

CASE REPORT

Social Welfare through Waste Management

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How to cite this article:

Sanskriti Tripathy, Tridibesh Tripathy. Social Welfare through Waste Management. J Soc Welfare Manag. 2025; 17(1):53–62.

ABSTRACT

This article focuses on the waste management system of Shimla Municipal Corporation. It describes the Solid Waste Management practices of the hill state capital corporation through a flow chart. The broad idea of the City Sanitation Plan of SMC is also mentioned in the article.

The National Urban Sanitation Policy (NUSP) of the Ministry of Urban Development was initiated in the year 2008. The plan was to sanitise the cities, make the cities clean and make the cities liveable. After 6 years of its roll out, more than 150 cities had planned their City Sanitation Plans. Shimla was one such city that is mentioned in the article.

The triad of the roll out of SBM was the 4 Ps. These are policy, panchayat, people and participation. The NUSP was framed in the first step. The panchayats were actively involved in the second step. It was made a people's movement as the third step. Covering all these components, the participation became the periphery of the entire circle.

The waste management in hill areas is more crucial than the plains. Repeated efforts in the hill areas on managing the waste is needed since tourism is a big contributor to the economy of the hill states.

KEYWORDS

• CSP • SWM • MCS

INTRODUCTION

In this article, the achievement of Shimla Municipal Corporation (SMC) is given through 6 indicators with base level taken in April 2011. 7 achievements are given for the years 2012, 2013 and 2014.

The article also mentions about user charges helped SMC with a revenue of ₹ 25 lakhs (2.5 millions) per month. In addition, a flow chart of the redressal system of SMC is also mentioned.

The article mentions the Solid Waste Management (SWM) practices of SMC that are

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➤ Received: 04-03-2025 ➤ Accepted: 08-05-2025



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done a regular basis. In addition to that, the details of the City Sanitation Plan of the city of Shimla are given in alignment with the waste management practices.

CASE STUDY ON THE MUNICIPAL WASTE MANAGEMENT SYSTEM OF SHIMLA

The following study was conducted in Shimla, Himachal Pradesh by Omesh Bharti, Amarjeet Singh, D.P. Singh and Vibhor Sood.

Shimla has a population of 1,69,758 people. The total area under the jurisdiction of Municipal Corporation Shimla (MCS) has increased after the incorporation of New Shimla, Totu and Dhalli areas upto 35 sq km. The MCS is divided into 25 wards and covers the urban core and fringes.

As per the garbage free star rating, there are three cities with seven star rating, 15 cities with 5 star rating, 229 cities with 3 star rating and 426 cities with one star rating.

Solid waste management is an issue in the hilly areas due to indiscriminate disposal of waste. This clogs the natural and manmade

storm water drainage system specifically during the monsoon. Hence, for SWM, either the MCS, an agency or a private operator are given the responsibility for different components of the SWM programme.

According to the Himachal Pradesh Municipal Corporation Act, 1994 door to door garbage collection bye-laws were enacted in 2006. The Shimla Environment, Heritage Conservation and Beautification Society was held responsible for the enforcement of these bye-laws. Waste processing and treatment works on a PPP model by Hanjer Biotech Energies Pvt. Ltd.

Various stakeholders carry out duties like door to door collection of MSW, segregated waste at secondary storage and collection points, treatment of MSW and disposal of the waste. The city has banned the usage of plastic carry bags with thickness less than 75 microns as per the HP Non-Biodegradable Garbage (Control) Act, (1995). The littering of garbage has also been made liable to a fine of Rs. 500 to Rs. 5000.



Figure 1

A FLOWCHART OF THE SWM PRACTICES OF THE MCS

As per the study, the daily waste generation in the city was approximately 93 MT. So the generated waste per capita per day turned out to be 350g/capita/day. Door to door waste collection was estimated to be 70-75 MT.

The implementation pattern of the Door-to-Door collection process of Garbage was also assessed from 1999 to 2008. The motivation began from the increasing volume of garbage and finally got directed as per the MSW (M&H) rules, 2000 and HC Directions, 2006. The user charges were also finally determined

differentially. Four NGOs with local knowledge were also involved in 2008. The limiting factor in 2008 was the financial in viability of the revised user charges for collection.

For door to door collection, the SEHB society provided two coloured bins-yellow and green to households, commercial establishments etc. The yellow and green bin had been provided for the non-biodegradable waste and biodegradable waste respectively. Establishments were debarred in case of non-compliance with waste collection. 86 percent of the total residential population was also covered in the waste collection process. Women workers and married couples were placed as per their comfort and vaccination drives were also conducted for the workers. Primary collection and segregation of waste was improved using various pilots by the help of agencies like GIZ and EU.

A secondary collection system consisting of eight concrete dustbins, 148 dumper containers of 4.5 cum capacity and 54 dumper containers of 3.5 cum capacity was created. A proper routing plan along with transfer stations for waste transport was created. Manual collection was done at the primary level. The MCS also

set up a waste transfer station at Darni Ka Bagicha.

From the secondary collection points, the waste was transported to treatment plants and landfills. Vehicles like Pick-Ups (Hydraulic and non-hydraulic, dumper placer, auto tipper, compactors etc. were used for the transportation of waste.

Proper focus was also given on the disposal of inert material generated from the treatment facility. All the waste from the processing unit and other non-biodegradable waste were landfilled in a valley near the compost plant at Darni Ka Bagicha. An engineered disposal facility was proposed to be developed on the PPP model.

The MCS also set up a complaint redressal system that operates in three languages English, Hindi and Pahari (Himachali). The citizens were allowed to lodge their complaints in the complaint cell. The contact details of all the officials associated with SWM were also provided on the official website of the complaint cell. The e-samadhan portal was also created for registering complaints. The Chief Sanitary Inspector was made accountable for addressing the grievances of the citizens.

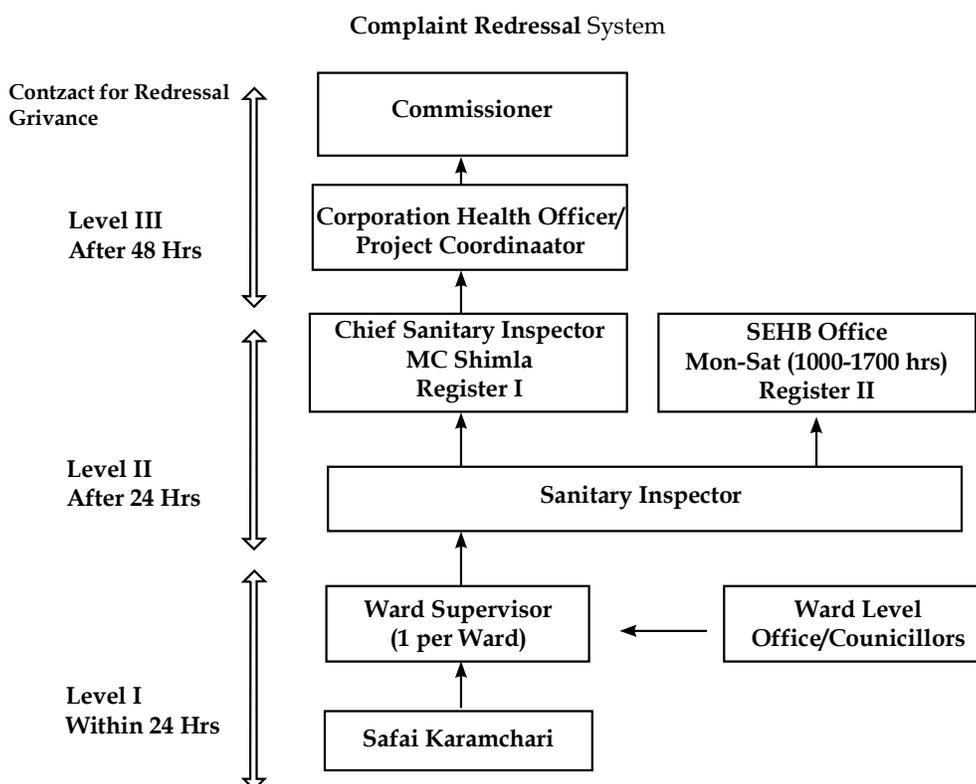


Figure 2

A flowchart of the complaint redressal system of MCS

Under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM), the SWM project was approved by the MoUD.

The SEHB managed an income of ₹ 25 lakhs per month through the collection of user charges.

To conclude, all of the actions taken by the MCS helped improve its Service Level Benchmark. Improvement in indicators like household level coverage, collection of waste, grievance redressal contributed to the overall growth of the MCS.

Performance Indicator	Bench-marks	Base Level April 2011	Target March 2012	Target March 2013	Target March 2014
Household level coverage of solid waste management services	100%	84.8	90	88	88
Efficiency of collection of municipal solid waste	100%	77.8	80	78	82
Extent of segregation of municipal solid waste	100%	10	20	20	20
Extent of municipal solid waste recovered	80%	15	30	30	35
Extent of scientific disposal of municipal solid waste	100%	0	50	0	0
Extent of cost recovery in solid waste management services	100%	9.9	15	15	22

DISCUSSION

The key issues mentioned in the article are the waste management practices on SWM by the SMC. Thereafter, the CSP and its intricacies are addressed. Following that, the feedback tool through the grievance addressing system of the SMC is another unique feature.

At the fag-end of the article, the performance indicator of the SMC along with the performance of each of the indicators is another feature of the article.

CONCLUSION

The City Sanitation Plans are inherent to the Swachh Bharat Mission. The three figures in this article are its unique representations. The article is not only descriptive but also receptive as it mentions the feedback tool through the grievance addressing system.

The article only aspires that such efforts are replicated by other cities and especially the cities in the hills of India. The cleanliness of these hill cities will only contribute to more influx of tourists & improve the economy of cities like Shimla & eventually of the currently cash starved Himachal Pradesh.

Conflict of Interest: There are no conflicts of interest in the article

Funding: No funding received for this article

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