ENVIRONMENT AND SUSTAINABLE URBAN DEVELOPMENT

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ABSTRACT

Human beings interact both with the social world and nature for its survival. Natural resources and economic base along with technology are required for the continual improvement of life style and living standard. Up till now the development was achieved by over exploitation of resources which has damaged the environment and we are facing its consequences. A major cause of this situation is the fast urban growth. India is witnessing an unprecedented rise in urbanization in last two decade. But Indian cities are not able to manage the increasing population because of poor urban management and resource constraints. These cities and their residents are fighting against population, lack of safe drinking water, scarcity of electricity and other basic amenities. Population and degradation of social and physical environment is a major issue in most of the cities in India, but at the same time cities are paving a way for a new cultural & economic development. The present study analysis urban and development in India and its impact on environment growth. Urbanization and sustainable development can be achieved if population growth and management of resources are catered properly, unfortunately it is not the scene of Indian urban growth. Thirteen out of twenty most polluted cities of world are Indian cities. We need an immediate control and overview of present trend of urbanization. This research paper is an attempt to identity the major issues of environment in class II & III cities of MP and to explore the path for sustainable development.

Keywords: Sustainable Development, Environmental Degradation Urban Growth, Natural Resources.

INTRODUCTION

India is a vast, diverse and complex in its environment and environment-society relationship. Fast growth of population and economy is putting immense pressure on resources. India is second largest populated country and is expected to be well ahead of China in 2050. The country is experiencing rapid population growth in both rural and urban sectors. Decadal growth of India’s population was 17.64% (2001-2011) and total population was 12010193422, 83.3 crore live in rural area while 37.7 crore stay in urban area. Urban population is 31.16% of total population. Exponential growth and economic development lead to the over exploitation of natural resources and it will only result in an environmental and social catastrophe.

Urbanization is an increase in population and economic activities in urban areas which leads to further development of towns and agglomerates to contain this rising population. Urban place in India is a settlement having

- Municipality corporation, cantonment board or notified town area;
Have a minimum population of 5000;
- At least 75% of male population is engaged in non-agricultural activity;
- Density of population in the city is at least 400 person per sq.km.

Urbanization is a process which includes two things (1) an increase in the number of people living in the urban settlement and (2) an increase in the percentage of the population engaged in non-agricultural activities living in such places. The percentage of urban population to total population has gradually increased. Goa is the most urbanized state where 49.76% of the population lives in urban areas. This is followed by Maharashtra Mizoram, Tamilnadu and Gujarat. The pattern of urbanization and its relationship and impact with an environment has different forms and phrases throughout the country.

**METHODOLOGY**

To understand the relationship of environment and urban development in M.P. the methodology adopted was both quantitative and qualitative. The population data and environmental information’s were collected through secondary data from census, Government Reports, M.P. Pollution Board Publications, M.P. Planning Commission Report, M.P. State Development Report, EPCO and reports by non-governmental organizations. A primary survey of Sehore was conducted by pre-designed questionnaire to measure the level of satisfaction and awareness, systematic observation and survey was conducted to collect ground level information regarding maintenance and management of environment.

**STUDY AREA**

Madhya Pradesh is known as heart of India, situated in the center, it covers 308000 sq.km area. The population in the state recorded 24.34% growth from 1991 to 2001 and 20.3% growth from 2001 to 2011. Total population of the state is 72597565 (2011) and urban population is 20059666 (2011) which is 27.6% of total population. Madhya Pradesh is behind the national level or urbanization which is 31.16%. Total urban centers (towns) in India are 15870 of which 576 are situated in M.P. States share in national urban population is only 5.4%.

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>No. of towns</th>
</tr>
</thead>
<tbody>
<tr>
<td>1951</td>
<td>26071637</td>
<td>175</td>
</tr>
<tr>
<td>1961</td>
<td>32372408</td>
<td>181</td>
</tr>
<tr>
<td>1971</td>
<td>41654118</td>
<td>204</td>
</tr>
<tr>
<td>1981</td>
<td>41654119</td>
<td>271</td>
</tr>
<tr>
<td>1991</td>
<td>66181170</td>
<td>394</td>
</tr>
<tr>
<td>2001</td>
<td>66181170</td>
<td>394</td>
</tr>
<tr>
<td>2011</td>
<td>72597565</td>
<td>476</td>
</tr>
</tbody>
</table>

**Trends of urbanization in M.P.**

Some major characteristics of urbanization in M.P. can be listed as:

- The growth rate of towns in last decade is higher than the recorded at national level. India – 334% and MP 353% (1901 to 23011)
- The status of urban agglomeration and out growth in the state has declines. No. of UAs in 2001 – 42 and No. and in 2011 it was is 37.
- There is no change in the pattern of growth of urban agglomeration. The top UAs are same since 1965 – (1) Indore 2167447; (2) Bhopal 1883381; (3) Jabalpur 1267564 (4) Gwalior 1101981 (5) Sagar 370296.
• Least populated urban agglomeration in 2011 have only 1 to 1.5 lakh population.
• Cities having more than ten lakh population are only four and Indore, Bhopal, Jabalpur & Gwalior are top four cities. Since 1901 the order has not changed.
• Only 14 cities have Municipal Corporation and 97 have municipality, rest have nagar panchayat. This indicates that size of towns is quite small. State have 106 Class III towns and 160 Class IV towns. Only 33 cities are Class I towns.
• Madhya Pradesh share in national urban population is also very small. It is 5.5% in 2011. Decadal increase of urban population is also very small in comparison to many other states.
• Forty percent of urban population of state resides in 6 major towns – Indore, Bhopal, Jabalpur, Gwalior, Sagar and Ujjain.
• Although number of Class III & IV is quite large but only 16% of state urban population is accommodated by these cities.
• Least urbanized districts are Dindori, Alirajpur, Jhabua, Sidhi & Sheopur where urban population is less than 20% of total population.
• Most of the district H.Q. have large concentration of population. More than 80% of district’s urban population is found in Bhopal, Indore, Jabalpur & Gwalior city.

<table>
<thead>
<tr>
<th>Types of Cities</th>
<th>No.</th>
<th>Population</th>
<th>% Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>33</td>
<td>1918474</td>
<td>59.44</td>
</tr>
<tr>
<td>II</td>
<td>29</td>
<td>2035398</td>
<td>10.14</td>
</tr>
<tr>
<td>III</td>
<td>106</td>
<td>3100866</td>
<td>15.45</td>
</tr>
<tr>
<td>IV</td>
<td>160</td>
<td>2251336</td>
<td>11.22</td>
</tr>
<tr>
<td>V</td>
<td>89</td>
<td>709609</td>
<td>3.53</td>
</tr>
<tr>
<td>VI</td>
<td>10</td>
<td>43983</td>
<td>0.21</td>
</tr>
<tr>
<td>Total</td>
<td>427</td>
<td>20059666</td>
<td>100</td>
</tr>
</tbody>
</table>

Although urban growth of M.P. is quite slow yet urban centers are facing many environmental and economic problems. Pollution, unemployment, poverty & lack of infrastructure are main issues. Unplanned growth and misuse of resources is a matter of concern. Urbanization puts great pressure on land, water, forest and agriculture. Increasing demand of food, water, land and energy, and increasing industrialization leads to exploitation of natural resources which affects positivity on environment, sustainable urban development means a process that balances among economic, social & environmental perspectives in urban areas. It is tool & solution to improve quality of life and it also takes care of environment.

**Environmental pollution** is a major problem of all major cities of M.P. Gwalior is most polluted city. Particulate matter in area at Gwalior stands 329 micrograms per cubic meter. This is five times higher than normal value. Small industrial units in the city, haphazard development and construction, plus population growth has placed Gwalior among top ten polluted cities of India. Same story is with Indore. Water and air pollution is major problem. Over all CEPI score is 71.26. M.P. Pollution Board recognized 162 units as water polluting agent. Mangaliya is most polluted area of city due to congested building, heavy traffic, and mixed land use. Jabalpur pollution index is 66.15 and Bhopal pollution index is 66.15. All big cities have major problem of sewage and sanitation maintenances, garbage disposal, solid waste disposal etc.

Small cities of M.P. are victim of mismanagement and lack of planning for the city. Results of primary survey done in Sehore clearly indicates that unplanned urban growth has generated the
problem of traffic, drainage, waste disposal and sanitation. These problems are the main cause of environmental degradation. Air pollution and water pollution has raised to alarming situation. Limited water supply and power cuts has made city very unhealthy. Obstructed drains, garbage, poor roads, uncontrolled traffic, and small industrial units. And there haphazard growth is spoiling city’s environment. 75% of surveyed population was dissatisfied with the condition of city. They complained about mismanagement, violations of rules, and negligence of authorities. Parvati River is highly contaminated. Scarcity of drinking water is major problem. Presence of fluoride and iron is affecting the health. Ground water consumption is very high by distribution of water is also not proper by municipality. Hence sanitation service is not proper in the city. 60% of the surveyed population was having problems of lungs and stomach. City gets effected by all types of viral infection off and on like Dengue, Chicken guniya, Japanese Encephalitis etc.

SUGGESTION
Urbanization and industrialization is demand of the time. It cannot be stopped or delayed. Madhya Pradesh is now proceeding towards fast urbanization to increase employment and for industrial development. Hence to protect environment planned urban growth in essential. Government has decided to construct development plan for 360 cities and work is going on under department of Planning &Design. Project Uday has been set for availability of safe urban infrastructure to promote sustainable development and remove poverty. Effective steps are required to control transport and traffic, to improve sanitation system in towns, to control illegal construction and land use, Industrial units should be established with full care for environment protection. Sustainable development and better urban life can be achieved, with balance between economic growth and protection of environment.

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