditions. Favourable headway and lateral placements are brought about the ability of the road to handle traffic is vastly improved.

The mounting height of the street light in general is 7.5 – 12.0 m for traffic routes. In general, the spacing of street lightings should not exceed 55 m and should preferably be 35-45 m on important traffic routes. Generally it is 3 to 5 times the mounting height of light the existing situation of street lights is:

Present position of Street light in the city is as follows:

• No. of poles	1527
• Ordinary Bulbs on poles	864
• Sodium light on poles	560
• Tube fixed on poles	10
• Others	93
• Total	1527
• No. of Bulbs in Malin Basti	120

Roads coverage by Street Light

• 1. Pucca Roads	100 percent
• 2. Kutchra Roads	100 percent
• 3. Bridle Roads	90 percent

As per the standards, to cover about 85 km of road networks of the city, total no. of street light should be around 2400. In addition to the street light around Lake, 'Flats' and at other important places it should be atleast 270. This means 1200 new lights are required to cover the entire area. Also it is proposed to put high mask light on important places and proposed parking lots. All interventions are proposed under Phase 1 (2007-13)

## 7.9 Heritage and Tourism

Nainital is built on the slopes of seven hills around it. It is from these and on these, that Nainital's form took shape. Attention to the natural features should as much be a part of town development as the town's built structures. The following table gives the vision and strategies for heritage and tourism.

**Table 7.11: Vision and Strategies for Heritage and Tourism**

Vision	Issues	Strategies
To place Nainital on the international map for eco tourism by leveraging its pristine beauty, rich heritage and regional tourism potential	<ul style="list-style-type: none"> <li>• Lack of concerted efforts for heritage conservation</li> <li>• Lack of high end tourism</li> <li>• Development and maintenance of good quality tourist infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Conservation of Churches and Cemeteries</li> <li>• Demonstrate model architectural design and elements for buildings</li> <li>• Develop separate parking areas for heavy vehicles</li> <li>• Revive lakes and other water bodies</li> <li>• Develop wilderness tourism</li> <li>• Effective traffic management and adequate parking facilities to tourists</li> <li>• Maintain cleanliness in the city with the help of citizens and CBOs</li> <li>• Encourage PPP for high quality hotels, tourism packages, etc</li> <li>• Efficient solid waste management to keep the city clean and enhance city aesthetics</li> </ul>

**Identification of Projects**

- Heritage walks from Mallital and Tallital
- Revival of 'sightseeing points'/'viewing points'
  - Tiffin Top
  - Cheena Peak
  - Snow View
  - Camels Back
  - Lands End
  - Sunset Point and Hanuman Gadhi Point
- Development of Wilderness Trek Path – Kilbari, Kunj Khadak, Rear Side of Camels Back, Pangut, Vinayak, Mahesh Khan
- Restoration of Cemetery and Churches – St. John's Church, Methodist Church and Pines
- Revival of Water Springs
- Beautification of Temple Complex of Naina Devi Temple
- Development of Thandi NLRSAK for Bird Watching. This has been considered in the strengthening of roads and lake front development in the earlier sections.
- Creation of Examples of Built Form (design, building material, etc) Compatible with Surrounding Topography and Natural Beauty
- Development of a Mini Kumaon Park which will have models of built and natural heritage of Kumaon
- Upgradation of sanitation facilities is covered under NLCP.
- Development of pedestrian walkways, ropeways, roads and parking areas have been covered under the the section on Roads and Transport

All interventions in the form of proposals listed above are proposed under Phase 1 (2007-13).

**7.10 Urban Poor**

The citizens from poverty pockets have portrayed their vision in the following manner:  
**'A clean and beautiful city with all facilities and universal access to basic services.'**

It was envisioned that all urban poor of the town will have voice in reform planning of the slums. They also participate in designing and evaluation of development projects.

The goal and objectives of all urban planning for social and economic development should be to make the town without slums. To reach this goal, it will be essential to review urban development processes and make the town fully democratic, economically productive, socially just, environmentally sustainable, and culturally vibrant.

One of the main strategies would be establishing a framework for involving all stakeholders for the efficient and smooth implementation of the Policy objectives.

Keeping the above Policy in view the suggested strategies for poverty reduction are as follows:

### **1. Community Organisation**

- Meaningful and effective community participation involves decision making which results in a shift in the existing power relations between community and organisations. This also empowers marginalised groups in turn.
- Implementation of 74th Constitutional Amendment Act in terms of community participation.

Community driven programmes would be designed so that all groups in the community have a voice in decision making and management, and have entitlement to the benefits. Specific gender sensitive approaches are necessary to ensure inclusion of both women and men. To ensure maximization of benefits to the poor, the issues of social inclusion and gender must be considered as central element and of prime importance. The **Kerala model of Kudumbashree** could be adopted for reorganizing the existing groups in the town.

*It has been found that similar community structures in 2 CDSs already exist in the town but non-functional now. So it is essential to reactivate those and channelise all community development activities through them.*

### **2. Income Generation Activities**

Initiate various income generating activities for the urban poor

As mentioned in the inception report, one of the guiding principles of the study is reduction of urban poverty- both quality of life poverty and income poverty through enhanced opportunities for economic development.

It was evident from various consultations in the town unemployment is an emerging concern of the citizens and community based organisations are hesitant to start any production job as they are worried about marketing of their products.

*In view of this a project of vocational training for local youth is being proposed under this project.*

Young men and women from slums could be trained in various vocational trainings with the help of DUDA and NPP in order to provide gainful employment to the urban unemployed or underemployed poor through self-employment or wage employment. The local skilled workers, who are already in various trades, could be used as the trainer in such trainings. But marketing of the products has to be taken care of.

Citizens from some slum have suggested that an outlet for their products could be organized by the municipal authority.

### 3. Community Participation

Participatory planning by participatory problem identification and analysis is required. It also helps in designing Information Education and Communication (IEC) activities.

*The citizens need to be mobilised and sensitized towards the need for their participation. This in turn will empower the local community who does not have access to basic services. This could also be achieved through the community structure of SJSRY programme.*

- Positive Deviance (PD) approach
  - Identify good practices
  - Use PD people as change initiator

*In every community there are some "Positive Deviants (PD)" whose special practices/ strategies/ behaviors enable them to find better solutions to prevalent community problems than their neighbours who have access to the same resources. Positive deviance is a culturally appropriate development approach that is tailored to the specific community in which it is used. For using PD approach to bring about a change in the community practices the current community groups under SJSRY programme could be used.*

- Launching of awareness programme
  - Participatory Hygiene And Sanitation Transformation (PHAST).
  - Child-Child education
  - Child-Adult education
  - Women –women education

It is essential to use PHAST approach to help poor people of the town to feel more confident about themselves and to improve their ability to take action and make improvements in their localities. It has been felt that feelings of empowerment and personal growth are as important as the physical changes, such as cleaning up the environment or building latrines.

## 7.11 Strengthening Urban Governance and Institutional Development

### Major Recommendations

Recommendations in the course of the institutional analysis have been made in specific parts of Chapter 4. Key elements of these recommendations are summarized here for the sake of emphasis. For completeness, these summary recommendations include those applicable to the state urban sector as a whole.

- Among the many reform agenda items listed in JNNURM guidelines, conformity legislation on the basis of 74th CAA is of crucial importance. A new Municipal Bill has been drafted, and this should be finalized and given full legal form at the earliest possible time.
- Two important legislations are still required: one on public disclosure, and another on community participation. These can be made parts of the new Municipal legislation which is under finalisation.

- Training and capacity building need to be taken up both for political leadership and the professional staff in the municipalities and the para-statal. For this purpose, a Training Cell may be set up in the Urban Development Directorate. The currently proposed state-wide TNA exercise to ascertain training needs and identification of specific training institutions should be carried out as soon as possible. Meanwhile, the urban Center within ATI may be suitably strengthened.
- Reforms at the municipal level need to be initiated by the State. For this purpose, the State's secretariat needs to be reorganized to enable the policy level to come out with more holistic and integrative view of things on the ground. UDD should have under it the DAs and the TCPO. Its Directorate dealing with ULBs needs to be strengthened to help the modernization processes in the ULBs that are under way now.
- The Nainital Nagar Palika Parishad, in its present form is too weak even to manage its very limited functional load. NNPP's political and executive-professional structure needs overhauling to enable it to cope with its municipal management responsibilities and large development projects in future. A State Civil Service Officer should be posted as its chief executive, following the system in other big cities in India, to provide the required level of management presence and expertise.
- The typical municipal functions that are under the ambit of municipalities in other parts of the country are not with the municipal council. The functions such as water distribution, sewerage, building regulations, etc. need to be transferred to the council. This however cannot be done until there is state-wide reform and the capacity of the authority is built to the required level.
- The committees that are functioning need to be rationalized in order to provide a framework more specific to the requirements of the town. For example the Water Works committee which still exists in the council has no or limited role since the function has been transferred to UJS.
- Although the formation of ward committees is not mandatory in Nainital, it is desirable have greater level of interaction with the citizens. The ward committees thus are of paramount importance and are required to be set up in order to establish a citizen authority network.
- In Nainital urban situation, there are too many institutions that have grown up under historical circumstances. Keeping in view the needs for coordinated development and institutional strengthening, well-thought-out institutional planning is of crucial importance. This is not going to be a one-shot exercise and needs to be taken up on phased basis. The process of institutional re-engineering has been graphically shown in Chapter 4. Rough timelines have been indicated to bring about institutional changes within an accelerated time frame. Four scenarios have been depicted as shown below.

Stage I: Limited municipalization of parastatal functions like building regulations transferred to municipality, and more importantly, formation of a strong standing coordination committee headed by the Divisional Commissioner – this is to be done within three to six months of acceptance of this report.

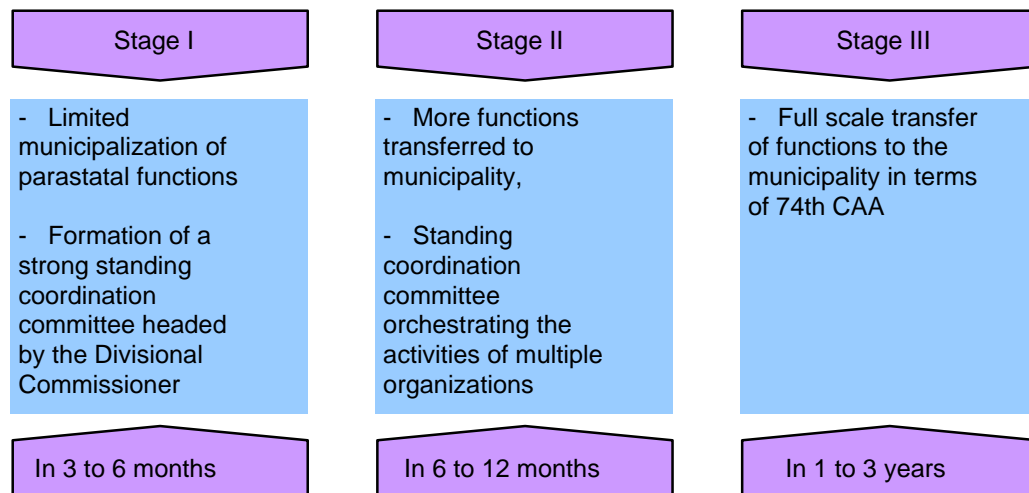
Stage II: More functions transferred to municipality, and the standing coordination committee orchestrating the activities of multiple organizations – this should not take more than six to 12 months from the acceptance of the report.

Stage III: Full scale transfer of functions to the municipality in terms of the provisions of the 74th CAA (and municipal act) – this should be completed within a year.

Institutional change in terms of the upgrading of the status and transfer of functions from parastatals to the municipal body has to be accompanied by a well-thought-out policy of 'all round capacity-building' for the municipality. There has to be a paradigm shift away from the present day weak and marginalized urban local body to a robust, strong and vibrant nodal institution to take charge of planned development and management of the city. It must have the capacity to usher in dynamic municipal management and at the same time to successfully 'network' with other organizations operating within the Nainital urban area.

Change management of this scale and complexity would require a specialized cell within the UDD which may be called the PMU (project management unit).

**Figure 7.1: The Process of Institutional Re-engineering**



## 7.12 Municipal Financial Management

NNPP proposes to adopt the following strategies to achieve the targets of Financial Reforms as mandated in the JNNURM guidelines.

### Double Entry System of Accounting

The process of introducing the system has been started. Initial system studies have been completed by the consultant appointed for development of accounting software. This consultant will be responsible not only for the development of accounting software but also for the maintenance of the same for subsequent three years.

The terms of reference for the appointment of accounting firm for the design of common state accounting manual and implementation of the double entry accounting system has been finalised. Short listing of chartered accountants is in process of being finalized for hand-holding and training of accounts staff.

The double entry accounting system will be introduced in all of the 63 ULBs, and all parastatal agencies. Guidelines for arriving at opening balance have been issued.

It is envisaged that the introduction and implementation of double entry accounting system in HNPP would be completed by the end of financial year 2007-08.



### **Property Tax**

The collection efficiency is proposed to be increased to the required / desired level of 85% over the next four years (by 2009-10) by streamlining the present collection system. The software consultant is developing a computerised collection system facilitating collection at various collection centres. This system is expected to be in place by end of the financial year 2006-07.

Simultaneous to increasing the collection efficiency the tax base is proposed to be widened.

Measures are proposed to ensure growth in tax revenue to match with the growth in the State Domestic Product. Some of the measures in addition to the ones mentioned above are better / enhanced tax compliance, remove bottlenecks in the efficient implementation etc.

## 8. City Investment Plan, Strategies And Implementation Plan

City Investment Plans in line with the identified vision for Nainital have been prepared through: (i) a comprehensive process of assessment of the status of physical and social infrastructure sectors, (ii) stakeholder consultations, and (iii) preliminary analysis of demand and supply. This assessment has also led to the identification of sector-specific strategies, implementation actions and associated reforms.

The strategies adopted primarily have three dimensions; improving the service delivery by efficiency measures, improving service delivery by creating infrastructure assets and improving the governance aspects of NNPP and para- stats. This section summarises the capital investments required for creating infrastructure assets and various strategic interventions required in the implementation of such sub-projects. It is based on the analyses presented in the foregoing chapters, and in particular the short-, medium-, and long-term sector-wise interventions identified in Chapter 7.

### 8.1 City Investment Plan (CIP)

The City Investment Plan is the multi-year scheduling of identified and prioritized investments. The scheduling or phasing of the plan has been developed keeping in mind likely fiscal resources availability (for new investments and O & M), technical capacity for construction and O & M, and the choice of specific improvements to be carried out for a period of six years, and in subsequent phases.

The need for the CIP is on account of:

- Assessment of city growth and infrastructure needs (to be carried out once every five years)
- Preliminary outline feasibility and engineering studies carried out for new projects
- Scheduling of investments of ongoing and committed projects with funding from other sources
- Assigning of priorities within the constraints of available financial resources

#### 8.1.1 Institutionalising the CIP Process

The City Investment Plan is an important element of, and is significant in terms of, the city's management process and sustainability with regard to the delivery of basic services. The CIP also provides a framework for the annual budget cycle of NNPP and para stats for the next 6-10 year period, and thereafter for subsequent investment phases.

As a part of the process of CIP preparation for the CDP, NNPP and para stats have:

- Analysed and discussed with the stakeholders, the existing applicable norms and standards for infrastructure services;
- Agreed and recommended a reasonable and realistic option;
- Justified and provided rationale if the chosen option is not within the existing service level standards; and
- Identified the roles and responsibilities of various stakeholders in the implementation of identified projects.

## 8.2 Capital Facilities, Investment Phasing and Implementation

The City Investment Plan involved the identification of public capital facilities to cater to the demand of the city populace in two phases – Phase 1 (by the year 2013) and Phase 2 (by 2025) - according to the infrastructure needs.

The project identification has been done through a demand-gap analysis of the services and reconciliation of the already identified projects as part of various outline, preliminary and in some cases detailed engineering studies. The analysis has also built on recently completed technical studies where these are available.

Further project prioritisation and strategising of the investments, and phasing of these investments is based on the strategies listed out under each service sector as identified by NNPP through stakeholder consultations. The projects derived are aimed at ensuring the optimal and efficient utilisation of existing infrastructure systems and enhancing the capacity of the systems and services to cater to the demands of future population additions and tourist arrivals, i.e., increasing floating population. Certain other projects listed as part of the CIP include developmental projects other than those addressing the core service sectors viz. system modernisation, river conservation etc. Such projects are also based on lists and or reports prepared by and for NNPP by others.

The City Investment Plan and forecast future of needs for provision of capital facilities under each identified sector are presented below. These assets will help NNPP and para statals universalise services for the current population as well as accommodate the expected increase in population. In sectors where long-term planning is required (for example, source development for water supply), a 30-year planning horizon (till the year 2036) is considered. Assets created in such sectors consider the projected population in this horizon. NNPP expects that these infrastructure assets would not only guarantee services to its citizens, but also signal a proactive commitment to potential investors considering the Nainital region.

### 8.2.1 Summary of Investments

The total estimated capital investment required for providing efficient services to the present population and future population of NNPP by the year 2025 is Rs. 1036.3 crores at 2006 prices.

The planning horizon for the projects identified in sectors of urban poor slum improvements, land use development planning and other similar sub-projects is 2011-16 and accordingly the entire identified investment is proposed for funding in Phase 1. The planning horizon for core service sectors of water supply, sewerage, drainage, solid waste management is 2025 and hence, mindful of the need for efficient resource planning, only part of the identified investment is proposed for funding in short term. In case of roads, traffic and transport sectors, 100 percent of identified investment is proposed for funding in Phase 1 considering the immediate need for improving road network and transport systems in the city. Longer term intervention, such as New Ropeways is proposed in Phase 2

The phasing of the identified projects and investments is based on the following principles

- Priority needs, with developed areas receiving priority over future development area
- Inter and intra-service linkages, viz. water supply investments shall be

complemented by corresponding sewerage/ sanitation improvements

- Size and duration of the requirements, including preparation and implementation period
- Project-linked revenue implications, such as installing house connections where supply and distribution capacities have been increased
- The scheduling of adequate time to allow pre-feasibility, full feasibility and safeguard investigations for those large sub-projects which will require such analysis
- Scheduling additional infrastructure requirements to match with the population, and tourist inflow growth over the plan period

Table 8.1 below presents the summary of sector-wise total investment needed in the Term investments. Priority investments are listed in Phase 1, to be implemented by 2013.

**Table 8.1: Summary of Capital Investments (Rs. Crores)**

S. No	Sector	Phase 1 2007-13	Phase 2 2014-25	Total
1	Water Supply	38.2	29.1	67.3
2	Sewerage & Sanitation	19.7	11.8	31.5
3	Roads, Traffic & Transport	240.5	450.0	690.5
4	Street Lights	3.4	0.6	4.0
5	Storm Water Drainage	23.8	10.1	33.9
6	Solid Waste Mgement	33.0	32.3	65.3
7	Urban Poor / Slums	46.2	0.0	46.2
8	Urban Renewal and Environment	45.4	45.0	90.4
9	Heritage and Tourism	7.2	0.0	7.2
	<b>Total</b>	<b>457.3</b>	<b>579.0</b>	<b>1036.3</b>

Note: Above costs are at current 2006 prices and includes 7.5% for physical contingencies and 5% for project management assistance.

72.3% of the total identified investment is proposed in the roads, traffic and transport sector towards up-gradation, new construction, widening and strengthening works, Ropeways, other public transport systems, bridges and junction improvements.

This is followed by investments in urban renewal and environmental improvement projects forming 9.5% of investment proposed for land use planning and other non-core sectors for programs, 5.8% for the water supply sector, 4.8% for urban poor/slum development programmes, 2.5% for storm water drainage, 2.0% solid waste management, 1.8% for sewerage sectors, 1.0% for heritage and tourism and 0.3% for street lighting.

### 8.3 Sector Investment Plan

Sector wise details of the City Investment Plan, capital facilities identified to be created, supportive actions and implementation aspects and strategies are discussed in the following sections in detail. Component-wise details of capital investment phasing under each sector is as follows.

### 8.3.1 Water Supply

Proposed component wise investments given in Table 8.2 would meet the immediate requirements of rehabilitation of the existing system as well as augmentation leading to assured supply of water to the residents of Nainital.

Large quantum of the investments proposed is for the tapping of new sources of surface water, installation of scada systems, rehabilitation of existing pumping plants, rising mains etc.

**Table 8.2: Water Supply Sub-projects Investments**

S. No.	Project Components	Phase 1 2007-13	Phase 2 2014-25	Total (Rs.Crores)
1	Construction of Tube well / Infiltration, including Pump house, Pumping Plant rising main etc. and all works needed for the Commissioning (2Nos) of 2 mld each.	0.8		0.8
2	Tapping of new sources of surface water, including filtration if necessary, Pump house, Pumping Plant rising main etc. and all works needed for the Commissioning 11 mld		10.0	10.0
3	Construction of reservoir 1 No. total capacity 1000 kl & CWR of capacity 1854 kl	1.8	2.8	4.6
4	Reorganisation of distribution system where existing pipeline capacity is falling short due to increased population 15 km 65mm to 150mm Av dia 100 mm. @ Rs. 850/m.	1.3		1.3
5	Installation of SCADA System with complete automation on pumping plants 47 Nos. presently plus 3 Nos. New Tubewells.	1.8	1.0	2.8
6	Replacement of Damaged / Old Pumping Plants (50 hp to 200 hp) 20 Nos @ 25.0 Lacs each	5.0	5.0	10.0
7	Leak detection and water and power Audit	0.7		0.7
8	Supply and Installation of mechanical bulk water meters Av. 200mm (on 47 Pumping Plants Plus 20 CWR * 4 ) 127 No. @ Rs. 50000 + in 2 tubewells	0.7	0.1	0.8
9	Establishment of a fully equipment water testing laboratory	1.0		1.0
10	Replacement of old and damaged distribution mains (40 mm to 150 mm Dia.) in the old city (40 mm to 80 mm = 30 km, 80mm to 150mm = 20 km)	3.9		3.9
11	GIS based pipeline network mapping in Naintal	0.5		0.5
12	Replacement of pipeline which have come under road or stone masonry stairs in the lanes. 10 km Av. Dia 80 mm @ 400/m	0.4		0.4
13	GIS based mapping	0.5		0.5
14	Replacement of rising mains Av. Dia 200mm 20 km	2.8		2.8
15	Staff Quarters Tax collection Centres office Buildings etc.	3.0	1.5	4.5
16	Installation of India mark-II H.P. . for floating population to scare misuse of stand posts.	1.5	1.0	2.5
17	Development & Repairs of 6 Nos. old Tubewells & cleaning of one No. infiltration well	1.0		1.0
18	Replacement of old steel CWR's at 4 places (pilgrim, Tonchy, Inter china, Ayarpata) Total capacity 2000 kl	1.6		1.6
19	Energy meters at 50 pumps @ Rs. 10000 / each	0.1		0.1
20	Provision of Stand by Pumps 5 Nos. (40 HP to 100 HP) @ 25.0 Lac each	1.5	1.5	3.0

S. No.	Project Components	Phase 1 2007-13	Phase 2 2014-25	Total (Rs.Crores)
21	Renovation & Replacement of Old filter plants (1955) 8 mld	2.0	1.0	3.0
22	Procurement of Spare parts for existing pumping plants and their repairs	0.2	0.5	0.7
23	Construction system control rooms 4 Nos.	0.2		0.2
24	Conversion to online Billing & collection system	0.2		0.2
25	Reconstruction of old pump house housing 17 Nos. pumping plants at old Water Treatment Plan	1.0	1.0	2.0
26	Construction of break Pressure tanks in all the zones where difference in pressure head is too much 10 Nos.	0.1		0.1
26	Provision of a water softening plant 5 mld each at short term and Mid term.	0.5	0.5	1.0
	<b>Total</b>	<b>33.9</b>	<b>25.9</b>	<b>59.8</b>
	Physical Contingencies @ 7.5%	2.5	1.9	4.5
	Project Management Assistance (5%)	1.7	1.3	3.0
	<b>Grand total</b>	<b>38.2</b>	<b>29.1</b>	<b>67.3</b>

### 8.3.2 Sewerage

The component-wise investments proposed in Table 8.3 will involve the rehabilitation and augmentation of sewerage systems and construction of sewage treatment plants (STPs). The implementation is proposed both in the short- and medium-term in line with the investments in water supply system augmentation.

**Table 8.3: Sewerage Sub-projects Investments (Rs. Crores)**

S.No.	Project Components	Phase 1 2007-13	Phase 2 2014-25	Total (Rs.Crores)
1	Augmentation of old sewer network = 5 km sewer length: 250 lacs.	2.5		2.5
2	Additional Sewer Networks & Sewer Rehabilitation = 3 km in length		1.5	1.5
2	GIS based mapping of the existing sewerage system: 100 lacs	1.0		1
3	Sewer cleaning equipments such as suction machine, PGM etc.: 100 lacs	1.0	1.0	2
4	Comprehensive Lake water balance & water quality modeling studies	1.5		1.5
5	Slope stabilization of outfall sewer with advanced nailing and shotcrete technologies : 200 lacs (4000 m2 @Rs 5000/m2)	2.0		2
6	New 2 MLD STP for Sukha Tal Zone (MBR or SBR Based) : 200 Lacs	2.0		2
7	New Sewerage scheme for Narayana Nagar area= 2 km sewer Length: 100 Lacs.	1.0		1
8	New 0.4 MLD STP based on package system (Anaerobic-Aerobic Type) : 100 lacs	1.0		1
9	New Sewerage scheme for Hari Nagar area= 2 km sewer Length: 100 Lacs.	1.0		1
10	New Sewerage scheme for Krishna Pur area= 5 km sewer Length: 250 Lacs	2.5		2.5
11	New 2 MLD STP based on SBR Technology: 200 lacs.	2.0		2
12	Augmentation of STP capacities (Both Existing &		8.0	8

S.No.	Project Components	Phase 1 2007-13	Phase 2 2014-25	Total (Rs.Crores)
	Proposed)			
	Base Cost	17.5	10.5	28
	Physical Contingencies @ 7.5%	1.3	0.79	2.09
	Project Management Assistance (5%)	0.9	0.53	1.43
	<b>Grand Total</b>	<b>19.7</b>	<b>11.82</b>	<b>31.52</b>

### 8.3.3 Storm Water Drainage

The proposed component-wise investments given in Table 8.4 would meet the immediate requirements for rehabilitation of existing major drains and construction of road side surface masonry drains, box culverts for main roads etc. Completion of these investments will go a long way in reducing the water logging and flooding of city areas, especially during the rainy season.

**Table 8.4: Storm Water Drainage Sub-projects Investments (Rs. Crores)**

S.No.	Project Components	Phase 1 2007-13	Phase 2 2014-25	Total (Rs.Crores)
1	a) Repairs of Bed and sides of main drains and catchpits in stone masonry Av. Section 1.8 m (Width) * 1.5m (Depth) b) Reconstruction of RCC drain (Fairy Hall, Sher Ka danda area drains Av. Section 5m*4m c) Reconstruction of KC drain (0.30 to 0.45 m width * 0.15 to 0.30 depth)	12.9	5.0	17.9
2	Rehabilitation of existing Nala (PCC lining)	1.5	1.0	2.5
3	Box culverts	0.0	0.5	0.5
4	Slab culverts	0.6	0.5	1.1
5	Precast covers / steel gratings	2.5	1.0	3.5
7	Outfall Structures	1.0	0.5	1.5
8	Laying of under ground 300 mm pipes in small lengths	0.1		0.1
9	Provision of openings where existing drains are permanently covered.	0.3		0.3
10	Construction of Crosswalls / check dams	0.5		0.5
11	Construction of Grit Chambers.	0.5		0.5
12	Steel Strainers a) Coarse Screens with platforms for cleaning b) Fine Screens with platforms for cleaning.	0.8	0.5	1.3
13	Removal of obstruction of road side drains due to encroachment and associated repair works.	0.5	0.0	0.5
	<b>Total</b>	<b>21.2</b>	<b>9.0</b>	<b>30.2</b>
	Physical Contingencies @ 7.5%	1.5	0.7	2.2
	Project Management Assistance (5%)	1.1	0.4	1.5
	<b>Grand Total</b>	<b>23.8</b>	<b>10.1</b>	<b>33.9</b>

### 8.3.4 Solid Waste Management

Proposed component-wise investments given in Table 8.5 would meet the immediate requirements for an efficient system of collection and disposal of the entire solid waste generated in the city of Nainital. Some major replacement and/or maintenance of the systems are proposed as long term investments. The SWM projects have been selected after elaborate discussions with the NNPP officials.

**Table 8.5 Solid Waste Management Sub-projects investments**

S.No	Project Components	Phase 1 2007-13	Phase 2 2014-25	Total (Rs.Crores)
	<b>Procurement of Equipment &amp; Vehicles</b>			
1.	Containerised Handcarts	0.3	0.1	0.4
2.	Dumper Placer Containers (4.5 m <sup>3</sup> capacity)	3.9	1.4	5.3
3.	Dumper Placer Machine	1.8	0.8	2.6
4.	Pickup Vehicles (1-2 m <sup>3</sup> Capacity)	2.1	1.2	3.3
5.	Mechanised Bin Lifting Vehicle	0.5	0.3	0.8
6.	Refuse Collection Bins	2.2	1.2	3.3
7.	Stray Animal Catcher	1.2	0.8	2.0
8.	Construction of Vehicle Depot with Workshop & Vehicle Washing Facility	1.0	0.0	1.0
9.	Construction of Concrete Base for Containers	0.1	0.0	0.1
10.	Development of new disposal site (After Identification and selection)	8.0	9.7	17.7
11.	Decentralized Composting with Shed	0.0	0.0	0.0
12.	Composting*(MT)	0.0	0.0	0.0
13.	Shed	0.1	0.1	0.1
14.	Sub-total Procurement of Equipment & Vehicles	21.0	15.6	36.6
15.	Land Cost			
16.	Vehicle Depot	4.0	5.6	9.6
17.	Disposal Site (New)	4.4	7.5	11.9
	<b>Total Base Cost</b>	<b>29.3</b>	<b>28.7</b>	<b>58.0</b>
	Add -:			0.0
	Physical Contingencies @ 7.5%	2.2	2.2	4.4
	Project Management Assistance (5%)	1.5	1.4	2.9
	<b>Grand Total</b>	<b>33.0</b>	<b>32.3</b>	<b>65.3</b>

\* Composting is proposed to be handed over on Built-Owned-Operate Basis.

### 8.3.5 Roads and Urban Transport

Proposed component-wise investments are given in Table 8.6 which would meet the immediate requirements of footpaths, off-street parking, widening of existing roads, and construction of new bypasses to reduce traffic congestion, and construction of ropeways.

**Table 8.6: Roads and Urban Transport Sub-projects Investments**

S. No.	Project Components	Phase 1 2007-13	Phase 2 2014-25	Total (Rs.Crores)
A.	Traffic Management			
1	Traffic singh board (L S)	0.1		0.1
2	Road Marking (L S)	0.8		0.8
3	Reflectors	0.2		0.2
4	Footpath	1.9		1.9
5	Guard rail	1.3		1.3
6	Side Protection Barrier	30.8		30.8
7	Road Furniture	0.2		0.2
8	Traffic Education Awareness Programme	2.0		2.0
B	Off-street Parking	17.5		17.5



S. No.	Project Components	Phase 1 2007-13	Phase 2 2014-25	Total (Rs.Crores)
C	Junctions Improvement	1.4		1.4
D	Improvement of Kharanja Road and Kutcha Road with CC	30.3		30.3
E	Passing Places on Existing Roads	6.5		6.5
F	Widening and strengthening of existing Roads	5.6		5.6
G	New Bypass	17.6		17.6
H	New Road	2.3		2.3
I	Elevated Roads	35.3		35.3
	New Bus stand	20.0		20.0
J	New Ropeway	0.0	400.0	400.0
K	Shifting of Building for parking and constructing elevated road in Lake (includes acquisition of Metropol Hotel and shops near Mallital Rickshaw Stand)	40.0		40.0
	<b>Total</b>	<b>213.8</b>	<b>400.0</b>	<b>613.8</b>
	Physical contingency@ 7.5%	16.0	30.0	46.0
	Project Management Assistance (5%)	10.7	20.0	30.7
	<b>Grand Total including contingencies</b>	<b>240.5</b>	<b>450.0</b>	<b>690.5</b>

### 8.3.6 Street Lighting

The investments envisaged for street lighting would fulfill the immediate requirements.

**Table 8.7: Street Lighting Sub-projects Investments**

S. No	Project Components	Phase 1 2007-13	Phase 2 2014-25	Total (Rs.Crores)
1.	Total	3.0	0.6	3.6
	Physical contingency - 7.5%	0.2	0.0	0.3
	Project Management Assistance -5%	0.2		0.2
	<b>Grand Total including contingencies</b>	<b>3.4</b>	<b>0.6</b>	<b>4.0</b>

### 8.3.7 Urban Poor

The proposed component-wise investments given in Table 8.8 would meet the immediate requirements for housing of slum populations, sewerage and drainage in identified slums as well as the rehabilitation and resettlement of slum settlements along the river banks. The requirements in respect of water supply and solid waste management system in the slum settlements have been provided for in the overall city investment plan for respective sector. The projected requirement of housing for the urban poor is based on the present proportion (36%) of the urban poor to the total population. Considering the same ratio of urban poor in 2025 the housing need has been projected.

**Table 8.8: Urban Poor Sub-projects Investments**

S.No	Urban Poor Project	Rs. in Crore		
		Phase 1 2007-13	Phase 2 2014-25	Total
1.	Housing 4800*Rs.80,000*	38.4	-	38.4
2	Infrastructure provision			
a.	Water Supply (Included in the overall city development plan)			

S.No	Urban Poor Project	Rs. in Crore		
		Phase 1 2007-13	Phase 2 2014-25	Total
b.	Awareness Programme	1.00	0.00	1.00
c.	Drainage (New- 500mtr, Repairing- 1000 mtr))	0.75		0.75
d.	Sewerage (Linked to city sewer system in phase 2)	0.40		0.40
e.	Solid Waste (Included in the overall city development plan)			
f.	Access Road	0.00		0.00
g.	LCS 20 community Latrines (5+5 seater)@ Rs.3500	0.014		0.014
h.	Street Light	0.50		
<b>Total</b>		<b>41.10</b>	<b>0.00</b>	<b>41.10</b>
Physical contingency (7.5%)		3.10	0.00	3.10
Project Management Assistance (5%)		2.00	0.00	2.00
<b>Grand Total</b>		<b>46.20</b>	<b>0.00</b>	<b>46.20</b>

\* A minimum of 12% (10% in case of SC/ST and other weaker section) beneficiary contribution with bank loan would be added.

### 8.3.8 Urban Renewal, Area Development and Environment

Table 8.9 provides the details of various urban renewal, area development and environment sub-components proposed for investment.

**Table 8.9: Urban Renewal, Area Development and Environment Sub Projects**

S. No.	Project Components	Phase 1 2007-13	Phase 2 2014-25	Total (Rs.Crores)
1	Redevelopment of old city areas - Mallital Bazaar, Beech Ki Bazar, Jailal Shah Bazar, Tallital Bazaar, Bakery Area	2.0	0.0	2.0
2	Relocation plan of families residing in vulnerable buildings -Survey of old buildings, -Feasibility study of introducing TDR for relocation and -Provision for relocation plan	5.0	0.0	5.0
3	Provision for Land Acquisition/Purchase and development of Sites and Services for Housing for Urban Poor	8.4		8.4
4	New Area Development - Khurpatal, Bhavanipur, Khuriagaon and Bimtal - Sites and Services	4.5		4.5
5	Revival of Sukhatal -Study of lakebed -Repair of Nallas -Beautification -Arrangements of water harvesting	2.5		2.5
6	Lake Front Development	5.0		5.0
7	Geological and Soil Study for Hill Slopes in the catchment area of Naini Lake	1.5		1.5
8	Comprehensive Lake water balance & water quality modeling studies	1.5		1.5
9	Provision for Slope Stabilisation based on Geological Studies	10.0	40.0	50.0
	<b>Total Base Cost</b>	<b>40.4</b>	<b>40.0</b>	<b>80.4</b>
	Physical Contingency (7.5%)	3.0	3.0	6.0
	Project Management Assistance (5%)	2.0	2.0	4.0
	<b>Grand Total</b>	<b>45.4</b>	<b>45.0</b>	<b>90.4</b>

\* Include provision for Urban Afforestation / Plantation

### 8.3.9 Heritage and Tourism

Table 8.10 provides a listing of the projects identified under heritage and tourism development. Some of the major projects are restoration of Churches, development of wilderness trekking path, etc.

**Table 8.10: Heritage and Tourism Sub projects**

S. No.	Project Components	Phase 1 2007-13	Phase 2 2014-25	Total (Rs.Crores)
1	Heritage walk from Mallital and Tallital	0.8		0.8
2	Development of View/Sightseeing Points (6)	0.2		0.2
3	Wilderness Trekking Path with shelter points (LS)	0.3		0.3
4	Restoration of Churches (2) and Cemetery (1)	1.5		1.5
5	Demonstration of model architectural designs	1.5		1.5
6	Beautification of Naina Devi Temple Complex	0.2		0.2
7	Development of 'Mini Kumaon' Park with models of natural and built heritage of Kumaon	2		2
	<b>Total</b>	<b>6.5</b>		<b>6.5</b>
	Physical Contingencies (7.5%)	0.4		0.4
	Project Management Assistance (5%)	0.3		0.3
	<b>Grand Total</b>	<b>7.2</b>		<b>7.2</b>

## 8.4 Financing Plan

As per the guidelines of JNNURM, Nainital is eligible for 80% of the total project cost as grant finance from the Government of India. 10% of the total project cost will be financed through grants from State Government. NNPP and Para Statsals would be contributing the balance 10% of the total project cost.

As per the same guidelines, in case any JNNURM project is also approved as Externally Aided Project (EAP), the EAP funds can be passed through as ACA to the State Government as funds contributed by State/ULBs/FIs and JNNURM funds can be used as Gol contribution. Urban infrastructure investments in respect of Nainital are also being taken up for the proposed Asian Development Bank (ADB) urban sector loan for Uttarakhand. It is anticipated that significant ADB funds could be leveraged for Nainital and other urban centers in Uttarakhand through the application of JNNURM funds to the city's investment proposals contained within this CDP and associated CIP.

## 8.5 Financial and Operating Plan

### 8.5.1 Cost Estimates and Financing Plan

*Cost Estimates.* The total cost of the CDP, during the JNNURM period, is estimated at Rs.5, 536 million including duties, taxes, contingencies (physical and price) and financing charges (front-end fees and commitment charges). Base cost of sub-project components were determined based on prevailing Schedule of Rates and compared with costs of similar nature projects – where designs / detailed reports were available, costs were counterchecked and incorporated into the CDP. Physical and price contingencies are included on investment program cost. Costs on Investment Program Management are estimated at the overall program-level and is also included in the CDP sub-project cost. CDP cost summary is indicated in Table 8.11.

**Financing Plan.** Based on discussions held with GoU, 80 percent (Rs.442.9 crores) of the CDP is proposed to be financed by Government of India as grant, 10% (Rs. 55.4 crores) by GoU, Nainital Lake Region SADA and Nainital NPP as equity, and 10 percent (Rs.55.3 crores) of the CDP is proposed to be financed by grant from GoU.

**Table 8.11: Investment Program**

Component	Programme	Dist.
	INR mn	%
<b>Part A: Urban Infrastructure Improvement</b>		
Water Supply	381.6	8.3%
Sewerage and Sanitation	196.9	4.3%
Solid Waste Management	329.9	7.2%
Urban Drainage	238.2	5.2%
Urban Transport and Roads	2,404.7	52.6%
<b>Sub total - Part A</b>	<b>3,551.2</b>	<b>77.7%</b>
<b>Part B: Slum Improvement</b>		
Community Infrastructure	462.0	10.1%
Street Lighting	33.8	0.7%
<b>Sub total - Part B</b>	<b>495.8</b>	<b>10.8%</b>
<b>Part C: Civic Infrastructure</b>		
Art, Culture, Heritage and Tourism	72.0	1.6%
Urban Renewals	454.0	9.9%
<b>Sub total - Part C</b>	<b>526.0</b>	<b>11.5%</b>
<b>Cost including physical contingencies</b>	<b>4,572.9</b>	<b>100.0%</b>
<b>Contingencies</b>		
Price Contingencies	963.3	
<b>Sub total – Contingencies</b>	<b>963.3</b>	
<b>Total Cost</b>	<b>5,536.2</b>	

Source: Analysis.

## 8.5.2 CDP Sustainability

### **Basic Assumptions for Projections**

In order to determine the financial viability of the CDP, two instruments were used – the internal rate of return (FIRR) and the Financial Operating Plan (FOP). The FIRR determines the rate of return based on surplus cash flows from sub-project account. The FOP is a cash flow stream of Nainital Jal Sansthan / NPP / SADA based on regular revenues, expenditures, and applicability of surplus funds to support sub-project sustainability. The FOP horizon is determined to assess the impact of full debt servicing liability resulting from the borrowings to meet the identified interventions/sub-projects. The proposed capital investments are phased over a five-year period from FY2008 to FY2012.

**Revenue Income.** The assumptions for forecasting revenue income comprise:

- (i) **Taxes and Charges.** In cases like property related taxes, water charges and sewerage charges, where the base and basis of revenue realization are known and predictable, the likely revenue is forecast based on certain assumptions regarding growth in number of assessments, revision in ARV (in case of property-related taxes), revision in charges/tariffs and improvement in collection efficiencies.
  - a. **Property Tax:** projected based on ARV per property; number of assessments to grow at a nominal 1 percent per annum; ARV for properties assumed to grow at 3 percent per annum; ARV for all properties revised once in five years beginning 2006-07 at 30 percent; and collection

performance assumed at 80 and 86 percent against arrears and current demand respectively.

- b. **Water Charges:** no new connections envisaged in the base case scenario and increase in water connections is a result of the availability of additional water for distribution – it is assumed that 90 percent of the properties would have water connections by FY 2028; the current rate of water charge is revised at 5 percent annually; collection performance is assumed at 85 percent of total demand; and new (one-time) connection charges are adopted at Rs.1,000 per domestic connection, Rs.2,000 per commercial connection and Rs. 3,000 per industrial connection.
  - c. **Sewerage Charges:** it is assumed that 95 percent of the properties under this phase would have sewer connections by FY 2028; an average surcharge rate of 50 percent of the water charges per property is assumed for FY2012 and increase is assumed annually in proportion to water charges; collection performance is assumed at 85 percent of the demand; and new (one-time) connection charges are adopted at Rs.1,500 per domestic connection, Rs.3,000 per commercial connection and Rs.4,500 per industrial connection.
- (ii) Other revenue income from own sources. All revenue income from own sources other than property-related taxes, and water and sewerage charges, where the base and basis is not clearly defined, are forecast based on the observed trend during the past five years/assessment period (2001-02 to 2005-06). Non-tax Own Sources and Tax Own Sources are expected to grow at 7.5 percent annually.
  - (iii) Grants and Contributions. Revenue income in the form of grants and contributions are also forecast based on the observed trend during the last five years (2001-02 to 2005-06), to meet the operational deficits.
  - (iv) Additional Revenue Income due to Sub-Projects. The sub-projects – in case of water and sewerage projects – are expected to secure additional revenue by way of increase in number of assessments and levy of user charges. Water charge is adopted at Rs.7.3/kl ( average) (FY2008) with an annual revision of 5 percent; the sewerage charge is adopted at 50 percent of the water charges with corresponding annual revision, and the conservancy charge is adopted at Rs.125 per month from FY2012 with an annual revision of 10 percent. The additional revenue income due to water supply, sewerage and solid waste management sub-projects is computed based on the proposed number of properties, new connections, proposed tariffs and assumed collection performance (at 85 percent of demand).

*Revenue Expenditure.* Key assumptions for forecasting revenue expenditure comprise:

- (i) Expenditure on Municipal Services. Expenditure on municipal services including general administration, revenue collection and service delivery are forecast based on the observed trend during the past five years (2001-02 to 2005-06), and is expected to grow at 3 percent annually. General Administration expenditure is expected to increase at 3 percent annually and increase in staff salary is assumed at 3 percent of the current employee related expenses.

- (ii) Outstanding Non-debt and Debt Liabilities. Currently, Nainital MB does not have any outstanding non-debt liabilities like payments due to employees, Uttarakhand Power Corporation (UPC), etc. Hence, it is assumed that future non-debt liabilities will not occur. Nainital Jal Sansthan has no outstanding loans.
- (iii) Additional O&M Expenditure due to Sub-Projects. While each sector identifies the O&M costs applicable for asset maintenance (manpower, consumables, power charges, etc.), a proportion of the capital cost was derived for projections. Table 8.12 presents the assumptions regarding O&M expenditure on new assets.

**Table 8.12: Assumed O&M Expenditure**

Sector	O&M as % of Capital Cost
Water Supply	3.00
Sewerage & Sanitation	2.00
Urban Drainage	2.00
Solid Waste Management	15.00
Urban Transport and Roads	2.00
Community Upgrading	2.00
Urban Development	2.00

*Capital Account.* In case of capital account, no capital transactions are considered and sub-project cash flows are loaded onto the FOP and their impact on Jal Sansthan, Development Authority and municipal finances tested. Key assumptions regarding capital account are investment phasing and sub-project financing/funding structures.

- (i) **Capital Expenditure.** The estimated expenditure for implementing sub-projects is phased over 2008-12 and expenditure ascertained adopting a physical contingency of 7.5 percent (for civil works) and a price contingency of five percent per annum. Base costs are determined based on 2006-07 prices.
- (ii) **Capital Income.** Capital income is forecast based on actual requirement to meet proposed capital expenditure. This Phase of CDP assumes 20 percent grant / equity financing from Government of Uttarakhand, Nainital MB and Nainital Development Authority and 80 percent grant financing from Government of India under JNNURM.

### ***Sustainability***

*Sustainability Analysis.* Sustainability analysis assumes that GoU and parastatal agencies like Nainital Jal Sansthan and Nainital MB will carry out minimum reforms indicated as assumptions for financial projections. The financial and operating plan (FOP) for Nainital Jal Sansthan and Nainital MB evaluates the Jal Sansthan / Municipal fund status for the following scenarios:

- (i) **Base Case Scenario.** In the base case scenario, the finances of Nainital Jal Sansthan / NPP are forecast in a “do nothing” or “without CDP” scenario. The revenue deficit indicates Nainital Jal Sansthan / MB incapacity to service capital expenditure.
- (ii) **Investment Scenario.** The investment scenario is based on investments

identified under the CDP and the requirement for upgrading the city's infrastructure is estimated and phased based on construction activity. Implications of this investment in terms of additional operation and maintenance expenditure are worked out to ascertain sub-project cash flows. Revenue deficits from the Base Case Scenario and sub-project cash flows emerging from implementable investments – the cash flow net surpluses indicates the Nainital MB's and Nainital Jal Sansthan's ability to generate operating surplus. FY 2013 is assumed as the reference year to determine the net surpluses and whether Nainital Jal Sansthan / MB maintain a debt/revenue surplus ratio as an indication of the Nainital Jal Sansthan / MB ability to sustain investments.

Based on the aforesaid sustainability analysis, the sub-project cash flows were applied onto Nainital Jal Sansthan / NPP Revenue Account cash flows to determine the Operating Surplus/Closing Balance. Summary figures are indicated in Table 8.13 and Table 8.14 below.

**Table 8.13: CDP Sustainability – Nainital Jal Sansthan**

Item	2007	2013	2021	2032
	Rs. million			
<b>Revenue Account</b>				
Opening Balance	-47.4	0.1	0.8	0.7
Revenue Income	134.2	156.8	274.4	615.1
Revenue Expenditure	86.4	156.6	274.9	615.3
Closing Balance	0.4	0.3	0.3	0.5

Source: Analysis.

**Table 8.14: CDP Sustainability – Nainital NPP**

Item	2007	2013	2021	2032
	Rs. million			
<b>Revenue Account</b>				
Opening Balance	-	0.2	0.8	0.7
Revenue Income	41.0	139.1	161.5	253.7
Revenue Expenditure	40.8	138.9	161.9	253.7
Closing Balance	0.2	0.4	0.5	0.7

Source: Analysis.

Table 8.15: Financial Improvement Action Plan

Item / Current Situation	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	Remarks
<b><u>A. Water Supply</u></b>									
• Connection Fee Revision	-	-	-	-	20% of fee in FY 2007	-	-	20% of fee in FY 2010	Water connection fee is assumed as Rs.1000 for domestic connections in FY 2007.
• Increase in monthly water charge per connection	-	-	5%	5%	5%	5%	5%	5%	The monthly charge for domestic connection is Rs. 7.3 per Kilo Litre (KL) in FY 2008. 85% collection performance.
• Properties covered by water connections	-		76%	80%	85%	90%	90%	90%	100% coverage
<b><u>B. Sewerage</u></b>									
• Connection Fee Revision	-	-	-	-	20% of fee in FY 2007		-	20% of fee in FY 2010	Sewer connection fee is assumed as Rs.1500 for domestic connections in FY 2007.
• Increase in monthly sewer charge per connection	-		same	As	in	case of	water		Based on the size of investments and the priority for sewerage investments, sewer charges are proposed as monthly fees as a 50% surcharge on water. 85% collection performance.
• Properties covered by sewer connections						46%	55%	64%	95% coverage by FY 2028.
<b><u>C. Solid Waste Management</u></b>									
• Increase in monthly conservancy charge per property	-	-	-	-	-	-		20% every three years from 2014-15	Conservancy tax/charge introduced from FY2011 85% collection performance.
• Properties covered by conservancy charge	-	-	60%	60%	70%	80%	100%	100%	100% coverage
<b><u>C. Property Tax</u></b>									
• ARV Revision			-	-	-	60% of ARV in FY 2012		-	Revisions in ARV made once every three years @ 20%. Annual increase @1%.
• Collection Performance Demand			53%	58%	62%	67%	73%	77%	Achieve 85% collection of arrear and current demand.



Table 8.16: Financial and Operating Plan

	Item Heads	2007	2008	2009	2010	2011	2012	2013	2021	2028	2032
		as of March 31 (in INR Million)									
	<b>REVENUE ACCOUNT</b>										
<b>I</b>	<b>Revenue Income</b>										
<b>A</b>	<b>Tax- Own Sources</b>										
1	House Tax	8.3	8.4	8.6	8.7	0.0	21.8	16.3	17.0	26.4	33.0
2	Other Taxes & Charges (incl under spl law, acts)	4.4	4.8	5.1	5.5	5.9	6.4	6.8	12.2	20.2	27.0
	<i>Tax- Own Sources</i>	12.7	13.2	13.7	14.2	5.9	28.2	23.1	29.2	46.6	60.1
<b>B</b>	<b>Non Tax- Own Sources</b>										
1	Income from Municipal Properties and Markets	2.8	3.0	3.2	3.5	3.7	4.0	4.3	7.7	12.8	17.1
2	Miscellaneous Income	7.7	8.2	8.9	9.5	10.2	11.0	11.8	21.1	35.0	46.7
	<i>Non Tax- Own Sources</i>	10.5	11.2	12.1	13.0	14.0	15.0	16.1	28.8	47.8	63.8
<b>C</b>	<b>Revenue Grants / Transfers</b>										
1	State Finance Commission	16.7	16.8	17.0	17.2	17.3	17.5	17.7	19.1	9.2	
2	Operational Grants	1.0	12.7	12.5	12.5	21.5	65.2	67.0	50.0		
	<i>Revenue Grants</i>	17.7	29.5	29.5	29.7	38.8	82.7	84.7	69.1	9.2	0.0
<b>D</b>	<b>Other Income</b>										
1	Income from Interest on Investments	0.1	0.2	0.2	0.3	0.3	0.4	0.5	2.2	9.0	20.0
	<i>Other Income</i>	0.1	0.2	0.2	0.3	0.3	0.4	0.5	2.2	9.0	20.0
	<b>Revenue Income</b>	<b>41.0</b>	<b>54.1</b>	<b>55.5</b>	<b>57.2</b>	<b>59.0</b>	<b>126.3</b>	<b>124.4</b>	<b>129.4</b>	<b>112.6</b>	<b>143.9</b>

## Financial and Operating Plan (contd...)

	Item Heads	2007	2008	2009	2010	2011	2012	2013	2021	2028	2032
<b>II</b>	<b>Revenue Expenditure</b>										
<b>A</b>	<b>General Administration</b>										
1	Staff Salary and Employee Related Expenses	28.9	41.7	42.9	44.2	45.6	46.9	48.3	61.2	75.3	84.8
2	Office - Contingency expenses	8.1	8.3	8.6	8.8	9.1	9.4	9.7	12.2	15.0	16.9
	<i>Establishment</i>	37.0	50.0	51.5	53.1	54.7	56.3	58.0	73.5	90.4	101.7
<b>B</b>	<b>Operation &amp; Maintenance</b>										
1	Public Safety and Health and others	3.8	3.9	4.1	4.2	4.3	4.4	4.6	5.8	7.1	8.0
	<i>Operation &amp; Maintenance</i>	3.8	3.9	4.1	4.2	4.3	4.4	4.6	5.8	7.1	8.0
<b>C</b>	<b>Debt Servicing</b>										
1	Debt Servicing- Old	-	-	-	-	-	-	-	-	-	-
	<i>Debt Servicing</i>	-	-	-	-	-	-	-	-	-	-
	<b>Revenue Expenditure</b>	<b>40.8</b>	<b>54.0</b>	<b>55.6</b>	<b>57.3</b>	<b>59.0</b>	<b>60.7</b>	<b>62.6</b>	<b>79.3</b>	<b>97.5</b>	<b>109.7</b>

**Financial and Operating Plan (contd...)**  
**CASH FLOW STATEMENT - Nainital NPP**

(Rs. Million)

Item Heads	2007	2008	2009	2010	2011	2012	2013	2021	2028	2032
Opening Balance	-	0.2	0.3	0.2	0.1	0.2	0.2	0.8	0.4	0.7
<b>Revenues</b>										
Tax and other revenues	41.0	54.1	55.5	57.2	59.0	126.3	124.4	129.4	112.6	143.9
Solid Waste Management	-	-	-	-	-	10.0	14.7	32.1	74.0	109.8
<b>Sub-total Revenues</b>	<b>41.0</b>	<b>54.1</b>	<b>55.5</b>	<b>57.2</b>	<b>59.0</b>	<b>136.3</b>	<b>139.1</b>	<b>161.5</b>	<b>186.5</b>	<b>253.7</b>
<b>Expenditure</b>										
Existing revenue expenditure	40.8	54.0	55.6	57.3	59.0	60.7	62.6	79.3	97.5	109.7
Solid Waste Management	-	-	-	-	-	61.4	62.1	67.2	72.0	126.8
Community Upgrading & Civic Infrastructure	-	-	-	-	-	14.1	14.2	15.4	16.5	17.2
<b>Sub-total Expenditure</b>	<b>40.8</b>	<b>54.0</b>	<b>55.6</b>	<b>57.3</b>	<b>59.0</b>	<b>136.3</b>	<b>138.9</b>	<b>161.9</b>	<b>186.0</b>	<b>253.7</b>
Closing Balance	0.2	0.3	0.2	0.1	0.2	0.2	0.4	0.5	0.9	0.7

**CASH FLOW STATEMENT – Operation and Maintenance Costs - GoU / SADA**

(Rs. Million)

Item Heads	2007	2008	2009	2010	2011	2012	2013	2021	2028	2032
Opening Balance							74.1	693.9	1,278.2	1,630.9
Transport Planning						56.9	57.4	62.2	66.7	69.4
Urban Development						5.9	6.0	6.5	6.9	7.2
Storm Water Drainage						11.3	11.4	12.3	13.2	13.8
<b>Closing Balance</b>						<b>74.1</b>	<b>148.9</b>	<b>774.9</b>	<b>1,365.1</b>	<b>1,721.2</b>

**Note:** Operation and Maintenance costs would be met from State Government grants for above along with for ongoing projects.

**CASH FLOW STATEMENT - Nainital Jal Sansthan**

(Rs. Million)

Item Heads	2007	2008	2009	2010	2011	2012	2013	2021	2028	2032
Opening Balance	-47.4	0.4	0.2	0.2	0.4	0.4	0.1	0.8	0.6	0.7
<b>Water Supply</b>										
Revenues	134.2	93.1	100.8	109.1	131.7	137.9	143.2	235.1	392.5	527.3
Expenditures	86.4	93.3	100.8	108.9	131.8	141.3	151.6	269.5	451.9	609.4
<b>Sewerage &amp; Sanitation</b>										
Revenues	-	-	-	-	-	8.0	13.6	39.3	65.4	87.9
Expenditures	-	-	-	-	-	4.9	4.9	5.3	5.7	6.0
<b>Closing Balance</b>	<b>0.4</b>	<b>0.2</b>	<b>0.2</b>	<b>0.4</b>	<b>0.4</b>	<b>0.1</b>	<b>0.3</b>	<b>0.3</b>	<b>0.9</b>	<b>0.5</b>

## Financial and Operating Plan

## PROPERTY TAX REVENUE SCHEDULE

Item Heads	2007	2008	2009	2010	2011	2012	2013	2021	2028	2032
Demography										
Population	67,008	69,206	71,476	73,820	76,242	78,742	81,325	105,282	131,968	150,153
Approx. Households/Properties	14,891	15,379	15,884	16,405	16,943	17,498	18,072	23,396	29,326	33,367
Authorized Properties										
Domestic	4,716	4,763	4,810	4,859	4,907	4,956	5,006	5,421	5,812	6,048
Commercial	256	259	261	264	267	269	272	295	316	329
Industrial	154	155	157	158	160	162	163	177	190	197
Authorized Customers	5,126	5,177	5,229	5,281	5,334	5,387	5,441	5,892	6,317	6,573
Property Tax Assessments										
Number of old assessments	4,152	4,944	5,193	5,245	5,297	5,350	5,404	5,852	6,275	6,530
Additional assessments annually	42	49	52	52	53	54	54	59	63	65
Assessments to increase Tax Base	750	200	-	-	-	-	-	-	-	-
Total number of assessments	4,944	5,193	5,245	5,297	5,350	5,404	5,458	5,911	6,338	6,595
Annual Ratable Value										
Avg. ARV (Old Assessment)	10,851	11,177	11,512	11,857	18,971	18,971	18,971	22,765	32,782	39,339
Avg. ARV (New Assessment)	11,177	11,512	11,857	12,213	30,354	31,265	32,203	58,744	104,037	140,513
ARV Rate & Periodic Revision					60%					
ARV Increase Per New Property										
Current Demand (INR Million)										
Old Assessments	5.6	6.9	7.5	7.8	12.6	12.7	12.8	16.7	25.7	32.1
New Assessments	1.1	0.4	0.1	0.1	0.2	0.2	0.2	0.4	0.8	1.1
Total Current Tax Demand	6.7	7.3	7.5	7.9	12.8	12.9	13.0	17.1	26.5	33.3
DCB Statement Demand										
Arrear	9.0	7.4	6.2	5.2	4.3	17.1	8.1	2.9	4.4	5.6
Current	6.7	7.3	7.5	7.9	12.8	12.9	13.0	17.1	26.5	33.3
Total Demand	15.7	14.7	13.8	13.1	17.1	30.0	21.2	20.0	31.0	38.8
Collection										
Arrear	4.9	4.4	4.1	3.6	-	12.8	6.5	2.3	3.5	4.4
Current	3.4	4.0	4.5	5.1	-	9.0	9.8	14.7	22.8	28.6
Total Collection	8.3	8.4	8.6	8.7	-	21.8	16.3	17.0	26.4	33.0
Property Tax Collection Performance	53%	58%	62%	67%	0%	73%	77%	85%	85%	85%
Property Tax Coverage	96%	100%	100%	100%	100%	100%	100%	100%	100%	100%

## **8.6 Investment Sustenance Plan**

Steps are being initiated to meet the requirements of mandatory reforms and optional reforms, institutional and financial, at the ULB / Para Statal level in order to strengthen the financial system and improve financial management in these bodies (see Chapter 4). Modalities for meeting the minimum requirement of 50% of the operation and maintenance costs, as per the JNNURM guidelines, would be worked out and implemented with a phased plan towards full cost recovery.

## **Annexures**

**ANNEX 3.1.1: Population Projection in Nainital**

Year	Assumed annual growth rate (%)	Projected Population ('000)	Tourist load	Institutional population	Visitors to district head quarter	Total
2001	2.7	38 (Census)				38
2005	3	44.00	35.00	16.00	5.00	100.00
2006		45.32	35.70	16.32	5.10	102.00
2007		46.68	36.41	16.65	5.20	105.00
2008		48.08	37.14	16.98	5.31	107.00
2009		49.52	37.89	17.32	5.41	111.00
2010	3.5	51.01	38.64	17.67	5.52	113.00
2011		52.54	39.42	18.02	5.63	116.00
2012		54.11	40.20	18.38	5.74	119.00
2013		55.74	41.01	18.75	5.86	123.00
2014		57.41	41.83	19.12	5.98	126.00
2015	3	59.13	42.66	19.50	6.09	129.00
2016		60.91	43.52	19.89	6.22	132.00
2017		62.73	44.39	20.29	6.34	135.00
2018		64.62	45.28	20.70	6.47	138.00
2019		66.55	46.18	21.11	6.60	142.00
2020	2.5	68.55	47.11	21.53	6.73	145.00
2021		70.61	48.05	21.96	6.86	149.00
2022		72.73	49.01	22.40	7.00	151.00
2023		74.91	49.99	22.85	7.14	155.00
2024		77.15	50.99	23.31	7.28	159.00
2025	2	79.00	52.01	23.78	7.43	162.00
2026		80.58	53.05	24.25	7.58	165.46
2027		82.19	54.11	24.74	7.73	168.77
2028		83.84	55.19	25.23	7.88	172.14
2029		85.51	56.30	25.73	8.04	175.58
2030		87.22	57.42	26.25	8.20	179.10
2031		88.97	58.57	26.77	8.37	182.68
2032		90.75	59.74	27.31	8.53	186.33
2033		92.56	60.94	27.86	8.71	190.06
2034		94.41	62.15	28.41	8.88	193.86
2035		96.30	63.40	28.98	9.06	197.74
2036		98.23	64.67	29.56	9.24	201.69

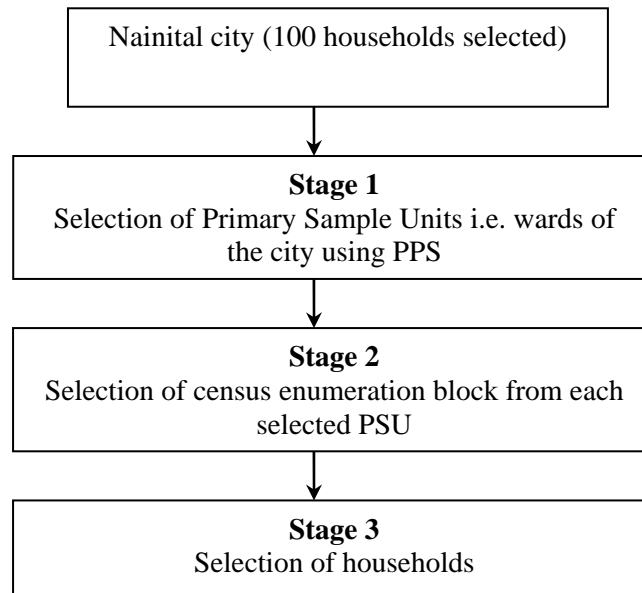
### ANNEX 3.1.2: Methodology of Socio-economic Survey

#### Sample design

Total sample to be covered– 2000 households from 5 cities.

Sample unit=Household

The sample will be selected in three stages for each selected city. In the first stage, Primary Sampling Units (PSU) (i.e. wards of the cities) will be selected using probability proportional to population size (PPS). In the next stage, one census enumeration block (CEB) from each selected PSU will be selected randomly. Finally, households will be selected within each sample of CEB. The households to be interviewed will be selected with equal probability from the household list in CEB using purposive sampling.



#### Sample size distribution

The proportionate distribution of sample size is as follows:

Town	Population	Sample size	Investigators	Days required
Nainital	38559	100	1	20

## ANNEX 3.1.3: Questionnaire for Baseline Socio-economic Survey

**Household Baseline Survey****A. Background information**

Sl.No. \_\_\_\_\_ City \_\_\_\_\_ Ward \_\_\_\_\_  
 Locality \_\_\_\_\_ Street \_\_\_\_\_ HH No. \_\_\_\_\_

**B. Demographic information**

Religion \_\_\_\_\_ Caste \_\_\_\_\_ Duration of stay \_\_\_\_\_

Sl. No.	Name	Relation with HHH	Sex	Age	Education	Occupation		Approx income/month	Approx expenditure/month	Monthly savings	Remarks*
						Primary	Other				
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											

Note- Please mark the respondent (should be an adult) as "R" in the remarks column

\* Mention if there is any comment



<b>C. HOUSING</b>		
1. How long has your family lived in this neighbourhood?		Months
2. If you have moved here in the last 5 years, have you moved:	1. From another part of this city 2. From another city, 3. From a rural area 4. From other country 5. Not Applicable	
3. Ownership of plot	1. Freehold Title 2. Lease 3. Patta 4. Joint patta 5. Other legal right 6. No legal right	
4. Given better legal right to this land, would you use your own money to improve your house?	1. Yes 2. No	
5. Ownership of house	1. Own 2. Rented 3. Others (Specify)	
6. If on rent, the <b>rent</b> per month		Rs.
7. House type	1. Kutchha 2. Semi pucca 3. Pucca	
8. Does any other Family (With separate kitchen) stay with you in this house?	1. Yes 2. No	
9. Do you pay any tax to local body. If Yes, what for how much? Water tax_____ Water charge_____ Property tax_____ Other service tax_____		Total Rs._____
<b>D. ENVIRONMENTAL SERVICES</b>		
10. How important are the following to your quality of life? (rank in order of importance)		
a. Water	Highest	1.
b. Sanitation		2.
c. Drainage		3.
d. Solid waste collection		4.
e. Roads, street lighting		5.
f. Proximity to public transport	Lowest	6.
<b>Water</b>		
11. What is your primary source of water supply?	1. House connection 2. Public standpost 3. Neighbour's house 4. Municipal tanker 5. Private vendor 6. Tube well/Hand pump 7. Dug well 8. Pond/River 9. Others	
12. If answer is 1; Do you have a water meter for house connection?	1. Yes 2. No	
13. Do you sell piped water to others, e.g. neighbors? If yes, how much per day?	1. Yes 2. No	_____ =
14. How many persons outside your household use water through your connection?		
15. Quality of water	1. Good 2. Medium 3. Poor	
16. Is the water treated before use?	1. None 2. Boil 3. Filter 4. Others (Specify)	
17. Hours of water supply through piped system per day	Morning_____ Afternoon/Evening_____	Total hours

18. Who fills water?	1. Adult male 2. Adult female 3. Boy 4. Girl	
<b>Sanitation</b>		
19. Where do your family members go for defecation?	1. Use latrine in this house	Men
	2. Use neighbour's latrine	Women
	3. Use a public toilet	Children
	4. Use a pay and use toilet	
	5. Open defecation	
20. Why do they go to other place?		
21. How the facility is maintained?		
22. Who cleans it?		
23. How often?		
24. If you have a latrine in the house, type of it?	1. Pour flush	
	2. Twin pit latrine	
	3. Dry/ bucket latrine	
	4. Not Applicable	
25. Where does it discharge?	1. Sewer	
	2. Drain	
	3. River	
	4. Septic tank/soak pit	
26. Are you satisfied with the facility?	1. Yes 2. No	
27. If not, why?		
28. Do you plan for something else?	1. Yes 2. No	
29. Is there enough water for the latrine?	1. Yes 2. No	
30. What is the source of that water	1. Tap 2. Hand pump 3. River/pond	
31. How do you clean your hands after defecation?	1. With mud 2. With water 3. With soap 4 Others	
	(Specify)	
32. If going out for defecation do you wear footwear?	1. Yes 2. No	
<b>Drainage</b>		
33. Do the locality has a rain water drainage? 1. Yes 2. No		
34. Does your neighbourhood suffer from water logging/flooding problems? 1. Yes 2. No.		
35. If Yes, How many times a year?	1. No, never	
	2. Less than 5 times a year	
	3. 5-10 times a year	
	4. More than 10 times a year	
36. If Yes, for how long does it stay flooded?	1. No, never	
	2. Less than one week in a year	
	3. 1week to 1 month in a year	
	4. 1-3 months a year	
	5. More than 3 months a year	
37. If Yes, do you suffer from damage to your home or loss of income as a result of flooding?	1. No, never	
	2. Less than 5 times a year	
	3. 5-10 times a year	
	4. More than 10 times a year	
38. On average, what is the cost of the damage each time?	1. No cost	
	2. Less than Rs 500	
	3. Rs 500 – 1000	
	4. Rs 1000 – 5000	
	5. More than Rs 5000	

<b>Solid Waste / Garbage</b>		
39. How does your household dispose of solid waste?	1. In private bin for house collection 2. In community bin 3. Burn 4. Throw outside on street or open area	
40. Who disposes waste?	1. Adult male 2. Adult female 3. Boy 4. Girl	
41. What is the approximate quantity?	In gm	
42. Is it segregated?	1. Yes 2. No	
43. Who segregates?	1. Male 2. Female	
44. 68. If you put waste in either private or community dustbin, how often is it collected?	1. Daily 4. Longer than a week 2. 2-3 times per week 5. Never 3. Weekly	
45. Who collects garbage from collection point	1. Municipality 2. Private party	
46. Is open burning in practice	1. Yes 2. No	
47. Who burns?	1. Residents 2. Municipality	
48. Do the streets get swept?	1. Yes 2. No 3. Don't know	
49. 69. Is the road drain outside your house swept clean regularly?	1. Yes 2. No 3. Don't know 4. No Drains	
50. Who sweeps?	1. Municipality 2. Private party 3. Residents	
51. How frequently?	1. Daily 4. Longer than a week 2. 2-3 times per week 5. Never 3. Weekly	
52. Do you pay any amount for garbage collection/sweeping	1. Yes 2. No	
53. How much?		
<b>Electricity</b>		
54. Do you have an electric connection in your house?	1. Yes 2. No	
55. Is there any electric meter in your house?	1. Yes 2. No	
<b>Roads, Street Lighting &amp; Access to Public Transport</b>		
56. Is the road in front of your house paved?	1. Yes 2. No	
57. Condition of the road	1. Kutcha 2. Metalled 3. Painted	
58. Do you have a street-light in your street?	1. No 2. Yes, within 50 m 3. More than 50m away	
59. Is it functional?	1. Yes 2. No	
60. Do you pay for it?	1. Yes 2. No	
61. How far do you have to go to get public transport?	1. Less than 100m 2. 100m to 1km 3. More than 1 km	
<b>F. HEALTH</b>		
62. Has any household member suffered from diarrhoea in the last six month?	1. Yes 2. No	

63. Has any household member suffered from acute respiratory infection in the last six months?	1. Yes      2. No	
64. How many days of work were lost because of these illnesses in the last month?	1. None      2. Less than 5 days 3. 5 -10 days      4. 10 – 20 days 5. More than 20 days	
65. Has there been any death in the family in the last year?	1. Yes, child under 5      2. Yes, other 3. No	
66. Probable cause of death		
67. What is the average cost of treatment for the family per month?	1. Nothing      2. Less than Rs 50 3. Rs 50-100      4. Rs 100 – 200 5. More than Rs 200	
<b>G. SOCIAL CAPITAL</b>		
68. Does any family member of the household have a membership of any local groups?	1. Yes 2. No	
69. Does any member of the household have a membership of Residents' or Community Welfare Association?	1. Yes      2. No	
70. Do you have a ration card?	1. Yes      2. No	
<b>H. PERCEPTIONS &amp; PRIORITIES</b>		
71. How do you rate the provision of services by the Government/Corporation in your area for:		
a) Water	1. Excellent 2. Good 3. Average 4. Fair 5. Bad	
b) Sanitation	1. Excellent 2. Good 3. Average 4. Fair 5. Bad	
c) Drainage	1. Excellent 2. Good 3. Average 4. Fair 5. Bad	
d) Solid Waste Collection	1. Excellent 2. Good 3. Average 4. Fair 5. Bad	
e) Roads & Street Lighting	1. Excellent 2. Good 3. Average 4. Fair 5. Bad	
f) Access to public transport	1. Excellent 2. Good 3. Average 4. Fair 5. Bad	
72. How would you rate their overall performance?	1. Excellent 2. Good 3. Average 4. Fair 5. Bad	
73. Which do you think are the 3 most important services to improve?	1. Water      2. Sanitation 3. Drainage      4. Solid Waste Collection 5. Street Cleaning      6. Roads & Street Lighting 7. Public transport      8. Other? <i>Please specify</i>	
<b>Willingness to Pay</b>		
74. Would you be willing to pay more for a better quality of service for? *		
a) Water	1. Yes 2. No 3. Don't know If yes, how much?	
b) Sanitation	1. Yes 2. No 3. Don't know If yes, how much?	
c) Drainage	1. Yes 2. No 3. Don't know If yes, how much?	
d) Solid Waste Collection	1. Yes 2. No 3. Don't know If yes, how much?	
e) Roads & Street Lighting	1. Yes 2. No 3. Don't know If yes, how much?	

\*Slabs for willingness to pay

(1) &lt;200 /month

(5) &lt;500 /month

(2) &lt;250 /month

(6) &lt;750 /month

(3) &lt;300 /month

(7) &gt;750 /month

(4) &lt;350 /month

**75. General Observation:**

*Approach road-*

*Streets/paths-*

*Drains-*

*Stand post-*

- \* *Post*
- \* *Platform*
- \* *Tap*
- \* *Cleanliness*

*Cleanliness of locality*

*Street lights*

**Possession:**

- \* *Television- Colour, B/W*
- \* *Air conditioner*
- \* *Air cooler*
- \* *Refrigerator*
- \* *Telephone*
- \* *Mobile*
- \* *Bicycle*
- \* *Motorbike*
- \* *Car*
- \* *Other assets*

### **ANNEX 3.3.1: Physical Development Policies as per Nainital Master Plan 2011**

Physical Development Policies as proposed in the Master Plan are as follows:

- Further division of land and land conversion shall not be permitted in NNPP area for development and construction works
- Permission for residential development shall be given only to the domicile of Nainital with the following conditions:
  - Height of the building will be restricted to 7.5 m or two stories whichever is less
  - Construction within 3 m of drains will not be allowed
- Non residential construction shall not be allowed in NNPP area
- Renovation in the existing residential buildings in declared safe areas for construction shall be allowed with
  - Restriction on height up to 7.5 m
  - No increase in plinth and floor area
  - No change in the use of the building
- Extension and reconstruction of existing non residential buildings shall be prohibited in NNPP area
- Development of sightseeing points, picnic and camping areas in cognizance with surrounding physical environment
- Conservation and preservation of forests and water bodies
- Private residential development in rural areas within NNPP shall be allowed with a maximum limit of 100 sq. m after approval from NLR SADA
- Areas which are ecologically sensitive areas have been earmarked as 'Prohibited Areas'. Regulations for Prohibited area include the following:
  - No renovation, extension and development works shall be allowed
  - No new construction shall be allowed. Limited developmental activities such as construction of retaining wall, plantation widening (limited to 7.5 m) and strengthening of existing roads are allowable in special circumstances. No new road construction shall be allowed in these areas and only pedestrian walkways would be permitted for construction
  - Division of land and land conversion for development and construction works shall not be allowed

### ANNEX 3.3.2: Summary of Works undertaken in Nainital Lake Conservation Project

#### 1. Sewer management

##### 1.1 Sewer line and Sewer Treatment Plant

Implementing Agency: Uttarakhand Paik Jal Nigam, Jal Sansthan, Nagar Palika Parishad  
Almost 72% of the population of Nainital comes under Lake Conservation Area. The length of the total branch sewer is 10.57 km.

##### 1.2. Toilet construction in Catchment Area

Implementing Agency: NLRSDA, Nainital

#### 1.3. Solid Waste Management

Implementing Agency: Nainital Nagar Palika Parishad

Work	Financial improvement			Physical improvement		Aim
	Sanctioned	Released	Expense	proposed	Ongoing	
Waste Disposal	81.00	10.75	10.30	Instrument price, densifier Plant	Dumper placer	December 06

Long term plans have been prepared for Solid Waste management and disposal by the consultancy. In the first stage there is planning to segregate the waste and collect for the recycling. Proposed Densifier Plant is planning to set up in Kathgodam for recycling the waste material.

#### 2. Hydraulic Work.

##### 2.1 Siphon Work

Implementing Agency: NLRSDA

##### 2.2 Outlet Work in Tallital

Implementing Agency: Irrigation Deptt, Nainital

##### 2.3 Protection of Balia Nala

Implementing Agency: Jamrani Bridge Construction Block, Nainital

Work	Financial improvement			Physical improvement		Aim
	Sanctioned	Released	Expense	proposed	Ongoing	
Balianala Protection – First Stage	1455.83	1550.00	1550.00	Safety work	100%	-

#### 3. Conservation and Development Work

##### 3.1 Aeration work

Implementation Agency: NLRSDA

Work	Financial improvement			Physical improvement		Aim
	Sanctioned	Released	Expense	proposed	Ongoing	
Airession	495.00	17.00	17.0	Airession		

To stop the losses of water animal due to continuous lack of oxygen in lake and also for the cleaning of lake, they are planning to improve the quantity of oxygen by airession system.

3.2 delta cleaning work

Implementation Agency: NLRSA

3.3 Biomanipulation Work

Implementation Agency: Fisheries Deptt, G.B. Pant Agriculture and Technology Institute, Pantnagar

Work: To maintain the water quality by putting fish into the lake.

3.4 Development Management of Lake Side

Implementation Agency: NLRSA

**4. Catchment Conservation Work**

4.1 Catchment Conservation

Implementation Agency: Forest Deptt., Nainital

4.2 Other conservation work

Implementation Agency: Public Welfare Deptt., Uttarakhand

- Ropeway

**5. Infrastructure Facilities**

5.1 Water quality

Implementation Agency: Kumaon University, Nainital

- Biological status & Water quality monitoring

5.2 Bypass Road

Implementation Agency: Public Welfare Deptt.

- Khurpatal Bypass – Haldwani- Nainital Marg  
Kaladoongi-Nainital Marg

5.3 Parking

Implementation Agency: NLRSA

5.4 New Bridge / Bypass

Implementation Agency: Jamrani Bridge Construction Block, Haldwani

5.5 Power Plant

5.6 Road Development ( Mall Road)

Implementation Agency: NLRSA

- Development of Walkway

**6. Public Awareness Programme**

Implementation Agency: NLRSA



**ANNEX 3.4.1: Details of Existing And Proposed Sewage Generation****Table 1 Existing Sewage Generated (2006) from different zones**

Zone	Wards	Base Population	Tourist Population	Guest Population	Total Population	Sewage MLD
I Nainital Lake Catchment Zone	1.0	2026	270	1013	3309	0.4
	2.0	1402	187	701	2290	0.2
	4.0	986	132	493	1611	0.2
	6.0	1528	204	764	2495	0.3
	7.0	1008	134	504	1646	0.2
	8.0	2710	361	1355	4426	0.5
	9.0	1620	216	810	2647	0.3
	10.0	2129	284	1064	3477	0.4
	11.0	802	107	401	1309	0.1
	13.0	2455	327	1227	4010	0.4
	14.0	1248	166	624	2038	0.2
	15.0	2787	372	1393	4552	0.5
	16.0	1889	252	944	3085	0.3
	18.0	1248	166	624	2038	0.2
	19.0	916	122	458	1496	0.2
	21.0	1253	167	627	2047	0.2
Sub Total		26005	3467	13003	42475	5
II Sukha Tal Zone	1.0	2026	270	1013	3309	0.4
	4.0	986	132	493	1611	0.2
	12.0	1537	205	768	2510	0.3
	17.0	2770	369	1385	4524	0.5
	24.0	1392	186	696	2273	0.2
Sub Total		8710	1161	4355	14226	1.5
III Narayana Nagar Zone	3	1457	194	729	2380	0.3
IV HariNagar - Krishna Pur Zone	5	1436	191	718	2345	0.3
	23	2028	270	1014	3312	0.4
	25	2550	340	1275	4165	0.4
	22	579	77	289	945	0.1
	20	987	132	494	1613	0.2
	18	1248	166	624	2038	0.2
Sub Total		8828	1177	4414	14419	2
GRAND TOTAL		45000	6000	22500	73500	8

\* Calculations of sewage flow is based on 80 % of water supply rate of 135 L/c.d for total population.

Table 2 Proposed Sewage Generated (2021) from different zones

Zone	Wards	Base Population	Tourist Population	Guest Population	Total Population	Sewage MLD
I Nainital Lake Catchment Zone	1.0	3241	360	1621	5222	0.6
	2.0	2243	249	1121	3614	0.4
	4.0	1578	175	789	2542	0.3
	6.0	2444	272	1222	3938	0.4
	7.0	1612	179	806	2598	0.3
	8.0	4335	482	2168	6985	0.8
	9.0	2593	288	1296	4177	0.5
	10.0	3406	378	1703	5488	0.6
	11.0	1283	143	641	2067	0.2
	13.0	3928	436	1964	6328	0.7
	14.0	1997	222	998	3217	0.3
	15.0	4459	495	2229	7183	0.8
	16.0	3022	336	1511	4869	0.5
	18.0	1997	222	998	3217	0.3
	19.0	1466	163	733	2361	0.3
	21.0	2006	223	1003	3231	0.3
<b>Sub Total</b>		<b>41608</b>	<b>4623</b>	<b>20804</b>	<b>67035</b>	<b>7</b>
II Sukha Tal Zone	1.0	3241	360	1621	5222	0.6
	4.0	1578	175	789	2542	0.3
	12.0	2459	273	1229	3961	0.4
	17.0	4431	492	2216	7140	0.8
	24.0	2227	247	1113	3587	0.4
<b>Sub Total</b>		<b>13936</b>	<b>1548</b>	<b>6968</b>	<b>22452</b>	<b>2</b>
III Narayana Nagar Zone	3	2332	259	1166	3757	0.4
IV HariNagar - Krishna Pur Zone	5	2297	255	1149	3701	0.4
	23	3245	361	1622	5228	0.6
	25	4080	453	2040	6573	0.7
	22	926	103	463	1492	0.2
	20	1580	176	790	2545	0.3
	18	1997	222	998	3217	0.3
<b>Sub Total</b>		<b>14124</b>	<b>1348</b>	<b>6064</b>	<b>19539</b>	<b>2</b>
<b>GRAND TOTAL</b>		<b>72000</b>	<b>7778</b>	<b>35002</b>	<b>112783</b>	<b>12</b>

**ANNEX 3.4.2: List of *Nallas* within Nainital Nagar Palika Parishad****Storm Water Drainage System of Nainital**

<b>S.No.</b>	<b>Location of Nala</b>	<b>Length</b>	<b>Location of outfall</b>
1.	a) Nainital – Almora Road Near Gauri Niwas 203m. b) Branches 3No. 479m	0.682 km	Mall Road
2.	a) Ramsay Hospital 387m b) Branches 3 No. 187m	0.574 km	Mall Road
3.	a) Ramsay Hospital 375m b) Branch 1 No. 51m	0.426 km	Mall Road
4.	Mangala Kothi 256m Branch 2 No. 169m	0.425 km	Mall Road
5.	District board office 114m	0.114 km	Mall Road
6.	a) Birla School 488m b) Branch 6 No. 592m	1.080 km	Mall Road
7.	a) Birla School 450m b) Branch 1 No. 185m	0.635 km	Middle Cheena Road Nala No. 6.
8.	a) Birla School 479m b) Branch 1 No. 46m	0.525km	Middle Cheena Road Nala No. 6.
9.	a) Birla School 461m b) Branch 2 No. 99m	0.560 km	Middle Cheena Road Nala No. 6.
10.	a) Mayvila Compound 125m b) Branch 1 No. 82m	0.207 km	Mall Road
11.	a) Birla School 747m b) Branch 1 No. 25m	0.772 km	Mall Road.
12.	Mayvila compound 246m	0.246 km	Mall Road
13.	a) Birla School 795m b) Branch 5 No. 945m	1.740 km	Mall Road
14.	a) Birla School 722m b) Branch 5 No. 602m	1.324 km	Mall Road
15.	a) Maharani Kothi 155m b) Branch 4 No. 377m	0.532 km	Mall Road
16.	a) Birla Chugi 680m b) Branch 8 No. 908m	1.588 km	Mall Road
17.	a) Birla School 130m b) Branch 3 No. 120m	0.250 km	Ratighat
18.	a) Snow view 781m b) Branch 12 No. 1333m	2.114 km	Mall Road
19.	Old Govt. house 120m	0.120 km	Ratighat
20.	a) Snow view 770m b) Branch 16 No. 1267m	2.037 km	Mall Road
21.	a) Alma house 1019m b) Branch 15 No. 2228m	3.247 km	Mall Road
22.	Alma house 125m	0.125 km	Ratighat
23.	a) N.TK.P. motor road, Snowview to Nainadevi Temple 1.52km	3.145 km	Falls into the lake near

S.No.	Location of Nala	Length	Location of outfall
	b) Branches -19 Branch 1.625km		Nainadevi Temple
24.	a) Below N.T.K.P motor road above Pavilion hotel 0.585km b) Branches - 4 Branch 0.255km	0.84 km	Falls in Nala No.23 Near Nainital Club Chorawha
25.	a) Start from Shanike School High court premises 0.70km b) Branches - 2 Branch 0.26km	0.96 km	Fall in Nala No. 26 near Telephone exchange office
26.	a) Start form Nainapeak land slide area to right side of Pant sadan1.35km b) Branches 2 - Branch 0.075km	1.425 km	Fall in Nala No. 23 near Telephone exchange office
27.	Start from Melrose compound 0.18km	0.18 km	Fall in Shukhatal lake
28.	Start from Ashdale compound 0.45km	0.45 km	Fall in Shukhatal lake
29.	Start from A.T.I 0.465km	0.465 km	Fall in Shukhatal lake
30.	Start from Nainapeak land slide area to Oak park 1.22km	1.22 km	Fall in Shukhatal lake
31.	Start from Nainapeak land slide area to Oak park 0.55km	0.55 km	Fall in Shukhatal lake
32.	Start form Nainapeak land slide area to Oak park 0.09km	0.09 km	Fall in Nala No. 31
33.	Start from University office 0.765km	0.765 km	Fall in Nala No. 34
34.	a) Start from Ayarpata Averfoil Modi Bhawan 0.91km b) Branches - 12 Branch 0.54km	1.45 km	Fall in Nala No. 23
35.	Start from Modi Bhawan in Ayarpata 0.39km	0.39 km	Fall in Nala No. 23
36.	a) Start from Aroma Hotel in Ayarpata (Nala No. 37) 0.27km b) Branches - 2 Branch 0.06km	0.33 km	Fall in Nala No. 35
37.	Start from above Mallital Pump House (Nala No. 38) 0.24km	0.24 km	Fall in Nala No. 23 Near Pump House
38.	Start from above Endcliff road (Nala NO. 39) 0.12km	0.12 km	Fall in Nala No. 23 Near Maszed
39.	a) Start from Ayarpata Hill Gurney House (Nala No. 43) 0.51km b) Branches - 12 Branch 1.57km	2.08 km	Fall in Nala No. 23 Near Tabitan Market
40.	a) Start from below Naini Retreat Hotel (Nala No. 44) 0.09km b) Branches - 1 Branch 0.30km	0.39 km	Fall in Nala No. 23 Near Tabitan

S.No.	Location of Nala	Length	Location of outfall
			market
41.	a) Start from Goinka Niwas in Ayarpata Hill (Nala No.45) 0.55km b) Branches - 1 Branch 0.25km	0.80 km	Fall in lake in south Mall road
42.	Start from Goinka Niwas in Ayarpata Hill (Nala No. 59) 0.18km	0.18 km	Fall in Lake in South Mall road
43.	Start from below Sherwood college (Nala No. 46) 0.30km	0.30 km	Fall in lake in south Mall road
44.	a) Start from below Sherwood college (Nala No. 47) 0.395km b) Branches - 2 Branch 0.09km	0.48 km	Fall in Lake in South Mall road
45.	Start from D.S.B Premises 0.( Nala No.60) 0.100km	0.100 km	Fall in lake in south Mall road
46.	a) Start from Drum House (Nala No.48) 0.380km b) Branches - 3 Branch 0.125km	0.505 km	Fall in lake in south Mall road
47.	a) Start from below sunny bank to Rock House (Nala No. 49) 0.36km b) Branches - 4 Branch 0.28km	0.64 km	Fall in lake in south Mall road
48.	a) Start from Drum House to Langum Hostel (Nala No.58) 0.32km b) Branches - 2 Branch 0.07km	0.39 km	Fall in lake in south Mall road
49.	a) Start from St. Mary School (Nala No. 55) 0.28km b) Branches - 1 Branch 0.04km	0.32 km	Fall in lake in south Mall road
50.	Start from St. Mary Gate to fairy Hall (Nala No.54) 1.20km	1.20 km	Fall in Baliya Nala
51.	a) Start from Cragland Hostel (Nala No. 50) 2.30km b) Branches – 15 Branch 5.84 km	8.14 km	Fall in Baliya Nala

## ANNEXURE - 1,

दिनांक— 12.10.2005 को झील संरक्षण परियोजनान्तर्गत नैनीताल नगर में स्टार्म वाटर नालियों की सीवर से डीलिकिंग के सम्बन्ध में पेयजल निगम, जल संस्थान, एवं नगर पालिका के अधिकारियों / कर्मचारियों की संयुक्त निरीक्षण आख्या।

आयुक्त एवम् अध्यक्ष, झील संरक्षण परियोजना अनुश्रवण समिति द्वारा दिए गए निर्देशों के अनुक्रम में दिनांक 12.10.2005 को झील संरक्षण परियोजनान्तर्गत नैनीताल नगर में स्टार्म वाटर नालियों की सीवर से डीलिकिंग के सम्बन्ध में पेयजल निगम, जल संस्थान, एवं नगर पालिका के कर्मचारियों द्वारा संयुक्त निरीक्षण किया गया। संयुक्त निरीक्षण में निम्नांकित कर्मचारी उपस्थित थे—

- 1 श्री हेम चन्द्र जोशी, जू.इं. पेयजल निगम
- 2 श्री रवि डोमाल, जू.इं. जल संस्थान
- 3 श्री देवेन्द्र जोशी, जू.इं. नगर पालिका परिषद

संयुक्त निरीक्षण के दौरान पाया गया कि नगर में निम्नांकित पूर्व में चिह्नित किए गए स्थान जहाँ पर स्टार्म वाटर नालियों जोकि सीवर लाइन से संयोजित थीं, को सीवर से हटाकर बड़े स्टार्म वाटर नालों से जोड़ा जा चुका है।


- 1 स्टेट बैंक मल्लीताल
- 2 घोडा स्टेशन मल्लीताल
- 3 नगर पालिका भवन
- 4 गाड़ी पड़ाव के पास
- 5 सैयद होटल के पास
- 6 थाना मल्लीताल के पास
- 7 अण्डा मार्केट के पास शकील की दुकान
- 8 अण्डा मार्केट के निजामुद्दीन संस के पास
- 9 अण्डा मार्केट में संगम एग स्टोर के पास
- 10 खयना स्वीट्स / हरिप्रिय रैस्टोरैण्ट के पास
- 11 रायल होटल के पास
- 12 बैंक आफ बड़ौदा की गली
- 13 चैम्प नट बंगले के रास्ते में
- 14 ओक लॉज
- 15 हैंड पोस्ट आफिस के पास
- 16 सदर लाइन में मेल शौचालय के आगे
- 17 सदर लाइन में मेल शौचालय
- 18 बी.डी. पाण्डे अस्पताल कैम्पस
- 19 पी.पी.सिंह खेड़ा बाजार में बाराह घर
- 20 वाल्ड्राफ होटल के पास
- 21 नगर पालिका मोट मार्केट मल्लीताल
- 22 मल्लीताल रिविशा स्टेशन
- 23 अल्फ्रेडन होटल के पास
- 24 तंदूर रैस्टोरैण्ट के पास

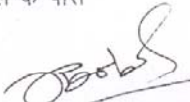
निरीक्षण के दौरान निम्न स्थानों नालियों का सीवर से डीलिकिंग का कार्य प्रगति पर पाया गया

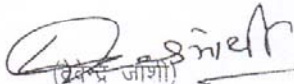
- 1-बाम्बे ड्राइंग ट्रान्सफार्मर के पास
- 2-शीला होटल के पास
- 3-नगर पालिका लाइब्रेरी के पास
- 4-पंजाब एण्ड सिन्ध बैंक के पास

निरीक्षण के दौरान नगर पालिका परिषद के अभियंता के साथ यह निर्णय लिया गया कि निम्न स्थलों पर स्थित नालियों जोकि अभी भी सीवर से हटाई नहीं जा सकी है, को तुरन्त स्टार्म वाटर नालों से जोड़ने की कार्यवाही प्राथमिकता के आधार पर कराना सुनिश्चित की जाय तथा कार्य आज ही से आरंभ करवा दिया जाय।

- 1 बेकरी कम्पाउण्ड, में मंगू लाल के घर के पास
- 2 अनुपम होटल, मल्लीताल बाजार।
- 3 बांके मेन्शन, मल्लीताल।
- 4 मल्लीताल प्राईमरी पाठशाला (गौशाला)
- 5 व्यापार कर कार्यालय के पास
- 6 कोणार्क होटल के पास
- 7 बेकरी कम्पाउण्ड मनोज कुमार के घर के पास
- 8 फारेस्ट लौज कैण्टन लौज के पास
- 9 कनौजिया वर्कशॉप मल्लीताल के पास

  
(हेम चन्द्र जोशी)  
जूनियर इंजीनियर  
पेयजल निगम  
नैनीताल

  
(रवि डोभाल)  
जूनियर इंजीनियर  
उत्तरांचल जल संस्थान  
नैनीताल

  
(हेम चन्द्र जोशी)  
जूनियर इंजीनियर  
नगर पालिका परिषद  
नैनीताल

Estimated cost : 30 lakhs (2002)

↓  
50 lakhs (2006-07)

## ANNEX 6: Stakeholders Consultation

6.1 List of Participants of Officers present in the meeting held on 18<sup>th</sup> May 2006 in the meeting Hall of NNPP, Nainital

OFFICERS PRESENT IN THE MEETING HELD ON 18.05.2006  
(IN MEETING HALL OF NNPP) Nainital

Sl. No.	Name	Dept.	Designation	Signature
1.	B. Datta	UDDTA	Team Leader	
2.	S.K. GUPTA	"	Transport Engineer	
3.	Archana S. Hindiya	VUDTA	Urban Planner	
4.	M. K. JOSHI	LAKE DEV. AUTHORITY	JUNIOR ENGINEER	
5.	Pranav Kumar (9412072070)	Ex. Eng. PWD.	Executive Engineer	
6.	SUNIL PARASHAR	LAKE DEV. AUTHORITY	JUNIOR ENGINEER	
7.	B.N. Chaudhary (9837314564)	P.W.D. NTL	A.E.	
8.	Deepak Malik	U.A. Jalsomthan	A.E.	
9.	A.K. Saxena (Mobile: 9412302703)	Payal Nigam	C.B.	
10.	H.C. Semwal	Dist. Adm.	A.D.M. NTL	
11.	Devendra Joshi (9877017168)	Nagar Palika	Jr Engineer	
12.	Sandeep Bhargava	NTL	S.F.I.	
13.	M. C. Gurusami	N.P.P. NTL		
14.	A.K. Pany	N.P.P. NTL	D.S.	
15.	S.C. Chaudhary 05942-235153	N.P.P. NTL	Asst	
16.	H.K. Pandey - 9412085082	U. Jalsomthan	Ex. Engr	
17.	Amit Anand - 9412093105 (H.K. Gurusami Executive Engr) - 9412093102	Uttarakhand Power Corp. Ltd.	S.D.O.	



**6.2 List of Participants of 1<sup>st</sup> Stakeholders meeting held on 30<sup>th</sup> May 2006 at Uttaranchal Administrative Training Institute (ATI), Nainital**

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6.2.

जवाहरलाल नेहरू राष्ट्रीय पुर्ननवीनीकरण मिशन (जे.एन.एन.यू.आर.एम.) बैठक दिनांक  
30 मई, 2006  
 आयोजन स्थल: उत्तरांचल प्रशासन अकादमी, नैनीताल  
 उपस्थिति प्रपत्र

क्र.सं.	प्रतिभागी का नाम एवम् पदनाम	प्रतिभागी का पूरा पता, दूरभाष, फैक्स, ई.मेल
01	श्री नवप्रभात, माननीय मन्त्री,	शहरी विकास एवं वन एवं पर्यावरण, उत्तरांचल सरकार, देहरादून
02	श्रीमती सरिता आर्या	अध्यक्ष, नगर पालिका परिषद, नैनीताल
03	श्रीमती जया बिष्ट	उपाध्यक्ष, बी.पी.एल., सर्वेक्षण समिति, उत्तरांचल

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जवाहरलाल नेहरू राष्ट्रीय पुनर्नवीकरण मिशन (जे.एन.एन.यू.आर.एम.) बैठक दिनांक 30 मई, 2006

आयोजन स्थल : उत्तरांचल प्रशासन अकादमी, नैनीताल

उपस्थिति प्रपत्र

क्र०	प्रतिभागी का नाम एवं पदनाम	प्रतिभागी का पूरा पता, दूरभाष, फैक्स, ई-मेल	हस्ताक्षर	
1-	डा० भूपाल सिंह भाबुनी आसुविद, अतिरिक्त प्रमुख अधिकारी, उत्तरांचल			236 94120
2-	मिनि नगर लाजी इवनिता प्रमुख कोटि कपरी, नवा बाला नगरपालिका, नैनीताल			2377 2336
3-	मिनि नगर लाजी इवनिता प्रमुख कोटि कपरी, नवा बाला नगरपालिका, नैनीताल			265
4-	मिनि नगर लाजी इवनिता प्रमुख कोटि कपरी, नवा बाला नगरपालिका, नैनीताल			
5-	मिनि नगर लाजी इवनिता प्रमुख कोटि कपरी, नवा बाला नगरपालिका, नैनीताल			
6-	मिनि नगर लाजी इवनिता प्रमुख कोटि कपरी, नवा बाला नगरपालिका, नैनीताल			9918
7-	मिनि नगर लाजी इवनिता प्रमुख कोटि कपरी, नवा बाला नगरपालिका, नैनीताल			
8-	मिनि नगर लाजी इवनिता प्रमुख कोटि कपरी, नवा बाला नगरपालिका, नैनीताल			235
9-	दीपक कुमार "भोलू"	सभासद खोखू 03 नगरपालिका, नैनीताल		9710
10-	डा० पी. 0. गिरी	मिनि नगर लाजी इवनिता प्रमुख कोटि कपरी, नवा बाला नगरपालिका, नैनीताल		9411
11-	मिनि नगर लाजी इवनिता प्रमुख कोटि कपरी, नवा बाला नगरपालिका, नैनीताल			9412
12-	मिनि नगर लाजी इवनिता प्रमुख कोटि कपरी, नवा बाला नगरपालिका, नैनीताल			980
13-	डा० सु. 0. मंड	वरिष्ठ उपाध्यक्ष, नगरपालिका, नैनीताल		9411
14-	ट. बाला चन्द भार्गव	मिनि नगर लाजी इवनिता प्रमुख कोटि कपरी, नवा बाला नगरपालिका, नैनीताल		9412
15-	S. R. Nathacharya	ADB, Govt. Urban Development, Nainital		
16-	B. D. Singh	Team Lead, Construction-03 Project		9899 6
17-	S. K. C. Gupta	Team Lead, Construction-03 Project		9411
18-	रेखा मांडे अध्यक्ष सी. डी. एस.	नगरपालिका, नैनीताल - फोन. 05942-242534		24

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जवाहरलाल नेहरू राष्ट्रीय पुनर्नवीकरण मिशन (जे.एन.एन.यू.आर.एम.) बैठक दिनांक 30 मई, 2006  
आयोजन स्थल : उत्तरांचल प्रशासन अकादमी, नैनीताल

उपस्थिति प्रपत्र

क्र०	प्रतिभागी का नाम एवं पदनाम	प्रतिभागी का पूरा पता, दूरभाष, फैक्स, ई-मेल	हस्ताक्षर
19	19 जन चौक अड्डा नं. 10 नैनीताल	वाडको 2, गौरी नगर नैनीताल	Chait
20	G. S. Rawat Clerk	मंगल नैनीताल	
21	K. S. Mehta	Pragatishakti Nagar	
	Gangadhar Sah	Mallital N.T.C.	
23	Shyam Lal Sah	R.T. A. Maudh...	
24	र. के. सक्सेना	आर.के. सक्सेना	dr
25	C. M. Sah	Project Engineer, C.O.R.	
26	M. K. JOSHI	JUNIOR ENGINEER LDA, NAINITAL (9412087688)	
27	SUNIL PARASUR	JUNIOR ENGINEER LDA, NAINITAL (9837802768)	
28	V. C. Prasad	C.O. at NTL	
29	J C D HONDIA	U A A N.T.	
30	शिवशंकर नैनी	D.O.D.A. N.T.	
31	नैनीताल नैनी	नैनीताल नैनी	
32	मोहन शर्मा	नगर प्रशासनिक परिसर नैनीताल	
33	मोहन शर्मा	नगर प्रशासनिक परिसर नैनीताल	
34	मोहन शर्मा	नगर प्रशासनिक परिसर नैनीताल	
35	दीप चन्द सती	"	
36	मोहन शर्मा	नैनीताल नैनी	

उपस्थिति प्रपत्र

क्र०	प्रतिभागी का नाम एवम् पदनाम	प्रतिभागी का पूरा पता, दूरभाष, फैक्स, ई-मेल	हस्ताक्षर
37	Sunil Kumar Agarwal	P.O. SUDA. Uthanchal	
38	N.K. Joshi Addl. Secy (U.D.&H)	2714284 (C-2) Delhi	
39	H. K. Pandey	Ex. Engr. U.J.S. NTL	
40	A.K. Pant	Nagar Palika NTL	
41.	Suresh Ch. Chaudhary	Act. Municipal Engineer, N. Del	
42	Er Devendra Joshi	Nagar Palika NTL	
43.	Dr. M.N. Joshi	Senior M.M. U.T. Nag. Pal.	
44.	कै. प्रो. व. रूख	कॉन्स. एंजि. सम्प्रदाय संस्थान 235/59	
45.	D.S. Dhapola	Project Director PMU Urban UAOA NTL	
46	H. C. Semwal	A.D. M. NTL	
47	P.D. Pande	Distt Information off. NTL	
48	गोपाल चन्द मल	मोबा नं. 98260 241100 341111	
49.	Prasanna Kumar	जिला इंजीनियर (जल संसाधन)	
50	नीरू खाट	पूर्व समासद नैनीताल	
51	विजय नारायण	सहायक अभियन्ता नैनीताल मोबा नं. 98260 241100	
52	विष्णु कुमार	जिला इंजीनियर (जल संसाधन) मोबा नं. 98260 241100	
53.	Dinesh Mahdolia Senior Project Manager	PMU-URBAN - Uthanchal Academy of Admn. Mainital	

### 6.3 Concept Note circulated before the City Vision Workshop

#### Concept Note circulated before the Workshop:

### JAWAHARLAL NEHRU NATIONAL URBAN RENEWAL MISSION (JNNURM)

#### 1. Background to JNNURM and CDP

- JNNURM was launched by Government of India in December 2005.
- Three cities from the state of Uttarakhand are included in JNNURM Dehradun, Haridwar, and Nainital.
- JNNURM entails preparation of City Development Plan (CDP) for each project town for 2021. A city development plan (CDP) is both a perspective and a vision for the future development of a city.

##### SECTORS INCLUDED IN CDP

- ☒ Urban Renewal
- ☒ Urban Services - Water Supply, Sewerage, Solid Waste Management, Storm water drainage, Urban Transport, Parking
- ☒ Development of heritage areas
- ☒ Environment

##### SECTORS NOT INCLUDED IN CDP

- ☒ Power
- ☒ Telecom
- ☒ Health
- ☒ Education
- ☒ Wage employment programme and staff component

- The State Government, ULBs and para statal agencies are required to implement the mandatory and optional reforms proposed in JNNURM.
- To access Central assistance, the State Govt and ULBs including para statals (where necessary) will need to execute Memorandum of Agreement (MoA) with Central Govt after submission of CDP, indicating their commitment to implement the identified reforms.
- The Funds are expected to flow from Centre, State and ULBs in the ratio of 80:10:10. The Funds from Centre and State will flow through the designated State Nodal Agency to ULBs.

#### 2. Vision Exercise

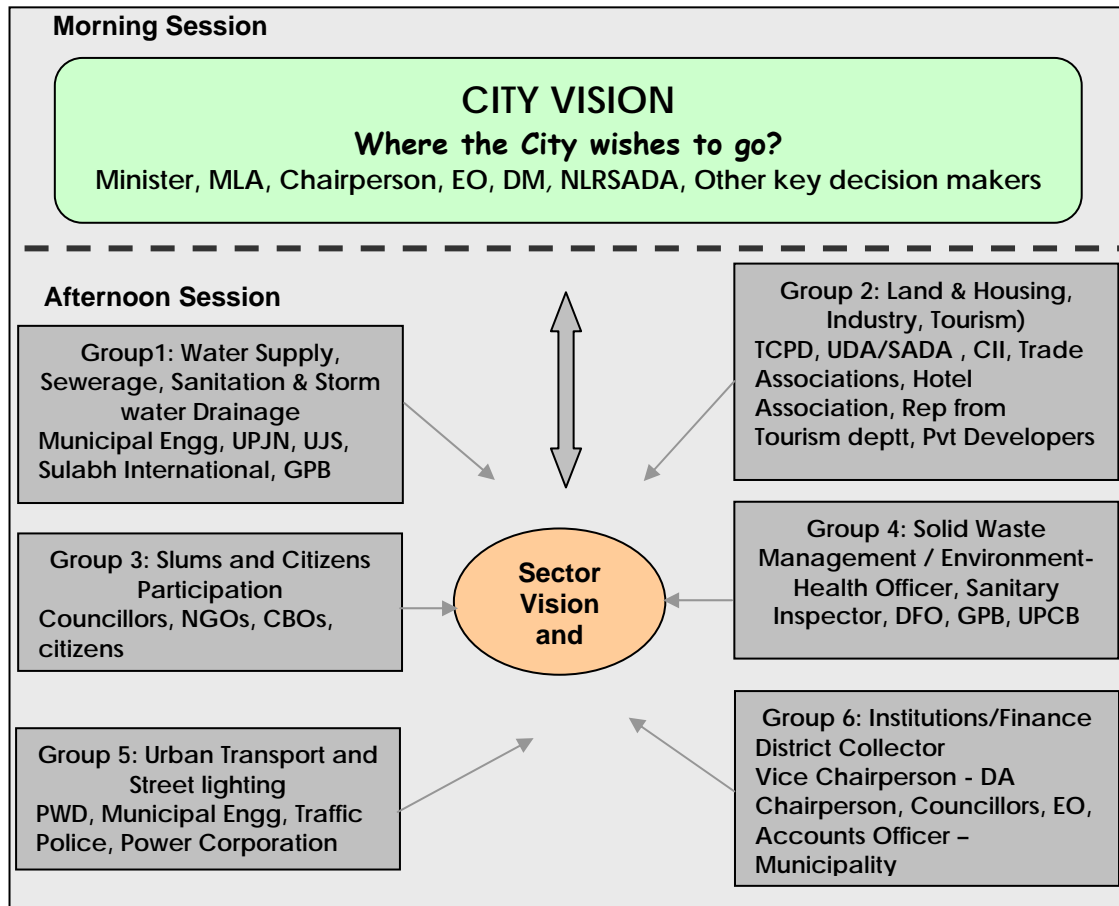
A one day workshop is proposed for a city wide stakeholder's consultation exercise.

<b>Why</b>	<ul style="list-style-type: none"> <li>To formulate a Vision Statement for the Town and sectoral vision and goals</li> <li>To identify key problems and solutions in the town</li> </ul>
<b>How</b>	<ul style="list-style-type: none"> <li>Workshop will be facilitated by UUDP-TA Consultants</li> <li>All participants will be encouraged to participate actively using group work and other participatory techniques.</li> </ul>
<b>Who</b>	<ul style="list-style-type: none"> <li>Chaired by Minister / Mayor/ Chairperson / Executive Officer</li> <li>Participants: MP, MLAs, representative group of ward councillors, concerned officers of municipality, concerned line depts, CBO's, NGOs, citizen groups, eminent citizens and other organisations working with poor.</li> </ul>
<b>Output</b>	1. Vision statement for town agreed

	2. Main sector problems and issues identified 3. Sector Vision and goals agreed. 4. Set of recommendations / suggestions to improve municipal services 5. Structured set of proposals to implement institutional reforms
<b>Time</b>	1 day
<b>Agenda</b>	<b>Morning 1100-1300</b> 1. Presentation on JNNURM & CDP 2. City Vision Formulation 3. Sector Vision Formulation
	<b>Afternoon 1400 - 1600</b> 1 Discussion and formulation of Sector Strategies

**“Vision is a statement of where the city wishes to go, within a given time frame and is often explained in terms of clear expectations.”**

### Vision Exercise



## Format of Questionnaire for Citizens Perceptions

### नागरिक ज्ञान/अनुभव

- आप अपने क्षेत्र एवं नगर को आगामी 25 वर्षों में किस रूप में देखना चाहते हैं ?
- आपकी राय में इस लक्ष्य को प्राप्ति हेतु क्या उपाय अपेक्षित है ?
- यदि आप जन-सहभागिता आवश्यक समझते हैं तो अपनी पंसद के कालम में सही (□) का/ के चिन्ह आंकित करें।  

आपके क्षेत्र के सुधार की कार्य योजना	निर्माण कार्यों का परिवीक्षण	सेवाओं का रखरखाव जैसे पेयजल आपूर्ति आदि	योजनाओं का गुणवत्ता एवं समय आदि के आधार पर मूल्यांकन	कार्यों में सुधार हेतु आप द्वारा दिया जाने वाला वित्तीय अंशदान
--------------------------------------	------------------------------	---	--	--
- क्या आपकी राय में उत्तम नगरीय सेवाओं के लिये नागरिक और अधिक भुगतान करने के इच्छुक होंगे?
- जन सहयोग प्राप्त करने के लिये नागरिकों को किस प्रकार से बाध्य किया जा सकता है?
- नगर निगम/नगर पालिका से आपकी क्या आशाएं हैं?
- नागरिकों से अनुरोध करते हैं कि वे अपनी प्राथमिकता के अनुसार 1 से 9 तक अंक दें (1- अति महत्वपूर्ण, 9- सबसे कम महत्वपूर्ण)

क्र०सं०	नगर का मूलभूत ढांचा व विकास के क्षेत्र	प्राथमिकता मूल्यांकन	सम्बन्धित/टिप्पणी
1 <sup>प</sup>	जलापूर्ति		
2 <sup>प</sup>	सीवर एवं सफाई		
3 <sup>प</sup>	ठोस अपशिष्ट प्रबन्धन		
4 <sup>प</sup>	वर्षा जल की निकासी		
5 <sup>प</sup>	सड़क		
6 <sup>प</sup>	जनता परिवहन (बस, विक्रम, थ्री व्हीलर, साईकिल, रिक्शा एवं अन्य)		
7 <sup>प</sup>	मार्ग प्रकाश व्यवस्था		
8 <sup>प</sup>	यातायात प्रबन्धन		
9 <sup>प</sup>	वाहनों को खड़ा करने का स्थान		

नाम :

स्थान/निवास का नाम रू हस्ताक्षर

फोन नं०:

नोट :- सुझाव हेतु पृथक पृष्ठ भी जोड़ा जा सकता है।



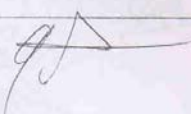
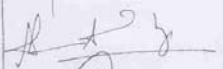
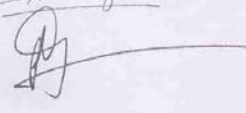
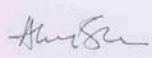
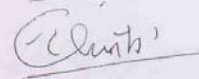
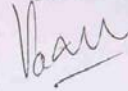

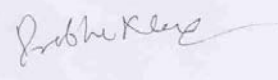

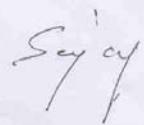
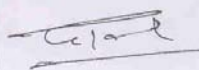

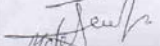
**6.4 List of Participants of 2<sup>nd</sup> Stakeholders meeting (City Vision Workshop and Working Group Discussions) held on 11<sup>th</sup> August 2006 at Nainital Club, Uttaranchal**

Attendance Sheet for Vision Meeting on  
Nainital held on 11 Aug '06 at Nainital Club

S. No.	NAME	Designation	Tel/Mobile No.	Signature
01	Dr. Sushma Sax	Member Nagar Palika NTL	9412039337	M.S.
02	Gazala Khan	"	9411376786	Gazala
03	H.K. Gururani	Ex-EN. EAD UPCL NTL	9412093102	H.K.
04	VIVEK TANDEY	D.F.O. Nainital	9412087818	V.T.
05	S.S. SAIN	Urban Development Project (100) Jharkhand	035-2643894	S.S.
06	S.S. Bisht	J.E. EDSB	9412093107	S.S.
07	M.L. Sax	Individual	235088	M.L.
08	Ajay Rawat	Head History Museum	236266	Ajay
09	ANUPAM SAH	Director (Project) Heritage Conservation Specialist	9411107646	Anupam
10	PARVEEN SHARMA	Convention INTACH	9837095706	CS
11	J.K. Shrivastava	Entrepreneur Nainital P.P. Khatiwala Chhatra Nainital A class Govt Contractor	235426	J.K.
12	Ceangalprasad	Citizen	-	Ceangal
13	Mahendra Singh Bhat	Citizen	235124	Mahendra
14	Rajesh Sax	Secy. Nainital Hotels' Ass.	235119	Rajesh
15	ANUP SAH	President NTA	235553	Anup
16	CHAKERTJEENIRWAN	Member ECCEA	232513	Chakertjeenirwan
17	K. Lalwani	Ex Director Rly. Club BVM NTL	9412084513	K. Lalwani
18	A. M. Bhatt	Ex. Vice Chairman City Board Nainital	9412037473	A.M.
19		Ex. Vice Chairman City Board Nainital	237701	
20		Ex. Vice Chairman City Board Nainital	941198530	
21		Ex. Vice Chairman City Board Nainital	238736	



S.No	NAME	DESIGNATION	Tel/Mobile No.	Signature
19	Sarita Arya	Chairman	9412084173	
20	R. L. Sol	City Board Nainital Member M. Panch. M.T.	2355153 220087 9897396521 230131	
21	गोविन्द चन्द शर्मा	जिला पंचायत अध्यक्ष, सहाय उपस्थिति, (नैनीताल)	251077	
22	अपराजिता चौधरी	नैनीताल नगरपालिका "एक" क्षेत्र	2760121	
23	Hem Doot J.E. U.P. Jal Nigam Nainital	J.E.	011346971	
24	N.S. Khan	A.E. Jal Nigam	9412986516	
25	D.S. Dlapola	Project Director G.C.C., U.A.A Nainital	9412038975	
26	P.S. Nazarkoti	Site Engineer Central Himalayan Environment Association, Nainital, O.P. Welding Nainital-1	05942 233079	
27	प्रायशः सिंह नेगी	श्री प्रो. गुरुकुल	239787	
28	PRAGYAL SINGH	ERnst & Young, H.Y.D.	9885242224	
29	RASHMI SINHA		0987373841	
30	Umi	<del>ERnst &amp; Young</del> UUDP-TA Consultants		
31	T.K. Acharya	S.D.M & Urban Env. Specialist - TA Consultants	09891216351	

	NAME	DESIGNATION	Tel/Mobile No.	Signature
32.	Dr Jim Arthur	ADB TL	0975228585	
33.	Dr A.A. Kojan	IT Roorkee	9837262698	
34.	S. Bhattacharya	ADB - Project Coordinator	979128787	
35.	Anurag	Member HDD Association	983712842	
36.	Colonel Bisht	Informal Office NTL	235939	
37.	Wajid Hussain	President	941197578	
38.	श्रीमती नीमा बिष्ट	C.D.S. गोरखपुर महामा	9411857256	
39.	Rubha Negi	महामा महिला समिति होम एड तराई समिति गोरखपुर	9897696705	
40.	Anwar. waseel	Quabery Taxi owners Association	9412087574	
41.	संजय चौधरी	उपाध्यक्ष नगर विकास महामा समिति गोरखपुर	9837225258	
42.	Gurabakhar	Member of Nagar Palika Barisal Nainital	941167679	
43.	राजेश प्रसाद	इन्फोर्टर	9232980	
44.	...	...	997980349	

45. दीपक कुमार "भालू" सहायक न.पा.प. नैनीताल 983753623  
 46. जयदीश शर्मा (इ.स.का.क.) प्र.पु. प्र.पा.श.व. नैनीताल  
 47. रमेश पाल कायलप.का.प.क.क. Ph. 235349  
 नैनीताल  
 ऑफ. 235153  
 11-08-06

## 6.5 Summary of Discussions of Working Groups

### Physical Growth - Opportunities and Constraints: Data Sheet for NLR SADA

Key Areas	Brief Description	Problems/Key Issues	Suggestions/Recommendations
Peri urban areas	North/ west of city. (mainly unsafe area) Sher ka Danda (very compressed)	Area is not safe for construction Unplanned construction Slum developments Approaches are not in proper way	Constructions should be banned
Constraints for physical growth such as forests, water bodies, agriculture land, cantonment area, etc	Sukhatal Lake should be regenerates.		Constructions in lower level should be removed. Periphery of lake should be developed
Congested core areas for redevelopment	Mallital Market Tallital Market Mall Road	Congested, encroachment in roads and drains Traffic jam, Land slides 6 P.M. to 8 P.M stoppage of traffic in summer season	Encroachment should be removed Drains should be clean time to time No parking in Mall Road Lower Mall Road should be open for light vehicles in season.
Relocation of non-conforming land uses	Only cantonment area is located as non-confirming land use	---	---
Environmentally sensitive areas like	Hari Nagar, Durgapur Charter lodge, marshall	Number of construction are increased	Uttarakhand construction should

Key Areas	Brief Description	Problems/Key Issues	Suggestions/Recommendations
rivers, other water bodies, green areas, etc including cultural and historical areas	cottage Ayar Patta (Unsafe area) Mall road at Grand Hotel	Heavy traffic disturbed the light traffic	be demolished Heavy traffic should not allowed
Land Developed by MDDA in last 10-15 years (in Hectares)	Waverly Housing Scheme Khurpatal scheme 3.50 Ha	---	---
Residential Development by MDDA in last 10-15 yrs  - Total Area in Hectares - Type (EWS, LIG, MIG and HIG) and Number of Houses	Waverly Housing scheme  EWS – 48      MIG – 04  LIG - 36      HIG - 12	No land available in city. Land use should not allowed the construction in Nainital	Satellite township should be prepared in out side of Nainital city.
Encroachments on rivers, canals, natural drains, etc	Lots of construction have made on natural drains. Cases filed in authority.	Lake pollution	Construction should be banned. Offices should be shifted out side areas
Seismic consideration in building bye laws	Considered in byelaws.	Constructions by lower class people are unsafe because the guidelines for safety are not used by them.	Training of labourers/ Masons/ Contractors is must.
Future development priorities	Aeration/ Shyphoney of Naini Lake Sore line development Strengthening of hills	Funds are not available Lack of local support	Creating awareness among local residents

Key Areas	Brief Description	Problems/Key Issues	Suggestions/ Recommendations
	Balia Nala lake basin system		
Any other concerns or suggestions	---	---	---

Name: \_\_H.C Semival

Designation, Department & Contact Number: \_\_Secretary, N.L.R.S.A.D.A. Nainital, Phone no. 05942 - 232800

Signature: \_\_\_\_\_

## Tourism Development: For Hotel Association

Please give your views and suggestions on the following areas of tourism development:

Tourism Development	
What is the total capacity of hotel accommodation in Nainital?	Approximately 3000 rooms
Please give the month-wise or seasonal occupancy rate in hotels.	Jan: 30% Feb: 30% Mar: 30% Apr: 50% May: 80% Jun: 100% Jul: 50% Aug: 30% Sep: 30% Oct: 50% Nov: 50% Dec: 50%
Are you aware of tourism policy?	Yes
What are your expectations from Municipality, Haridwar Development Authority and State Government?	Attached Annexure - A
Any other suggestions	

Name: \_\_Rajesh Sah

Designation, Department & Contact Number: \_\_Secretary, Nainital Hotels & Restaurant association

Signature: \_\_\_\_\_

**6.6 List of Participants of State Level Meeting, chaired by the Chief Minister held at Forest Deptt "Manthan" Conference Hall, Dehradun on 29<sup>th</sup> August 2006**

एन.के. जोशी,  
अपर सचिव



उत्तरांचल शासन

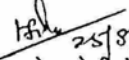
शहरी विकास अनुभाग  
अर्द्ध शासकीय संख्या ०७४/V/2006  
-138(सा0)/05  
दिनांक : देहरादून २९ अगस्त, 2006

प्रिय महोदय,

कृपया उत्तरांचल शासन के कार्यालय ज्ञाप संख्या 1171/V-श.वि.-06-138(सा.)/06 दिनांक 06 मई, 2006 का संदर्भ ग्रहण करने का कष्ट करें जिसके माध्यम से जवाहर लाल नेहरू नेशनल अर्बन रिन्यूवल मिशन (JNNURM) के अन्तर्गत चयनित उत्तरांचल के तीन शहरों की परियोजनाओं की प्राथमिकता के निर्धारण हेतु मा0 मुख्यमंत्री जी की अध्यक्षता में राज्य स्तरीय स्टीयरिंग कमेटी का गठन किया गया था। उक्त स्टीयरिंग कमेटी की दिनांक 29 अगस्त, 2006 को पूर्वान्ह 11.00 बजे मा. मुख्यमंत्री जी, उत्तरांचल की अध्यक्षता में वन विभाग के मंथन सभागार, राजपुर रोड, देहरादून में बैठक आहूत की गई है।

कृपया उक्तानुसार निर्धारित तिथि, स्थान एवं समय पर आयोजित बैठक में प्रतिभाग करने का कष्ट करें।

भवनिष्ठ,

  
( एन. के. जोशी )

1. मे0 ज0 भुवन चन्द्र खण्डूरी,  
मा.सांसद, पौड़ी गढ़वाल।
2. श्री राजेन्द्र कुमार,  
मा.सांसद, हरिद्वार।
3. श्री के0सी0 सिंह बाबा,  
मा. सांसद, नैनीताल,
4. श्री हीरा सिंह बिष्ट,  
मा. मंत्री जी, परिवहन,
5. श्रीमती मनोरमा डोबरियाल,  
मा.मेयर, नगर निगम देहरादून।
6. श्री दिनेश अग्रवाल,  
मा. सदस्य, विधानसभा।
7. श्री जोत सिंह गुनसोला  
मा. सदस्य, विधानसभा,
8. श्री त्रिवेन्द्र सिंह रावत,  
मा. सदस्य, विधानसभा।
9. श्री मदन कौशिक,  
मा. सदस्य, विधानसभा।
10. श्री डॉ. एन.एस. जन्तवाल,  
मा. सदस्य, विधानसभा।
11. प्रमुख सचिव, वित्त विभाग,  
उत्तरांचल शासन।
12. प्रमुख सचिव, आवास विभाग,  
उत्तरांचल शासन।
13. सचिव, पेयजल विभाग,  
उत्तरांचल शासन।
14. मा. अध्यक्ष नगर पालिका परिषद,  
नैनीताल।
15. मा. अध्यक्ष नगर पालिका परिषद,  
हरिद्वार।



-2-

पृष्ठांकन संख्या : 3078 (1)/V/2006 तददिनांक।

प्रतिलिपि : निम्नांकित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।

1. निजी सचिव, मा. मुख्य मंत्री जी, उत्तरांचल को मा. मुख्यमंत्री जी के संज्ञानार्थ।
2. निजी सचिव, मा. शहरी विकास मंत्री जी, उत्तरांचल को मा. मंत्री जी के संज्ञानार्थ।
3. निजी सचिव, मुख्य सचिव, उत्तरांचल शासन को मुख्य सचिव महोदय के संज्ञानार्थ।
4. निजी सचिव, सचिव, शहरी विकास, उत्तरांचल शासन को सचिव महोदय के संज्ञानार्थ।
5. निजी सचिव, सचिव, लोक निर्माण विभाग, उत्तरांचल शासन को सचिव महोदय के संज्ञानार्थ।
- ✓ 6. निदेशक, शहरी विकास, उत्तरांचल, देहरादून। *25/8/06*
7. श्री वी दत्ता, मै0 जी.एच.के. इंटरनेशनल को इस आशय से प्रेषित कि वे JNNURM के अन्तर्गत तैयार समस्त अभिलेखों सहित बैठक में उपस्थित हों।

आज्ञा से,

*25/8/06*  
( एन. के. जोशी )  
अपर सचिव।

**6.7 List of Participants of State Level Meeting, chaired by the Chief Minister held at Forest Deptt "Manthan" Conference Hall, Dehradun on 17<sup>th</sup> October 2006**

एन.के. जोशी,  
अपर सचिव



उत्तरांचल शासन

उत्तरांचल शासन  
शहरी विकास अनुभाग  
अर्द्ध शासकीय संख्या ११३/V/2006  
-138(सा0)/05  
दिनांक : देहरादून : 13 अक्टूबर, 2006

प्रिय महोदय,

शासन के कार्यालय झाप संख्या 1171/V-श.वि.-06-138(सा.)/06 दिनांक 06 मई, 2006 द्वारा जवाहर लाल नेहरू नेशनल अर्बन रिन्यूवल मिशन (JNNURM) के संबन्ध में मा0 मुख्यमंत्री जी की अध्यक्षता में गठित राज्य स्तरीय स्टीयरिंग कमेटी की दिनांक 17 अक्टूबर, 2006 को पूर्वान्ह 11.30 बजे मा. मुख्यमंत्री जी, उत्तरांचल की अध्यक्षता में मंथन सभागार, (वन विभाग) राजपुर रोड, देहरादून में बैठक आहूत की गई है।

कृपया उक्तानुसार निर्धारित तिथि, स्थान एवं समय पर आयोजित बैठक में प्रतिभाग करने का कष्ट करें।

भवनिष्ठ,

( एन. के. जोशी )

1. मे0 ज0 भुवन चन्द्र खण्डूरी,  
मा.सांसद, पौड़ी गढ़वाल।
2. श्री राजेन्द्र कुमार,  
मा.सांसद, हरिद्वार।
3. श्री के0सी0 सिंह बाबा,  
मा. सांसद, नैनीताल,
4. श्री हीरा सिंह बिष्ट,  
मा. मंत्री जी, परिवहन,
5. श्रीमती मनोरमा डोबरियाल,  
मा.मेयर, नगर निगम देहरादून।
6. श्री दिनेश अग्रवाल,  
मा. सदस्य, विधानसभा।
7. श्री जोत सिंह गुनसोला  
मा. सदस्य, विधानसभा,
8. श्री त्रिवेन्द्र सिंह रावत,  
मा. सदस्य, विधानसभा।
9. श्री मदन कौशिक,  
मा. सदस्य, विधानसभा।
10. श्री डॉ. एन.एस. जन्तवाल,  
मा. सदस्य, विधानसभा।
11. प्रमुख सचिव, वित्त विभाग,  
उत्तरांचल शासन।
12. प्रमुख सचिव, आवास विभाग,  
उत्तरांचल शासन।
13. सचिव, पेयजल विभाग,  
उत्तरांचल शासन।
14. मा. अध्यक्ष नगर पालिका परिषद,  
नैनीताल।
15. मा. अध्यक्ष नगर पालिका परिषद,  
हरिद्वार।


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पृष्ठांकन संख्या : 71-243(1)/V/2006 तददिनांक।

प्रतिलिपि : निम्नांकित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।

1. निजी सचिव, मा. मुख्य मंत्री जी, उत्तरांचल को मा. मुख्यमंत्री जी के संज्ञानार्थ।
2. निजी सचिव, मा. शहरी विकास मंत्री जी, उत्तरांचल को मा. मंत्री जी के संज्ञानार्थ।
3. निजी सचिव, मुख्य सचिव, उत्तरांचल शासन को मुख्य सचिव महोदय के संज्ञानार्थ।
4. निजी सचिव, सचिव, शहरी विकास, उत्तरांचल शासन को सचिव महोदय के संज्ञानार्थ।
5. निजी सचिव, सचिव, लोक निर्माण विभाग, उत्तरांचल शासन को सचिव महोदय के संज्ञानार्थ।
6. निदेशक, शहरी विकास/ परियोजना निदेशक JNNURM उत्तरांचल, देहरादून।
7. आयुक्त, कुमाऊं मंडल, नैनीताल।
8. आयुक्त, गढ़वाल मंडल, पौड़ी।
9. श्री वी दत्ता, मै0 जी.एच.के. इंटरनेशनल को इस आशय से प्रेषित कि वे JNNURM के अन्तर्गत तैयार समस्त अभिलेखों सहित बैठक में उपस्थित हों।

अज्ञा से,



(-एन. के. जोशी)

अपर सचिव।

13.8.06

### ANNEX 7.1: Proposed MSW Project Outline

**Collection system:** Primary collection of MSW from different sources of waste generation may be improved in the following manners:

Source of MSW Generation	Primary Collection System	Mode of Collection	Frequency of Collection
Domestic (Excluding Slums)	Door-to-Door collection of segregated (Bio-degradable & Non-Biodegradable) waste by NNPP workers/ Private Agency followed by either temporary storage in the community bins/containers or direct loading to the MSW transport vehicles	Through covered containerized handcarts/ backpackers at a pre-determined time	Everyday round the year
Slums	Door-to-Door collection of segregated (Bio-degradable & Non-Biodegradable) waste by Mohalla Swachhata Samiti followed by either temporary storage in the community bins/containers or direct loading to the MSW transport vehicles	Through covered containerized handcarts/ backpackers at a pre-determined time	Everyday round the year
Shops & Commercial Establishments	Shop owners and Market Associations shall be held responsible for segregation, storage, collection and transfer of waste either to temporary storage community containers/bins or direct loading to the MSW transport vehicles	Individual shop shall store segregated waste within its premise and transfer the same either to the community containers/bins or directly load to the MSW transport vehicles	Everyday round the year except the days when the shops or markets are closed
Fruit & Vegetable Markets	Market Associations shall be held responsible for storage, collection and transfer of waste to temporary storage community containers/bins for further transportation by MSW transport vehicles	Individual shop shall store its daily waste and transfer the same to the community containers/bins	Everyday round the year except the days when the markets are closed
Hotels & Restaurants	Individual Hotel/Restaurant shall be held responsible for storage and transfer of waste to temporary storage community containers/bins or to the MSW transport vehicles. Shop Owner's Association/ Market Association shall be overall responsible for primary collection of waste from their respective shops/markets	NNPP will provide vehicles for secondary collection and transportation of waste and charge to the respective hotel/restaurant for the service based on the quantity of waste generated by these hotels & Restaurants.	Everyday round the year
Construction and Demolition Waste	Individual waste generators shall be held responsible for collection, temporary storage and transportation of the waste for safe disposal. NNPP may provide vehicle for waste transportation and disposal against charges.		As and when required
Street Sweeping/ Drain Cleaning	Accumulation of wastes by sweeping of streets and cleaning of roadside drains by NNPP workers for further transportation to the waste disposal site	Using sweeping and drain cleaning tools and equipments	Everyday round the year

All door-to-door collection of waste will be chargeable as 'Service Charge'. In slum areas the service charge may be subsidized. NGOs/ Private agencies may be involved for collection and transportation of the re-cyclable wastes for further processing.

**ANNEX 7.2: Criteria for Calculation of Road and Transport Projects**

<b>Traffic singh board (L S)</b>	Number	400	
<b>Road Marking (L S)</b>	m <sup>2</sup>	12,000	
<b>Reflectors</b>	km	40	
<b>Guard Rail</b>	<b>length(km)</b>	<b>Length (m)</b>	
Upper Mall Road	3.45	3450.00	
Gandhi Road	2.87	2868.00	
<b>Total</b>	<b>6.32</b>	<b>6318.00</b>	
<b>Footpath</b>	<b>length(km)</b>	<b>Width (m)</b>	<b>Area(sq m)</b>
Upper Mall Road	3.5	1.5	5175
Lower Mall Road	2.9	1.5	4302
<b>Total</b>	<b>6.3</b>		<b>9477</b>
<b>Road Furniture</b>	<b>length (km)</b>		
	81.0		
<b>Side Protection Barrier</b>	<b>length (km)</b>		
	77.0		
<b>Traffic Education Awareness Programme</b>	<b>Qty</b>	<b>Cost L S (Rs. Lakh)</b>	
Independet consultants( to conduct study for 5 years)	5 yrs	20	
Development traffic education modules		30	
Development of traffic training parks (2 nos.)	2 nos.	100	
Traffic education programme for 10 years	10 yrs	50	
<b>Total</b>			
<b>Off-street Parking</b>	<b>Area (sq m) per storey</b>	<b>Area for (sq. m m) for 3/2 storey</b>	
Metropol Hotel	3500	7000	
On vacant hill side near St. Mary's Convent	1050	1050	
Ghora stand	900	2700	
Back of Ashok Cinema	900	2700	
At Flats	5000	15000	
Bus / Heavy Vehicle parking on land near Dharamshala on Haldwani road	1000	2000	
Bus / Heavy Vehicle parking on land near Pines on Bhowali road	1000	2000	
<b>Total</b>	<b>13350</b>	<b>32450</b>	
<b>Junctions Improvement</b>	<b>Total no.</b>		
<b>Total</b>	<b>7</b>		
<b>Improvement of Kharanja Road and Kutcha Road with CC</b>	<b>Length (km)</b>		<b>Area (Sq. m)</b>
Roads with PWD	15.5		38750
Roads with NPP	8.8		21925
(Assuming Average width 2.5 m)			
<b>Total</b>	<b>24.27</b>		<b>60675</b>

<b>Passing Places</b>	<b>Length (km)</b>		
Creating passing places on existing roads	65		
<b>Widening and strengthening of existing</b>	<b>Length (km)</b>	<b>Width (m)</b>	<b>Total (lane-</b>
Upper Mall Road	1.725	8.55	4.21
Lower Mall Road	1.434	5.90	2.42
Thandi Sarak (South Mall)	1.85	3.00	1.59
	<b>Length (km)</b>	<b>Lane</b>	<b>Total (lane-</b>
<b>New Bypasses</b>	<b>8</b>	<b>2</b>	<b>16</b>
<b>New Roads</b>	<b>Length (km)</b>	<b>Width (m)</b>	<b>Total (lane-</b>
New Road covering Nallah No. 23 from Flats near Masjid upto Telephone Exchange	1.00	3.5	1.00
<b>New Bus Stand</b>	LS		
<b>Elevated Roads</b>	<b>Length (km)</b>	<b>Width (m)</b>	<b>area(sq m)</b>
2-lane elevated road with footpath parallel to Mall road through Lake	1.8	7.00	<b>12600.00</b>
<b>New Ropeway</b>			
New Ropeway linking Harinagar-Hanumangarhi-Tallital	L.S.		
Kibury - Barapathar - Tiffin Top ropeway	L.S.		

S. No.	Projects	Unit	Quantity	Unit Rate (Rs)	Total Amount (Rs lakh)
A.	Traffic Management				
1	Traffic singh board (L S)	Number	400	3,500	14.00
2	Road Marking (L S)	m <sup>2</sup>	12000	625	75.00
3	Reflectors	km	40	60,000	24.00
4	Footpath	sq m	9477.0	2000	189.54
5	Guard rail	m	6318.00	2000	126.36
6	Side Protection Barrier	m	77000.00	4000	3080.00
7	Road Furniture	Km	81.0	20000	16.20
8	Traffic Education Awareness				
	Independet consultants( to conduct study for 5 years)	yrs	5	400,000	20.00
	Development traffic education modules	L S			30.00
	Development of traffic training parks (2	nos.	2	5,000,000	100.00
	Traffic education programme for 10	yrs	10	500,000	50.00
	Sub-Total				200.00
	Total (Traffic Management)				3725.10
B	Off-street Parking	sq m	32450	5400	1752.30
C	Junctions Improvement	per	7	2000000	140.00
D	Improvement of Kharanja Road and Kutcha Road with CC				
	Roads with PWD	sq m	38750	5000	1937.50
	Roads with NPP	sq m	21925	5000	1096.25
	Total		60675		3033.75
E	Passing Places on Existing Roads	km	65	1000000	650.00
F	Widening and strengthening of existing Roads				
1	Upper Mall Road	lane/ km	4.21	7500000	315.75
2	Lower Mall Road	lane/ km	2.42	7500000	181.50
3	Thandi Sarak (South Mall Road)	lane/ km	1.59	4000000	63.60
	Total		8.22		560.85
G	New Bypass	lane/ km	16.00	11000000	1760.00

S. No.	Projects	Unit	Quantity	Unit Rate (Rs)	Total Amount (Rs lakh)
H	New Road				
1	New road covering Nallah no. 23 from Flats (near Masiid upto Telephone	lane/ km	1.0	22500000	225.00
k	Bus Stand				
I	Elevated Roads				
	2-lane elevated road with footpath parallel to Mall Road through Lake	sq m	12600	28000	3528.00
J	New Ropeway	nos.	2	2E+08	4000.00
K	Shifting of Building for parking and constructing elevated road in Lake			L.S.	4000.00
	Total				25375.00
	Physical contingency@ 7.5%				1903.13
	Price contingency@ 5.0%				1268.75
	Grand Total including contingencies				28546.88
	STREET LIGHTS				
	Total				300.00
	Physical contingency@ 7.5%				22.50
	Price contingency@ 5.0%				15.00
	Grand Total including contingencies				337.50