

Role Of Urban Local Bodies In Urban Environment Management: Case Study Of Waste Management Of Patna.

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INTRODUCTION:-Local government is the form of government which is at the bottom of the pyramid of governmental institutes with the national government at the top of pyramid and intermediate government i.e state, region and province they are the one who stands for primary responsibilities like urban or rural infrastructure, land use planning and directly involving in the provision of basic water, sanitation and garbage disposal services etc.

Urban local bodies plays important role in urban environmental management since they are the best protectors of urban local environment. ULB are the ones who construct, operate and maintain economic, social and environmental infrastructure.

Solid waste management is one of the major environmental problems being faced by almost all the cities of India. Improper and unscientific disposal of solid waste causes health hazards to city dwellers. There are many shortcomings in the existing management practices of solid waste in cities. The generation of solid waste is increasing tremendously on account of excessive use of commodities and changing consumption pattern of the inhabitants. The major problem associated with improper disposal of garbage is uncontrolled dumping in low areas. Urban environment management focus on environmental aspects of urbanisation to achieve environmental policy goals, ultimately leading to sustainable urban development. Urban environment involves both networking & internal managerial upgrading. Urban environmental problems are evident in a number of ways in and around the cities in developing countries. To decline in air and water quality, problems of waste disposal, more intense competitions for space in congested areas, and the worsening of natural support system and the living conditions for urban dwellers are obviously seen in many regions (UN –ESCAP, 1994). City dwellers are facing various problems of urban environment which cause

negative impact on their lives. Basically urban environment are influenced by many factors like city's size, population growth, rapid economic development, local geography and climate. These problems became more worsening if the organisation handling such problems are weak.

As concerned to solid waste management of Indian cities is concerned, Patna city is not an exception to this. The generation of solid waste increases manifolds today. This is all because of the changing lifestyle, consumption of commodities, changing lifestyles and of course irregular collection of solid waste etc. Further the municipal corporation has shortage of adequate skilled manpower, finance and machinery which are essential for effective waste management in the city. Therefore organisations at all levels must pay considerable attentions to environmental impacts in order to achieve sustainable urban management.

OBJECTIVES OF STUDY

1. Study of urban local bodies served in urban environment management
2. Assess existing status of generation, collection, storage, transportation
3. Facilities provided by different urban local bodies

STUDY AREA-Patna is one of the important and historical cities of India. It is also capital of Bihar and situated on the bank of River Ganga Ji. Patna city is being characterized by low level of socio-economic development of its urban environment. It has been recorded 26,95,000 (15th largest city of India) with the decadal growth rate of 23.73 % and density 16,925 persons per sq km in 2011. The area is also experiencing heavy influx of migrant population from the surrounding areas for the search of better education, job and medical facilities, etc. Because of the high population and low level of infrastructure development as proportionate to the population, the areas are facing low level of socio-economic development and environmental degradation. It has recorded worst ranking in NSSO, HDI and Swachhta Sarvekshan. The gap between have and haven't is gradually widening in the basic amenities like urbanization, universalisation and accessibility in the quality of education, food, living standard, health sanitation, etc. which is resulting adverse impact on the sustainability and environment. It has also accessed the problems of traffic congestion, depleting ground water, safe & pure drinking water, e-waste, bio-medical waste, sanitation & sewage, growing slums areas, etc. This paper also deals with the role of Patna Municipal Corporation to combat these issues and challenges.

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Institutions working for urban governance in Patna (M. Corp.)-

- Patna Municipal Corporation (PMC)
- Patna Regional Development Authority (PRDA)
- Bihar Rajya Jal Parishad (BRJP)
- Public Health Engineering Department
- Nagar Parishads

Role of ULB in urban environment management: a case study of waste management of Patna

Patna is the largest urban agglomeration of Bihar accounting for 26,95,000 of population. The population of city has grown from 24 lakh to 26 lakh from last decade with a growth rate of 23.73%. if its growth is ignored than it can be a threat to urban environment and productivity of the city. The local authorities are playing significant role to bring together all the functions properly and in a sustainable manner.

Major facilities provided by ULB'S of Patna

• **Water supply-** BJRJ is responsible authority for providing the access to people of city for consumption purpose as well as for different household's activities. The operation and maintenance of the systems are undertaken by PMC under its jurisdiction. The coverage under water supply is approx by estimation is 58%. The city is mainly dependent highly on ground water sources. Out of the total water supply 40% is lost during transit. Patna has aprox. 11laks connections out of which 80% are for domestic purposes. The quality of ground water is good though it has some amount of arsenic too at some areas. About 20% people depends on stand post while 40% has their own private bore wells.

• **Sewerage and sanitation-** BRJP is again responsible for overall designing, implementation, operation and maintenance of sewerage system of city. Availability of sewerage system is limited to Patna municipal area rests are remaining aloof. The other half of population either used septic tanks or rest is disposed into open storm drains. On the basis of study it come into notice that about 85% population has individual arrangements and rest uses public toilets or go out in open.

• **Solid waste management-** it can be studied under qualitative and quantitative analysis.

Quantitative analysis- the quantity of solid waste generation depends on food habits, standard of living, level of commercial activities and seasons. Increasing urbanization, changing lifestyle of people, now the generation rate of solid waste increases. The amount of solid waste generated per capita is estimated to increase at a rate of 1-1.33% annually (Pappu Et Al 2007, Shekdar 1999). It has been reported that solid waste

generated per capita per day is from 0.2 -0.5 kg. (Dayal 1994, Singh 1998). An estimation of solid waste generation done under the City Development Plan of Patna city for implementation of JNNURM programmed in 2006 is about 650MT-800MT per day. Out of this 60% is domestic and 40% is industrial and commercial. The major sources of waste generation are household waste i.e kitchen, and hotels, markets, educational and biomedical wastes.

Qualitative analysis- it depends on number of factors like developmental activities, nature of goods and commodities.

Table-1.1PHYSICAL CHARACTERSTICS OF SOLID WASTE IN PATNA CITY

Component	Sub-component	Percentage
Organic waste	Leaves, straw, garbage, fruits and vegetables	49
Combustible waste	Paper, polythene, textiles, bones	12.5
Non – combustible waste	Ash and silt, earthen ware, stone, leather, rubber	38.5
	Total	100

Source: City development plan, prepared under JNNURM Programme, 2006



Fig-1.1 COMPONENTS OR URBAN ENVIORNMENT

Solid waste management is the one thing just about every city government provides for their residents. Solid waste management is arguably the most important municipal service and serves as a prerequisite for other action. Waste management is to manage the society's wastes in a manner that meets public health and environmental concerns and the public desire to reduce and recycle waste materials. It is the disciplinary associated with the control of generation, collection, storage, transfer and transport, processing and disposal of solid waste in a manner that is in accord with the best principles of public health, economies, conservation and other environmental considerations.

Storage and collection of solid waste- The main purpose of solid waste management is to minimize the adverse effects on the environment. The steps involved are; Disposal of solid wastes, Utilization of wastes, Collection of solid wastes. In most of the cities dustbins are common for decomposable and non – decomposable waste because no segregation of waste is performed. Same is the condition of Patna city. At present house to house collection is not yet started at Patna. The solid waste is dumped by individuals usually at low lying areas of city, street corners which are then collected by different municipal workers. They either use handcraft or trolleys or then dumped the waste in an unorganized manner without any treatment. All these lead to great adverse impact on environment, health of city dwellers. It causes health hazards to workers and rag-pickers too. Soil, air, land pollution is the most prominent issue of improper waste disposal within the city. Indiscriminate waste disposal and greater distance of dustbins lead to spreading of waste along the roads.

Transportation of waste- municipal agencies use their own vehicles for transportation of garbage. They mainly use open trucks, dumper and tractor. Patna Municipal Corporation also hires vehicles from private agencies or from private contractors. The local body doesn't have suitable vehicles for collection and transportation of wastes.

Treatment of solid waste- in most of the Indian cities waste is disposed off openly in an unscientific manner without any treatment. Condition is not different in the city of Patna; wastes are simply dumped without any treatment in depressions, ditches or by the roadside flank in an unscientific manner.

Local government capacity and management of urban environment problems and implementation

It can be defined as the ability of local government to perform their tasks relating to urban environmental issues. Crucial need is to enhance the capacity of ULB'S. Some areas of Patna are clean and the work of ULB is beyond question like of leaders, businessmen, doctors, lawyers and important persons.

ex:- Belly Road, Krishanpuri, Ashiana, Shastrinagar etc

Some areas are deprived of ULB facilities facing problems like solid waste disposal land, water, air pollution. Drainage choked, water logging Ex:- Mussalah Pur Hat, Mahendru, Bazar Samitu, Kadamkuan, Ashok Rajpath Etc

Conclusion and suggestion-The present study reveals that there are many shortcomings in the present practices followed for the the

management of urban environment especially waste management of Patna city. It is all because of inadequate manpower, financial resources, machinery. To overcome the deficiencies in current management of ULB an integrated action plan is the need of the hour, incorporating strategies and guidelines. The current regulation under municipal solid waste management 2000 are very stringent, norms are to be developed for insuring a proper MSWM system. Unfortunately there is a large gap between policy and implementation. Efforts should be made to bridge these gaps and also encourage public participation. Public awareness is one of the most crucial strategies of management which can act as a catalyst.

Urban environmental problems need to be implemented holistically in order to identify the critical issues, instead of offering end of pipe solutions in an ad hoc manner, with the cooperation & coordination of ULB & public participation. But with growing problems declining efficiency of city personnel, perennially inadequate finance, and the new concept of urban governance, the role of private sectors, NGOs's and the civil society have also become crucial. Thus only through the joint efforts of all these elements can make our city a beautiful place to live in peace & harmony.

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