



Changing Urbanization and Environment Concern: A Case Study of Solapur City (Maharashtra)

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Abstract

Urbanization is the process of becoming urban. It results on increasing pressure on land, water and environment in the cities. It is associated with the concentration of population in cities. Solapur city is found to be strategically vis-à-vis Karnataka and Andhra Pradesh state. The rapid urbanization and industrialization in and around Solapur city has attracted many migrants from various parts of the state to Solapur. This has resulted in expansion of the settlements in Solapur city. It is evolved as the regional growth centre, attracting economic activities and providing livelihood for large in-migrating population. According to 2001 census the population growth rate of city is 40.53 per cent as compare to 1991 census, and its direct impact is on the growth of slums in and around fringe area of the city. Due to expansion of city limit the numbers of vehicles were increased and it shows positive relation with vehicular pollution. Therefore, the present paper aims to highlights the causes, consequences of changing urbanization on environmental degradation. The present study is based on primary and secondary data. For analyzing the data, various cartographic and statistical techniques have been applied. The study revealed that due to rapid expansion of the city, growth of slum population (25 per cent), decrease in agriculture land and increase in number of two wheelers various environmental problems were emerged out. Vehicular Pollution is one of the major contributory sources of air pollution and its impacts are mainly eye irritation, asthma, bronchitis etc.

Keywords: *Urbanization, Environmental Degradation, Vehicular Pollution.*

Introduction:

India is known to possess the largest urban population in the world. The process of urbanization in India is closely linked to the economic and political processes that have been propelling the nation through the path of development. However, this urbanization continues in an unplanned manner, causing considerable environmental degradation, which intern is affecting human health. The advance effect of urbanization in India and in study region are seen in the firm of overcrowding, in sanitary conditions, water and air pollution, all of which affect both the physical and mental health of the residents.

The rapid urbanization and industrialization in and around Solapur city has attracted many migrants from various parts of the state to Solapur. This has resulted in expansion of the settlements in Solapur city.

Objective: To examine causes, consequences of changing urbanization on environmental degradation.

Study Region:

The city is situated on the south-east fringe of Maharashtra state and lies in the Bhima and Seen river basins. It is located on 17° 40' 30" North latitude and 17° 46' 15" East longitudes. It lies about 550 meters above mean sea level. Climatically it falls in the drought prone region in Maharashtra state. According to 2001 census the population growth rate of Solapur city is 40.53 percent as compare to 1991 census. As per 2010 Regional Transport Office record the total number of various types of vehicles are 9,08,960 which causing environmental degradation. Outlying rural areas near cities also become urbanized as population increases and cities sprawl outwards to the need for land. During expansion of city boundary in 1992, 13 villages were included in the city area. At present the area under Solapur Municipal Corporation is 178.57 sq.km.

Database and Methodology: The present study is based on primary and secondary data. The data has been collected and interpreted by using cartographic and statistical techniques.

Discussion:

Today, with an unprecedented population growth, the physical expansion of the cities is inadvertent. Much of the development has occurred in a spontaneous haphazard and unplanned manner. The rural villages of fringe zone have now been transformed into urban residential, commercial and industrial complex.

Urbanization Trend of Solapur City:

Regarding the spatial growth of the city, very little information for the period prior to the 16th century is available. In 1853 the city had small nuclear located on the northern side of the tank. Up to 1938 the city limits were extended towards northeast. The Municipal Corporation was established in 1964. City has witnessed boundary extension for 11 times since establishment of Municipal Corporation. The ever largest expansion of the city boundary took place on 5th May, 1992 when 13 villages were included in the city limit increasing 145.54 sq.km. area of the city. The total area of the city consists of 178.57 sq.km. The city has extended towards the Pune, Hyderabad, Bijapur National Highway no.9 & 13 and Akkalkot, Hotgi and road side. Due to rapid urbanization and industrialization in and around Solapur city has attracted many migrants from various parts of the state to Solapur.

Due to rapid expansion of city, slum population is increased by 25 per cent, decrease in agriculture land and increase in number of two wheelers created various environmental problems.

Growth of Population:

The growth of population always plays an important role for any kind of objectives over the surface of the earth. Population pressure on any particular place will create a lot of environmental hazards. Earlier, Solapur was known for its peaceful environment, but today, it is the most crowded and haphazardly grown city in the state. Day to day population is increasing at an alarming rate, which is the main cause for spoiling the overall environment of the city.

**Table : 1.1 Solapur city
Decadal Growth of Population (1901 - 2001)**

Sr. No.	Year	Total Population	Decadal growth of Population (in %)	Growth rate in % / year
1	1901	75,288	-	-
2	1911	61,345	-18.51	-2.04
3	1921	1,19,581	94.93	6.43
4	1931	1,44,654	20.96	1.89
5	1941	2,12,620	46.98	3.80
6	1951	2,77,087	30.32	2.63
7	1961	3,37,583	21.83	1.96
8	1971	3,98,361	47.62	1.65
9	1981	5,11,103	28.30	2.47
10	1991	6,04,215	18.21	1.66
11	2001	8,73,009	44.48	3.63

Source : District Census Handbook - Solapur district 2001.

During 1901 to 1911 the population of the study region was declined by - 18.52 percent due to epidemic diseases. In next decades the population increased by 94.93 percent. In the decade 1971, the population increased and continuously it is increasing. Table 1.1 gives detail idea about the growth of population of Solapur city during 1901 - 2001 period. Large scale construction activities, educational and employment opportunities, medical facilities etc. attracted the

number of migrants from Karnataka and Andhra Pradesh state. Due to this housing, water, electricity, clean environment, transport etc. problem are increasing in the city. Further, the increase of population in cities, is a great threat to the degradation of environment.

Transportation:

Transportation is a worst scenario in Solapur city. Rapid urbanization associated with high degree of industrialization has created environmental and social problems. Increasing urbanization and mobility has brought forward new dimensions of environmental issues notably transportation. Urban transportation is now a source of several environmental problems. In addition, congestion, overcrowding, vehicular pollution and lack of basic amenities make living in Solapur miserable, Solapur has emerged on the fifth largest city in the state of Maharashtra.

With growing traffic congestion, thousand of drivers in the urban centres are finding out that, rush hour traffic is slowing to a crawl. This in turn leads to higher oil consumption and release of high emissions, which are poisoning the urban centres. Further, many vehicles are in poor condition, creating more particulates and burning fuels inefficiently. Two-stroke engines are particularly very bad as they produce lot of noise, unit hydrocarbon and smoke at a much higher rate than other.

**Table 1.2 Solapur city
No. of Vehicles and their Contribution of Population**

Sr. No.	Types of Vehicles	2000	2005	2010	% Contribution
1	Two Wheelers	1,62,371	3,25,950	7,85,500	77.33
2	Auto Rickshaws	6403	8500	10,260	2.93
3	Light Motor Vehicles	16,042	34,150	45,000	7.40
4	Heavy Vehicles	28,387	45,500	68,200	12.35
	Total	2,13,203	4,14,100	9,08,960	

Source : Regional Transport Office, Solapur 2010,

It is seen from the table 1.2 that the number of two wheelers has steeply increased in Solapur city which is responsible for the deterioration of the air quality in the city. The maximum level of air pollution is due to release of CO₂ and lead by the vehicles. The people of Solapur are suffering from pulmonary tuberculosis disease.

Conclusion:

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Solapur city is getting crowded day by day and has affected a lot on environment. The study revealed that due to rapid expansion of the city, growth of slum population, decrease in agriculture land and increase in number of two wheelers were created various environmental problems. The purity of air is completely missing in the heart of the city. Age old people are affected by Asthama. The growth of transport is higher than the growth of population in the city due to expansion of city limit. The population residing in expansion area are facing various problems like clean drinking water, drainage problems etc. The condition of ambient air quality is unsatisfactory.

Suggestions:

1. All vehicles which are aged between 15-20 years should be banned on the road.
2. Eco-friendly energy should be used i.e. (NG, LPG etc.) to maintain clean environment.
3. DP should have plans for road networking.
4. Maintenance should be made regarding for road, foot paths, drainage to avoid environment degradation.

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