





3rd Consultation Meeting of City Sanitation Task Force



CITY LEVEL SANITATION STRATEGY

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Prepared for:



Municipal Corporation
of Shimla

Technical Assistance:



German International
Cooperation - ASEM


Prepared by:




Consortium for
DEWATS
Dissemination
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- ☐ Background
- ☐ Approach and Methodology
- ☐ City Level Strategy
 - Goals
 - Key Issues
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National Urban Sanitation Policy

“All Indian cities and towns become totally sanitized, healthy and live-able and ensure & sustain good public health & environmental outcomes for all the citizens with a special focus on hygienic and affordable sanitation facilities for the urban poor and women”

- **Objectives of NUSP**
 - Awareness generation and behavioral change
 - Open defecation free cities
 - Integrated city wide sanitation

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Shimla Ranks Low in Sanitation

Serial No	City	State	TOTAL
1	Chandigarh	CHANDIGARH	73.480
2	Mysore	KARNATAKA	70.650
3	Surat	GUJARAT	69.080
4	N.D.M.C.	DELHI	68.266
5	Delhi Cantt.	DELHI	61.367
6	Tiruchirapalli	TAMIL NADU	59.020
7	Jamshedpur	JHARKHAND	57.960
232	Vadodara	GUJARAT	33.625
233	Bilaspur	CHATTISGARH	33.606
234	Mira-Bhayandar	MAHARASHTRA	33.469
235	Ambattur	TAMIL NADU	33.460
236	Bhagalpur	BIHAR	33.406
237	Faridabad	HARYANA	33.252
238	Karnal	HARYANA	33.250
292	Shimla	HIMACHAL PRADESH	29.583
293	Puruliya	WEST BENGAL	29.567
294	Alappuzha	KERALA	29.480

Ranked 292 out of 423 Cities Surveyed in India

• Rating based on

- Access to toilets and level of open defecation
- Collection, treatment, disposal and reuse of waste water
- Collection, treatment, disposal and reuse of solid waste
- Quality of water supply

Shimla is in the brink of public health & environmental emergency and needs immediate remedial action

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Why is Shimla ranked No. 292?



Black and grey water not safely collected, treated and disposed off

1 out of 9



Inadequate access to public toilets. Instances of open defecation and urination

7.4 out of 16



Solid waste is not collected regularly

0 out of 4



Contaminated water supply in some pockets

0 out of 7

Water borne diseases

Outbreaks of Hepatitis and Death occurrences



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APPROACH

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THE VISION FOR SHIMLA CITY

Access to individual toilets/community toilets with adequate water supply

Major public places to have adequate access to public toilets

Improved drinking water quality

Safe collection, conveyance, treatment and disposal of wastewater

Communities to have access to d2d waste collection or within walking distance

Safe collection, transport, processing and disposal of solid waste

Ensuring adequate working standards for safety of sanitary staff

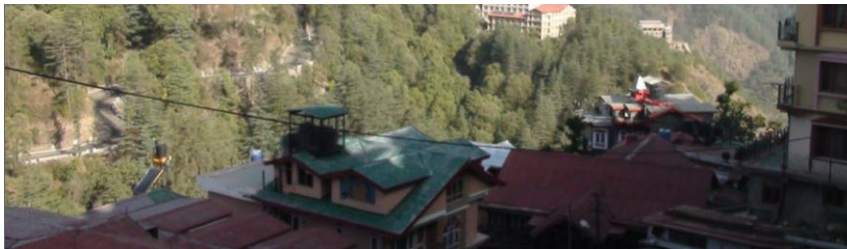
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GUIDING PRINCIPLES

- Equity
- Sustainability – Environmental and Economical
- Local Adaptability
- Improved Public Health
- Inclusive Growth

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TIME LINE

- Design Period – 30 Years
- Phase wise implementation to achieve the goals of CSP

PHASE	YEAR
IMMEDIATE	2011 - 2013
SHORT-TERM	2011 - 2021
MID-TERM	2011 - 2031
LONG-TERM	2011 - 2041

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CITY LEVEL STRATEGY

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GOALS

Goal 1

Goal 2

Goal 3

Goal 4

Goal 5




Goal 6

Goal 7

Goal 8

Good Public Health and Environmental Outcomes

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KEY ISSUES

Sewerage Management

Septage Management

Access to public sanitation

Solid Waste Management

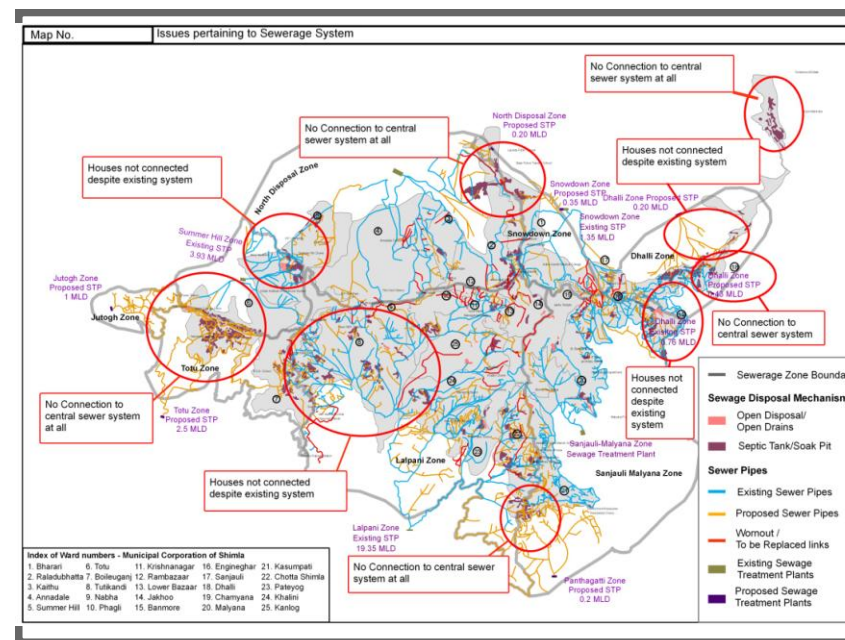
Drinking Water Quality




Institutional & Governance Framework

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Rationale for key issue 1

- ❑ Only 65-70% city area covered by centralised sewer system. 29% of the total population discharge wastewater into septic tanks/soak pits.
- ❑ Only 12,500 properties out of total 40,000 properties are connected to the sewerage network.
- ❑ The network grid is incomplete due to the missing connections between the hierarchies of sewers.
- ❑ The sewerage network in the core city area collects only black water whereas the grey water is discharged into open drains.
- ❑ Overlapping roles & responsibilities (WSSD, IPH) results in uncoordinated planning and implementation
- ❑ Weak enforcement of municipal bye-laws
- ❑ Lack of incentives to motivate communities to opt for sewer connections.

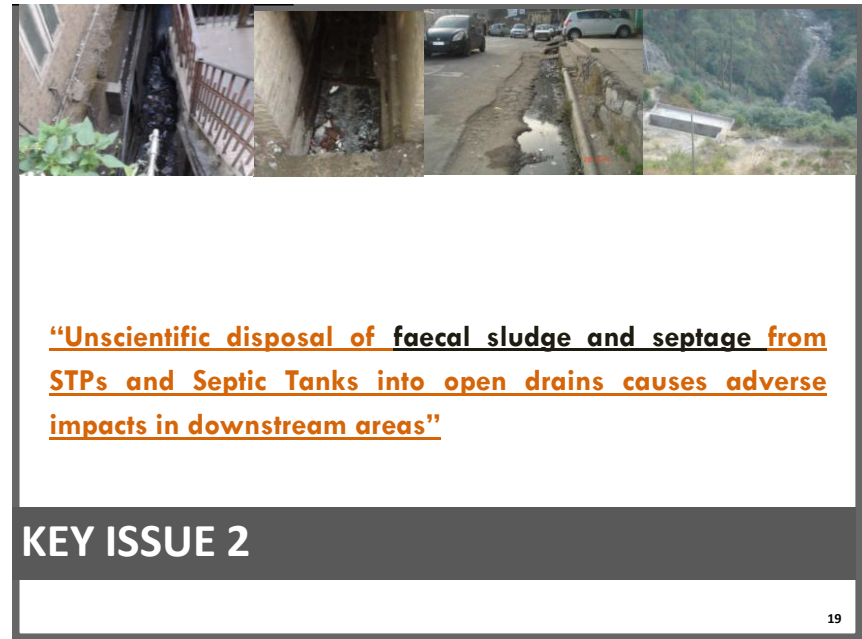
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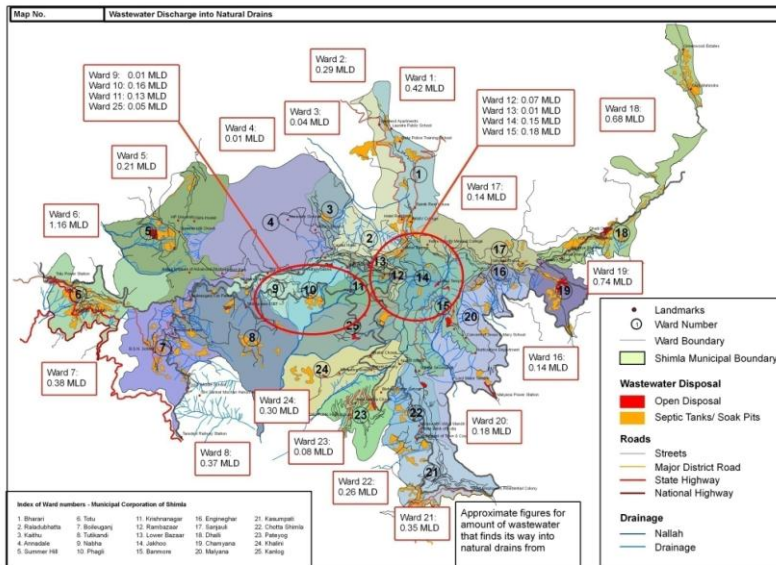




Recommendations for key issue 1

- ❑ Detailed survey to ascertain existing mode of wastewater disposal at household level.
- ❑ Initiate the tendering process for implementation of approved Sewerage DPR with proposed phases in the immediate phase.
 - Phase I - rehabilitation of missing links/worn out network, sewerage connections and sewer network, provision of additional facilities at STPs.
 - Phase II - providing additional treatment capacities, construction of new STP for Totu and Jutog Zone and sewer network in newly added areas.
- ❑ Explore alternative technologies for wastewater treatment.
- ❑ Policy regulations for new development to connect to centralised sewerage system or on-site wastewater treatment system.
- ❑ Develop new tax abatement policies, introduce incentives for citizens and develop enforcement mechanisms to ensure adherence to rules, laws, bye-laws.

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Rationale for key issue 2

- ❑ 29% of the total population discharge wastewater into septic tanks/soak pits.
- ❑ High desludging interval (8-10 years).
- ❑ Septage removed is dumped into the open drains or the water bodies.
- ❑ Lack of formal system for collection, conveyance and treatment of septage.
- ❑ Most of the septic tanks does not conform to the required design standards
- ❑ Lack of enforcement of by-laws/ building codes for design, construction and maintenance of septic tank.
- ❑ Lack of M&E systems to track the performance of the informal operators.








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Recommendations for key issue 2

- ❑ Rehabilitation of impaired septic tanks to prevent infiltration .
- ❑ Improvised septic tank design for areas difficult to connect to central sewerage system.
- ❑ Phasing out of septic tanks in sewered zones.
- ❑ Revamping of municipal bye-laws and building codes enforcing above recommendations
- ❑ Construct septage treatment facility.
- ❑ Implementation of DPR for up-gradation of sludge management interventions.
- ❑ Institutionalisation of septage management system.
- ❑ Regulatory oversight mechanisms to penalize the citizens violating the bye-laws.

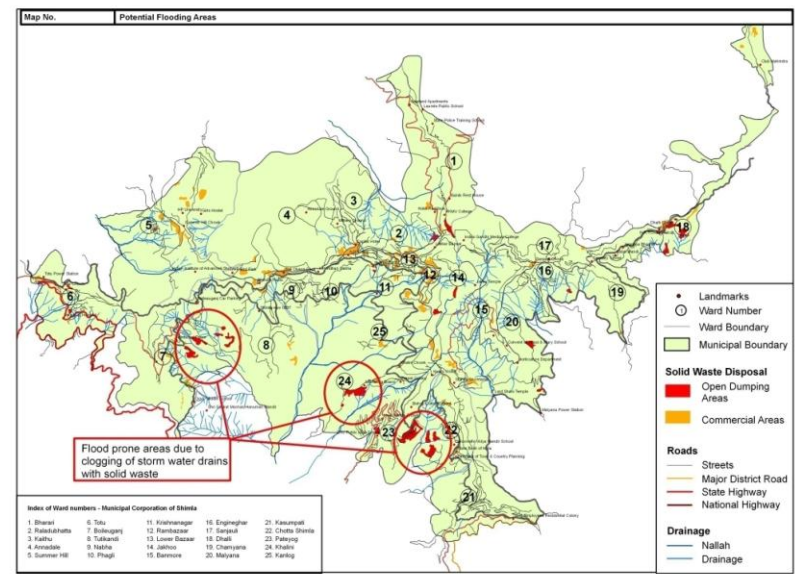
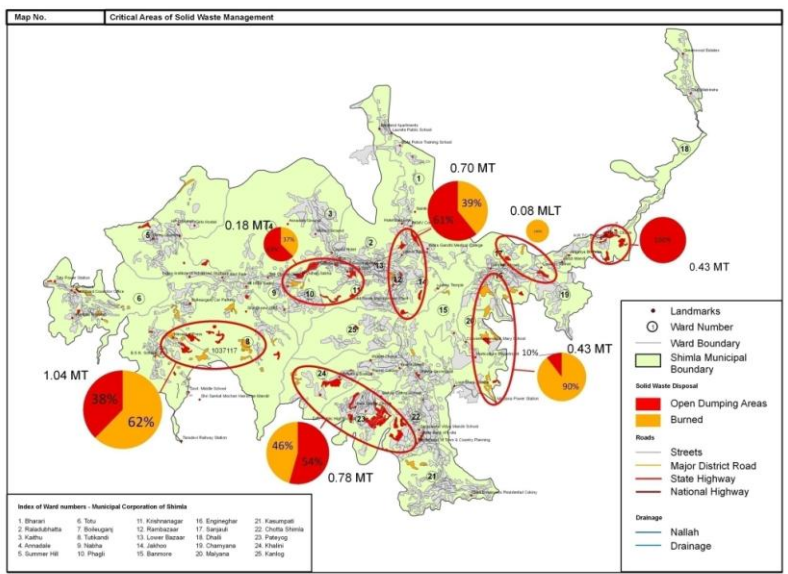
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“Indiscriminate dumping of solid waste in open drains and inadequate treatment and disposal facility causes adverse impacts in downstream areas”

KEY ISSUE 3

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Rationale for key issue 3

- ❑ Only 70 MT out of 90 MT of solid waste generated is collected and transported to the waste treatment facility
- ❑ 15% of the total households are not covered by door to door waste collection system - difficulties in collecting waste from downstream areas owing to topographic constraints
- ❑ Inadequate transportation fleet and staff for operation.
- ❑ Scattering of waste at secondary storage site and during transportation
- ❑ Open dumping and burning of waste due to inadequate/ inconvenient location of bins/containers.
- ❑ Inadequate waste clearing frequency in market and core city areas.
- ❑ Inefficient street sweeping operations.
- ❑ City lacks landfill facility for disposal of inert waste/rejects
- ❑ Behavioral aspects of the communities

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Recommendations for key issue 3

- ❑ Initiate door to door waste collection in the remaining 15% households in the immediate phase.
- ❑ Implementation of approved DPR – procurement of equipment/tools, and transportation fleet.
- ❑ Completion of new waste processing unit at Bhariyal and put into operation at the earliest.
- ❑ Preparation of DPR for planning, design and construction of sanitary landfill in the immediate phase.
- ❑ Municipal Bye-Laws promoting 3R's and regulatory mechanisms (polluter pays) to discourage open dumping of waste.
- ❑ Establish a dedicated Solid Waste Management Cell.
- ❑ Awareness generation campaigns

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Rationale for key issue 4

- ❑ 15% of the total city population is dependent on public toilets, 2% of the total population defecates in open.
- ❑ One toilet seat per every 190 users (norm 35 persons) for public toilets in residential areas.
- ❑ One toilet seat per every 80 users (norm 50 persons) for public toilets in commercial areas.
- ❑ Open defecation pockets identified have a facility in the vicinity, which strengthens the assumption that toilets are not in a usable condition.
- ❑ Lack of staff, irregular water supply and inefficient monitoring mechanism responsible for poor O&M of public toilets.
- ❑ Lack of a dedicated unit solely responsible for O&M toilets complicates the same.
- ❑ Location of facilities inconvenient. Toilet designs are not gender sensitive and does not consider needs of physically challenged and elderly population.
- ❑ Lack of incentive and motivation for community based sanitation initiatives.

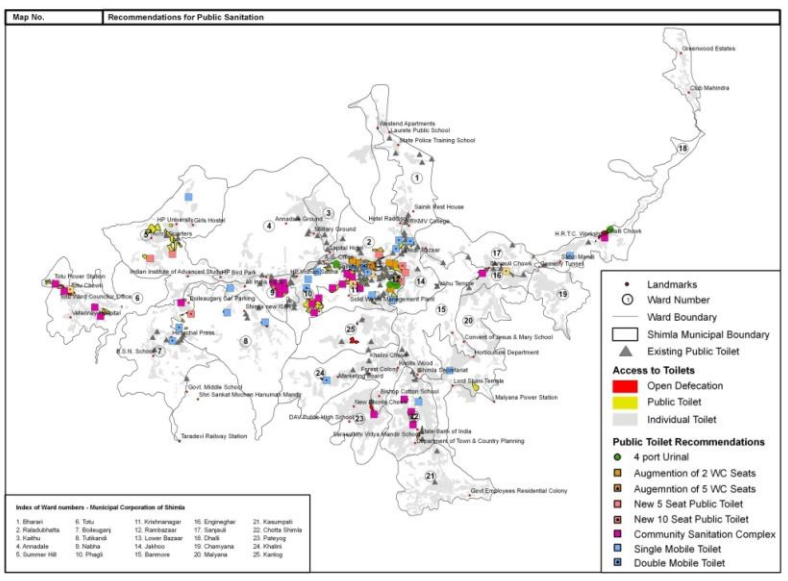
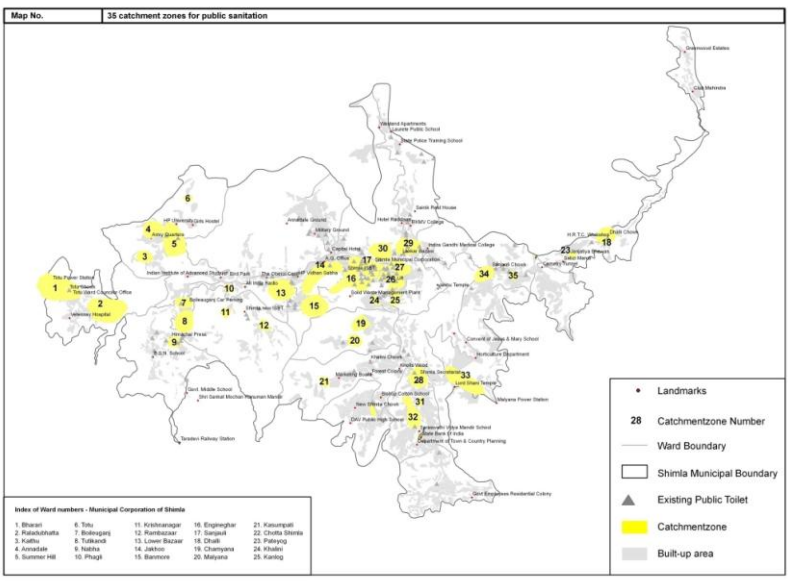
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Recommendations for key issue 4

- ❑ Review existing infrastructure against the recommended design considerations and standards, and rehabilitate or/ and upgrade the existing toilet facilities.
- ❑ Provision of 354 toilet seats and 33 mobile toilet seats in the immediate phase to achieve the seat/user norm. Initiate preparation of DPR and implementation of the same in the immediate phase.
- ❑ Preparation of Design and O&M Manual for provision of public sanitation infrastructure.
- ❑ Outsource the O&M of all public sanitation facilities.
- ❑ Establish dedicated Public Sanitation Cell for design, construction, operation & maintenance of the infrastructure.
- ❑ Conduct awareness generation campaign to educate communities about the advantages of community based sanitation and to promote the construction of individual toilets.

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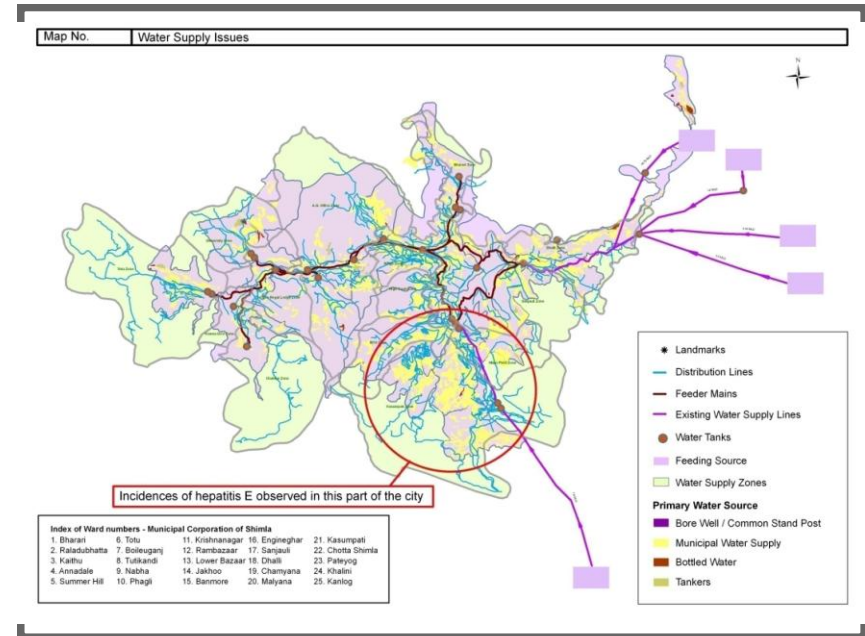







“Drinking water contamination posing health risks”

KEY ISSUE 5

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Rationale for key issue 5

- ❑ Incidences of water borne diseases reported due to contaminated water. City witnessed Hepatitis (A&E) outbreaks in the last three years.
- ❑ Water supply lines in the open drains enhances risk of contamination.
- ❑ The required horizontal and vertical clearances between sewer lines and water supply lines are not maintained.
- ❑ Illegal water and sewer connections by households cause breakages in the network thereby enhancing the risk of water contamination.

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Recommendations for key issue 5

- ❑ Detailed mapping of water supply network, sewerage network and drainage network for identification of intersection points.
- ❑ Carry out encasement of pipes, relocation of pipes/stand-posts/hand-pumps.
- ❑ M&E systems to monitor the functioning of SWM, sewerage system and storm water management systems in order to prevent the contamination of water in the supply system.
- ❑ Awareness campaign to educate people about the benefits of hygiene and better sanitation practices.


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“Sustainability of sanitation services and delivery not ensured due to weak institutional framework”

KEY ISSUE 6




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Rationale for key issue 6

- ❑ The organizational structure is not conforming to the service requirements and service responsibility.
- ❑ There are multiple agencies with overlapping and fragmented responsibilities cutting across different sanitation sectors.
- ❑ High frequency of transfers in the city managements positions adversely affects the continuity and local accountability.
- ❑ Lack of experienced and specialised staff with in-depth knowledge of the management system and lack of formal training in the sector.
- ❑ Weak enforcement of established rules, laws, bye-laws, municipal and building codes leads to inefficient management of services.
- ❑ Devolution of corresponding powers and authorities from the State Govt has not been achieved.
- ❑ Absence of well-established e-governance & regulatory structure.




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Recommendations for key issue 6

- ❑ Organisation restructuring is recommended (refer next slide).
- ❑ Devolution of department functions by formation of separate cells under MCS.
- ❑ Each sectoral unit/cell shall be supported by a technical services unit (TSU) and an O&M unit.
- ❑ The staffing plan and strategy shall be evolved with the help of institution development experts in consultation with the sector-specific experts in both technical and O&M services; the capacity enhancement strategy shall be dovetailed into these efforts.
- ❑ Autonomous sectoral units - specific business plans and financial operating plans, costing system and asset management systems .
- ❑ Establish e-governance structures.

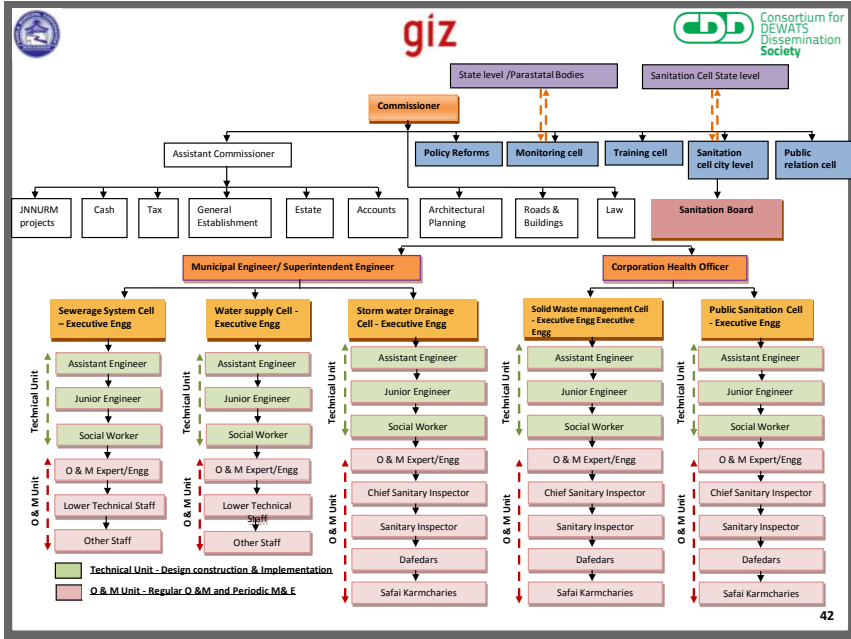
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Recommendations for key issue 6

- ❑ Customizing O&M Manuals, Standard Operating Procedures Manual and Best Management Practices Manual to city context.
- ❑ Regulatory mechanisms to encourage citizen participation as well as proactive quality service delivery by the service providers.
- ❑ Creation of Policy reforms cell to develop accountable governance framework.
- ❑ Performance linked incentive programs and M&E systems shall be developed.
- ❑ The ISIP developed shall be implemented with immediate effect.
- ❑ Steps shall be ensured to achieve the objects of the Model Municipal Law.




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“Existing financial management system does not meet the demands of the current and future sanitation requirements”

KEY ISSUE 7




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Rationale for key issue 7

- ❑ Shimla's overall annual financial balance is negative.
- ❑ Fiscal powers and authorities are still not devolved from the state government to local bodies.
- ❑ Insufficient local financial resources to sustain the delivery of sanitation services.
- ❑ Unclear budget heads across different departments involved in provision of sanitation services.
- ❑ Low cost recovery puts burden on municipal finances.
- ❑ Lack of administrative procedures to ensure financial data flow and reporting.




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Recommendations for key issue 7

- ❑ Reengineer the business processes of the Finance & Accounts Department of MCS.
- ❑ Evolve robust contract management systems; benchmarking and monitoring systems, efficient data management systems.
- ❑ Adopt accounting and budgetary standards as per the directive of C&AG – 'Accounting and Budget Formats for Local Bodies'.
- ❑ Ensure policy reforms to complete the decentralization process as per 74th CAA and the MML.
- ❑ Cost Effective mechanisms to be developed – integrate with other IT initiatives and leverage core technology infrastructure.
- ❑ Cost Recovery Mechanisms – increase tariffs once in every three years.
- ❑ Tax and tariff reforms to be initiated.

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IMPLEMENTATION COSTS

Sr. No	Recommendation	Cost (Rs. In Lakhs)
1	100% sewerage coverage , wastewater treatment and disposal	16500.00
2	Septage Treatment Units	1000.00
3	Public Toilets	1000.00
4	Solid Waste Management	16000.00
5	Storm Water Drains	4000.00
Total Capital Investment for 100% Sanitation		38500.00

Note: he costs mentioned have been referenced from DPRs and estimations. The cost may vary during actual design and implementation


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IMPLEMENTATION COSTS

We Acknowledge

- Municipal Corporation Shimla
- GIZ-ASEM
- CTF Members



Thank you

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