



SUSTAINABLE TRANSPORT MANAGEMENT WITH SPECIAL REFERENCE TO RAILWAY TRANSPORT SYSTEM IN MARATHWADA REGION OF MAHARASHTRA

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ABSTRACT:

Transportation is responsible for a quarter of the world's global Carbon dioxide emissions. This contributes a lot in to global warming. About 3/4th of the emission is due to road transport. This means the cars and trucks that people use to get goods for livelihood and to move around create more Carbon dioxide than any other mode of transport.

Marathwada region of Maharashtra is one of the most backward region of the state in terms of Railway transport. It has a minimum share in state's total railway transport. In the absence of water transport it is essential to increase the proportion of rail transport which is most appropriate way towards sustainable development. This is not so in case of Marathwada region as the absence of proper rail network leads to more burden on road transport which is leading this region towards negative environmental impact. In this paper an attempt has been made to study the railway network in Marathwada Region for sustainable development in the region.

Key words: Sustainable development, Urbanisation, railway transport

INTRODUCTION:

Growth of urban transport along a sustainable path in cities is the foremost need of the hour. Local pollution is a health hazard and Green House Gas emissions are a global issue. The world vehicle population is about 1.3 billion vehicles today and is expected to grow to 2 billion vehicles by year 2050. On the other hand with increasing global population freight transport demand is expected to grow three times around the same time frame. The challenge is how to address this growth and demand for transport. Thus, the introduction of green transport is the current hot topic.

Indian Railways have been a great integrating force during the last hundred years. Indian Railways are owned by the Government of India and the network is scattered throughout the country for transporting goods and passengers at the cheapest possible fares. The State Govt. has nothing to do with the railways directly except making some suggestions and demands. The railways constitute the basic infrastructure for economic growth and its adequacy is therefore vital.

OBJECTIVES OF THE STUDY:

The Objectives of the study are as follows:

1. To study the development of Roads in the Marathwada region (2013-2016).
2. To examine the development of railway transport in Marathwada Region through parameters such as:
 - a. District – wise Railway Route Length (2013-2016)
 - b. Density of Railway kilometer age per hundred square km. (2013-2016).

REVIEW OF LITERATURE:

Mishra N. M. in their book 'Surface Transport For Rural Development' (2008) states that in the absence of adequate rail linkage to rural areas, roads are the major means of transportation in the country. The surface communication has direct bearing on the quality of the lives of the people. The effectiveness of surface system will help manage the administrative system of the state as well as country.

Yogendra N. in his book 'New Initiatives in Infrastructure Sector' (1998) states that the analysis of transport network has indicated the concentration of flows towards large metropolitan centres. Such an analysis of the Indian railway network indicates the concentration of well-connected centres in a few pockets of the Indian space economy which are usually associated with large metropolitan and city centres in shaping the regional pattern of network efficiently also becomes apparent.

RESEARCH METHODOLOGY:

1. Area selected: The present study is confined to Marathwada Region of Maharashtra.
2. Study period: The study is stretched over a period of four years i. e. from 2012-13 to 2015 – 16.

3. Data Sources: The present study is based on secondary sources. The secondary data was collected from books, journals, newspapers and annual government reports of Government of Maharashtra.
4. Analysis of Data: The collected data is compiled and analyzed for the purpose of the study.

OVERVIEW OF ROAD TRANSPORT IN MARATHWADA REGION:

Though the road transportation started with hand cart and animal drawn carts, the advancement in technology coupled with growth of economy has brought out different modes of transport with varying pulling powers. At present, road transport services occupy a prominent place in the state's economy. It is the dominant mode of transport in Maharashtra. There is always a passenger preference for this mode of transport as it has inherent advantages of timeliness in the movement of goods and passengers and provides door to door service if needed.

The development of road in Marathwada region during last 4 years i.e. from 2012 - 2013 & 2015 - 2016 is shown in Table 1.

Table 1: Road Length in Marathwada Region (2013 – 2016)

Sr. No.	District	Roads in kms.			
		2012 – 2013	2013 - 2014	2014 – 2015	2015-2016
1.	Aurangabad	9,837	8,614	10,114	10,132
2.	Jalna	4,729	6,753	7,401	7,401
3.	Parbhani	4,815	4,912	5,412	5,412
4.	Hingoli	3,224	3,432	3,852	3,852
5.	Beed	9,450	10,574	12,362	12,362
6.	Nanded	10,202	11,862	11,324	11,324
7.	Osmanabad	5,803	6,525	7,497	7,497
8.	Latur	5,732	6,658	7,535	7,491
Total		53,792	59,330	65,497	65,471

N.B.: All figures are in Kilometers.

Source: 1. Infrastructure Statistics of Maharashtra 2012 – 2013, Table 1.2, pp 14.

2. Infrastructure Statistics of Maharashtra 2013 -2014 & 2014 - 15, Table 1.20, pp 14.

3. Infrastructure Statistics of Maharashtra 2015 -2016, Table 1.2, pp 18.

As shown in Table 1, there is increasing trend in railway route length in the region from year 2012-13 to 2014-15. Whereas year 2015 - 16 shows slight decrease. In the year 2012 - 2013, the rail route length was 53,792kms. the same has increased up to 65,471 kms. till 2015 -16. It shows that during this period 11,471 kms. of new road routes were constructed in the region. The Table also shows that

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Beed, Nanded and Aurangabad districts have highest length of roads whereas, Parbhani district has lowest length of roads.

DEVELOPMENT OF RAILWAY TRANSPORT IN MARATHWADA REGION:

The details of railway route length in Marathwada Region for the period of 2010 – 2013 are given in Table 2:

Table 2: District-wise Railway Routes in Marathwada Region 2012 to 2016

Sr. No.	District	Railway Route in kms.			
		2012 – 2013	2013 - 2014	2014 – 2015	2015-2016
1.	Aurangabad	107.25	107.25	107.25	107.3
2.	Jalna	88.25	88.25	88.25	88.3
3.	Parbhani	262.43	262.43	262.43	262.2
4.	Hingoli	0.00	0.00	0.00	0.00
5.	Beed	47.07	47.07	47.07	47.1
6.	Nanded	225.61	225.61	225.61	225.7
7.	Osmanabad	53.60	59.94	53.60	53.6
8.	Latur	139.30	156.64	139.30	139.3
Total		924.14	924.14	924.14	923.6

Source: 1. Infrastructure Statistics of Maharashtra 2011 -2012 & 2012 - 13, Table 1.20, pp 39.

2. Infrastructure Statistics of Maharashtra 2013 -2014 & 2014 - 15, Table 1.20, pp 39.

3. Infrastructure Statistics of Maharashtra 2014 -2015 Table 1.20, pp43.

As shown in Table 2, the total rail route length in Marathwada region is 924.14 kms. It indicates that during this period, there is no growth in the railway route length in the region. In the region, districts like Parbhani, Nanded, Latur and Aurangabad shows a satisfactory length of railway routes. But, mere length of routes is not a single parameter on which, the efficiency of transport can be measured. These railway routes does not cover all the tehsils of respective districts. Thus, fails to provide efficient transport network to the people in these region. Moreover, districts like Jalna, Osmanabad and Beed are poorly connected with railway. Whereas, Hingoli district is not connected by railway routes.

DENSITY OF RAILWAY KILOMETERAGE PER HUNDREAD SUARE KM.

Table No.3 shows the district - wise density of railway per 100 square km of geographical area.

Table 3: District - wise Density of Railway per 100 square km of Geographical Area for the Year 2015– 2016 in Marathwada Region

Sr. No.	District	Railway Kilometerage per hundred sq. km. of Geographical Area
1.	Aurangabad	1.06
2.	Jalna	1.14
3.	Parbhani	4.22
4.	Hingoli	0.00
5.	Beed	0.45
6.	Nanded	2.14
7.	Osmanabad	0.71
8.	Latur	1.95
Total		1.43

Source: Infrastructure Statistics of Maharashtra 2015– 16, Table 1.21, pp. 44.

As shown in Table 3, Parbhani district has a 4.22 kms. of railway routes for per hundred square km. of geographical area. Nanded and Latur districts have a railway network of 2.14 kms. per hundred square kms. Whereas, rest of the districts have lower density of railway network as compared to the Marathwada region. The entire Marathwada region has a railway network of 1.43 kms. for per hundred square kms of geographical area. Which is very low.

CONCLUSION:

Rail Transport play an integrating role as people move across the country for sight -seeing, business, education and pilgrimage and bring together peoples of far flung areas. It is bound by the economic life of the country and helped in accelerating the development of the industry and agriculture. But the developments that have taken place so far are not up to the mark. In a developing country like India, with the rapid increase in intensity of traffic and pollution growth of railway network become very necessary. Indian Railway has grown its vast network throughout the country, but for a long period of time Marathwada region in Maharashtra was not considered as either strategically or economically important. There is a huge imbalance in development of railway network in this region. The Demand for passenger transport is growing due to population and improved economy. Travel need now – a – days is equally important like food, shelter and clothing.

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