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Trend in the Development of Urbanization in important villages in Mysore Taluk from 1951 to 2018

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Abstract - This paper has made an attempt to study the Trend in urbanization in some of the important villages in Mysore taluk. There is a high level of change in the level of urbanization. Since 1951, we can see the upward movement of urbanization and on the other hand we can see the diminishing rate in the land utilized for agriculture. This is due to the importance given to the need for the urbanization. There will be expansions of urban areas both divergent from inside from the Mysore city and from outside from other taluks. Mysore taluk is developing fast towards western direction and it's not up to the mark in the eastern direction. Selected important villages are taken into account in order to access the levels of Urbanization in Mysore taluk. The major objective of this paper is to access the trend in the levels of urbanization and driving factors responsible for urbanization. The paper also throws light on the current situation of urbanization in those selected villages.

Key Words: Growth, Urbanization, Globalization, Decade, Trend.

I. INTRODUCTION

Urbanization bears many undesirable influences especially when there is an unlimited outgrowth and urban expansion. The urban intrusion on the rural land is directly proportional to the growth of urban area. The greater the rate of urban growth, greater will be the urban expansion and consequently there shall be urban encroachment on rural areas. As a matter of fact, villages surrounding the city are undergoing rapid transformations in land use and demographic compositions. Urbanization is an irreversible process involving changes in vast expanse of land cover, local ecology, and a progressive concentration of human population. Rapidly urbanizing landscapes with high population often face severe crisis due to inadequate infrastructure and lack of basic amenities, disorganized and unplanned land use management. These issues demand a balanced urban land use planning and management for future needs.

Mysore taluk has high level of change both in the context of areas under agriculture and the level of urbanization. Since 1951, there is upward movement of urbanization and on the other hand there is diminishing rate in the land utilized for agriculture. This is due to the importance given to the need for the urbanization. The taluks that connect the Mysore such as Hunsur, Srirangapatna, Nanjanagud, Heggadadevan Kote, Krishna Raja Nagar and Tirumakudlu Narsipur taluks also play a vital role in the urbanization in Mysore taluk. There will be expansions of urban areas both divergent from inside from the Mysore city and from outside from other taluks. For instance: Mysore taluk is developing fast towards western direction and its not up to the mark in the eastern direction. This is due to the development in the Hunsur taluk in the east and witness a merger development in Tirumakudlu taluk.

In this background the present chapter attempts to study the urban growth pattern of Mysore taluk and examine the various factors over decades from 1951-2018.The

Problem:

The Mysore taluk has been developing since 1951 and has in it the trend which will follow further more development in the process of urbanization. The major problem here is that the important aspects other than urbanization is not given much importance for study. The agriculture, the agro based industries, technological development in the means of agriculture are not given importance at all. Urbanization and development itself will not solve the problems, there should be a study where sustainable development should be given importance. This paper deals with the trend in development of urbanization where we can understand the levels of urbanization.

Objectives:

1. To analyze the growth of population in Mysore taluk from 1951 – 2018.
2. To analyze the status of Industrial Area in Mysore taluk from 1951 to 2018.
3. To analyze the status of Commercial Land Use in Mysore taluk from 1951 to 2018.
4. To analyze the status of Area under Transport & Communication in Mysore taluk from 1951 to 2018

II. TREND IN THE DEVELOPMENT OF URBANIZATION

It is very essential to know the trend in the development of urbanization in Mysore taluk. From the beginning the Mysore city is expanding slowly to the nearby villages allowing for development of urbanization. As said above

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since 1951 the villages having more agricultural areas have now become one of the important city town centres. This is due to the development of urbanization. The agricultural areas were encroached since from the beginning and it was converted to urban areas. Some of the important villages that attracts the urbanization are taken into account for drawing the inferences on the Trend in the development of Urbanization.

Mysore city has developed in all directions since 1951 to current era. The above map shows clearly the area which is developed and further to be developed. Out of the Sample villages important villages are taken into account where the trend of urbanization can be analysed. The areas development may be analysed in the form of stages as under:

The trend in the population growth may be started from the year 1951 as we can get some clear picture of what was the population in those years. The first stage includes the Mysore city. The centre for the urban development is Mysore city in Mysore taluk.

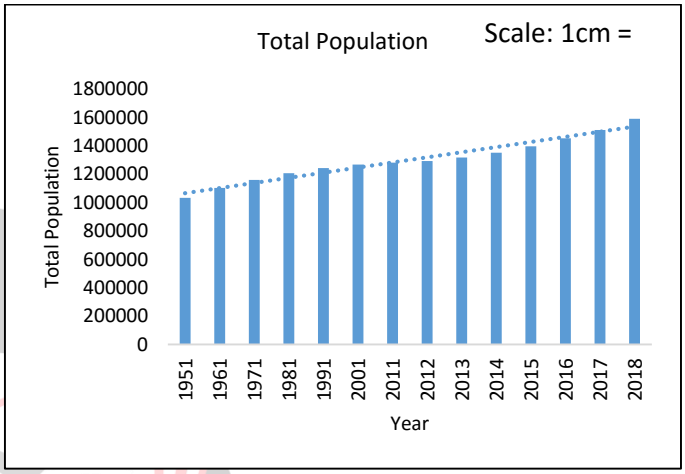
We can see that Mysore city had expanded and nearby villages are having more population. Villages like Hinkal and Siddalingapura are having more population. The population though was high, most of the population were agriculture oriented. The urbanization was mostly concentrated in the Mysore city itself.

Table No. 1: Population of Mysore Taluk from the year 1951 – 2018 (in Units)

Year	Total Population	Population in Percentage
1951	1034965	5.68
1961	1102989	6.05
1971	1160902	6.37
1981	1207704	6.63
1991	1243495	6.83
2001	1268177	6.96
2011	1281768	7.04
2012	1294113	7.10
2013	1317569	7.23
2014	1352136	7.42
2015	1397814	7.67
2016	1454603	7.98
2017	1511392	8.30
2018	1590293	8.73
TOTAL	**18217920**	**100.00**

The above Table No. 1 shows the details about the total population in Mysore taluk from the year 1951 to 2018. The total population in Mysore taluk in the year 1951 was 1034965 (units) which increased to 1102989 (units) in the year 1961. In the year 1971, the population increased to 1160902 (units). The population raised to 1207704 (Units) in the year 1981. In the year 1991, the population increased to 1268177 (Units) in the year 2001. In the year 2011, the population further increased to 1281768 (Units). The population increased to 1317569 (Units) in the year 2013. In the year 2014, the population again raised to 1352136 (Units). In the year 2015, the population further increased to 1397814 (Units). The year 2016 witnessed the increase in population to 1454603 (Units). The population again grew up in the year 2017 to 1511392 (Units). In the year 2018, the population increased to 1590293 (Units). We can see that there is a steady increase in the population growth from 1951 till 2018. This is mainly due to the Industrialization and Urbanization in Mysore taluk.

Figure 1: Population of Mysore Taluk from the year 1951 – 2018 (in Units)



The above Fig. No. 1 shows the growth in the population levels in Mysore taluk since 1951 to 2018. Here, we can see an upward movement of the trend line till 2018 starting from 1951. This is mainly because of the overall development in Mysore taluk.

Table No. 2: Status of Industrial Area in Mysore taluk from 1951 to 2018 (in Ha)

Year	Land Acquired for Industrialization	Percentage of Land used for Industrialization
1951	240	0.45
1961	550	1.02
1971	897	1.67
1981	1271	2.37
1991	1651	3.07
2001	2082	3.88
2011	2729	5.08
2012	3403	6.34
2013	4104	7.64
2014	4958	9.23
2015	5875	10.94
2016	6842	12.74
2017	8446	15.73
2018	10650	19.83
TOTAL	**53698**	**100.00**

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The Table No. 2 shows the status of Industrial area in Mysore taluk from 1951 to 2018. The status of industrial area is one of the important means for urbanization. It is very essential to know the amount of land utilized for industries from 1951 till 2018 to know the levels of industrialization. In the year 1951, the land used for industrialization was 240 Ha, which was increased to 550 Ha in the year 1961. The land acquired for industrial purpose again increased to 897 Ha in the year 1971.in the year 1981, the industrial land acquirement went up to 1271 Ha. The land acquisition raised to 1651 Ha in the year 1991. In the year 2001, we can see an increase to 2082 Ha in land acquisition for industries. In the year 2011, the land acquired for industries increased to 2729 Ha. The land acquirement for industries was 3403 Ha in the year 2012, 4104 Ha in the year 2013, 4958 Ha in the year 2014, 5875 Ha in the year 2015, 6842 Ha in the year 2016, 8446 Ha in the year 2017 and in the year 2018 the land acquired for industries was 10650 Ha.

We can see that the industrial development from 2015 is increasing at a rapid rate and we can see difference from 11% in the year 2015 to 20% in the year 2018.

Below mentioned Fig. No. 2 depicts the areas acquired for industrialization in Mysore taluk from 1951 to 2018.

Figure No. 2: Status of Industrial Area in Mysore taluk from 1951 to 2018 (in Ha)

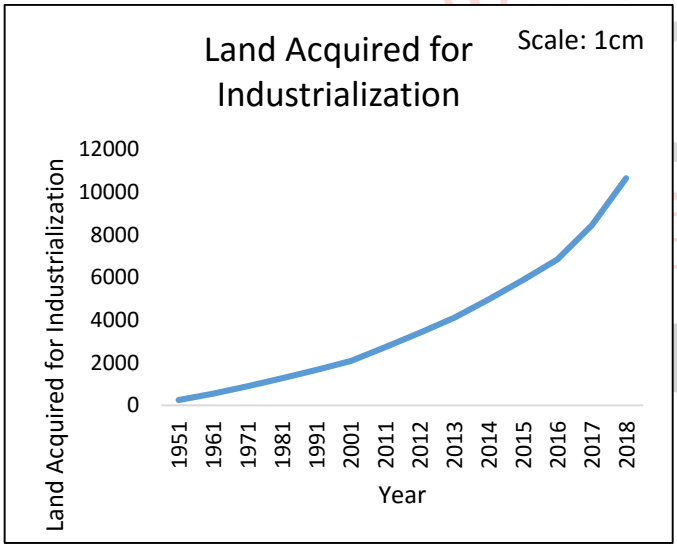


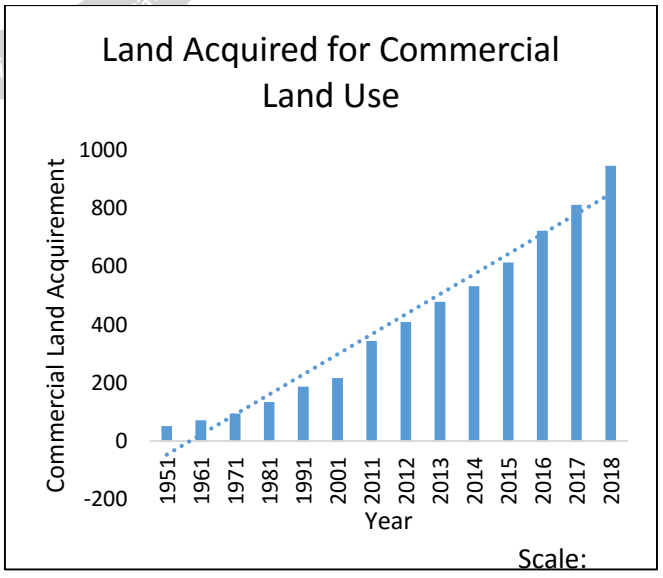
Table No. 3: Status of Commercial Land Use in Mysore taluk from 1951 to 2018 (in Ha)

Year	Land Acquired for Commercial Land Use	Percentage of Land used for Commercialization
1951	52	0.93
1961	71	1.27
1971	95	1.69
1981	134	2.39
1991	187	3.33
2001	216	3.85
2011	344	6.13
2012	409	7.29
2013	478	8.52
2014	532	9.48
2015	613	10.93
2016	722	12.87
2017	811	14.46
2018	945	16.85
TOTAL	**5609**	**100.00**

The Table No. 3 shows the status of commercial land use in Mysore taluk from 1951 to 2018.

The commercial land use also is one of the important aspect which is a driving factor for development of urbanization. In the year 1951 the commercial land use was 52 Ha which increased to 71 Ha in the year 1961. In the year 1971, the commercial land use raised to 95 Ha. The land use for commercial purpose increased to 134 Ha in the year 1981. We can again see an increase again in the year 1991 to 187 Ha. The commercial land use increased to 216 Ha in the year 2001. In the year 2011 the commercial land use was 344 Ha and it increased to 409 Ha in the year 2011. In the year 2012, the commercial land use was 409 Ha, which again increased to 478 Ha in the year 2013. In the year 2014, the commercial land use was 532 Ha and increased to 613 Ha in 2015. The commercial land use in the year 2016 was 722 Ha and it again increased to 811 Ha in the year 2017. In the year 2018 the commercial land use increased 945 Ha. The percentage of commercial land use in the year 2014 was 9.5% which increased to 17% in the year 2018.

Figure No. 3: Status of Commercial Land Use in Mysore taluk from 1951 to 2018 (in Ha)



The above Fig. No. 3 represents the trend in the use of land for commercial purpose. We can say that there is a steady upward movement of the land use since 1951 till 2018. The

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trend line moves further steeper from 2014 to 2018 showing that there is a huge use of land used for commercial purpose.

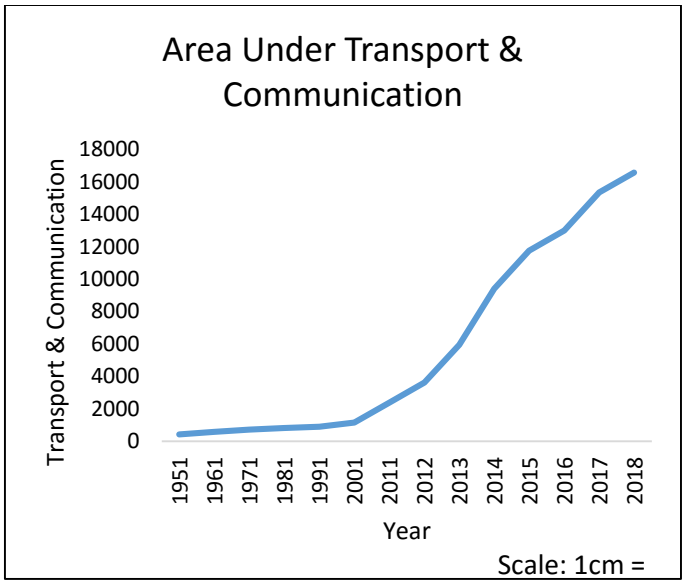
Table No. 4: Status of Area under Transport & Communication in Mysore taluk from 1951 to 2018 (in Acres)

Year	Area Under Transport & Communication	Percentage of Area used for Transport & Communication
1951	432	0.52
1961	589	0.71
1971	714	0.86
1981	814	0.98
1991	904	1.09
2001	1150	1.39
2011	2381	2.88
2012	3615	4.37
2013	5960	7.21
2014	9416	11.39
2015	11761	14.23
2016	12995	15.72
2017	15340	18.56
2018	16574	20.05
TOTAL	**82645**	**100.00**

The Table No. 4 shows the status of area under transport and communication in Mysore taluk from 1951 to 2018. The transport & Communication play a vital part in deciding the level of urbanization. Especially in Mysore taluk, there is a wide range of dynamicity from 1951 to 2018. This also become a driving factor for urbanization. In the year 1951 the area used for transport & communication was 432 acres which raised to 589 acres in the year 1961. In the year 1971, the land used increased to 714 acres. The land used for transport & communication increased to 814 acres in the year 1981. The land use again increased to 904 acres in the year 1991 which increased to 1150 acres in the year 2001. In the year 2011, the land use for transport increased to 2381 acres. The land use increased to 3615 acres in the year 2012, the land use in the year 2013 was 5960 acres, in the year 2014 it again increased to 9416 acres, the land use further increased to 11761 acres in the year 2015, in the year 2016, the land use increased to 12995 acres. In the year 2017, the land use increased to 15340 acres. In the year 2018, we can see that there is again an increase to 16574 acres.

From the above statistics, it is evident that the transport and communication has played a vital role in the development of urbanization in Mysure taluk. There is an increase from 7% to 20% from the year 2013 to 2018. This surely is the sign of the development in the urbanization.

Figure No. 4: Status of Area under Transport & Communication in Mysore taluk from 1951 to 2018 (in Acres)



The above Fig. No. 4 shows the trend in the development of transport & communication in Mysore taluk from 1951 to 2018. We see a clear upward movement right from the beginning in the year 1951 till 2018.

Conclusion:

The aspects explained in the paper like the Population growth, Land use for industries, for commercial use and Transport & Communication tells us that there is surely a growth impact in Mysore taluk from the year 1951 to 2018. All the above factors are growing at a multiple rate in the means of urbanization. This is a continuous process and these aspects need to be checked for a sustainable development.

III. FINDINGS

1. The Mysore city area is thickly populated in the starting of 20th century from 1901 to 1991 and the villages which are very next to the Mysore city are having more population. Villages like Siddhalingapura and Yelavala are more populated next only to Mysore city. Hinkal village is very close to Mysore city and hence the urban population is more in this village.
2. There is an increase in the population growth when compared from 1901 to 2018 but the area under agriculture is decreasing decade by decade almost in all the villages.
3. The major change of Mysore taluk in the year 1981 is that the village towards Srirangapatna taluk of Mandya has developed and the population has raised to the Very High Populated area.
4. In the year 1991 Mysore taluk witnessed two significant changes in respect of population growth. Two villages changed its level and went forward showing the

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glimpses of urbanization and they are Koorgalli and Belavadi village.

5. The agricultural area in Hinkal village in the year 1951 was 5.1 Km^2, which had come down to 3.0 Km^2, in the year 2011. In the year 2018 the agricultural area became nil. Hence, it is evident that the village has been converted into urban area with the influence of Mysore city.
6. Alanahalli village being very close to the Mysore city has been influenced by the urbanization and the development has caused the growth in the urban population by encroaching the agricultural land.
7. The Mysore city is so developed that it has swallowed in it some of the villages adjacent to it. Villages such as Hinkal, Boghadi, Srirampura, Alanahalli, Rammanahalli, Koorgalli and Yelawala have been encroached and slowly the villages have been converted into commercial centres.
8. Vijayanagar and Belawadi localities along Hunsur Road on the North-Western part of Mysore is experiencing rapid growth and this trend is likely to intensify further in the coming years.
9. Mysore has emerged as a preferred center for numerous software companies. As soon as the IT wave entered the city, the work on improving city's connectivity and infrastructure began so as to further boost the sector.
10. The doubling of railway tracks, modernization of airport, construction of highways etc. are some of the tasks already under progress. As a result, the real estate in Mysore is experiencing transformation with world class structures being built all around the city by leading realty developers.
11. There is a drastic change in the industrial development in Mysore urban area because of Mysore-Nanjangud Corridor, BMIC (Bangalore-Mysore Infrastructure Corridor), ORR (Outer Ring Road) and liberlisation policy of Government of Karnataka. However, these policies influenced a lot in terms of development of the city.
12. We can observe that high concentration is there in Belavadi village of 34% and all other villages which have an average of 20% of lands which varies between 8 acres and more.
13. The status of Big farmer has reduced from 86% in the year 1951 to 2.14% in the year 2018.
14. The status of Medium farmer has reduced from 89% in the year 1951 to 28% in the year 2018
15. The status of Small farmer reduced from 92% in the year 1951 to 44% in the year 2018.

IV. RECOMMENDATIONS

Based on the findings derived from this study, the following recommendations are provided in addition to literature recommends.

Leveraging new technologies to monitor encroachment

Regarding coming up with monitoring plans on the technological front, in the case of Mysore taluk, it is important to consider few things. Encroachment in Mysore taluk occurs in different forms starting from a small boundary shift to development of permanent structures and large-scale cultivation. In this aspect, even though it demonstrates to be a useful input data to monitor encroachment, it serves the purpose properly regarding bigger areas. Encroachments in the form of small boundary shift and vegetable gardens will be difficult to detect. Therefore, with every remotest section of the country connected with telecommunication services, most of the people are found using modern smart phones embedded with features such as GPS sensor and good resolution camera. The National Land Commission can take advantage of such technology and develop mobile applications whereby people can report encroachments directly to the concern authorities. However, there are risks of people misusing such applications for which the principle of accountability and penalty should be strictly considered.

Enforcement and awareness of laws and procedures

Enforcement of laws and regulations may not be entirely possible in Mysore taluk at the moment because there are no clear guidelines or definitions of encroachment and no comprehensive inventory of land. Hence, depending on the nature of the encroachment, each case is verified, and decisions are taken whether it needs to be regularized or a different approach is needed. But even having a comprehensive legal and regulatory framework in place with clear procedures and mechanisms alone could not prevent illegal occupation or land conversion if rules are not enforced or efficiently implemented accordingly. To enforce any future rules and laws Mysore taluk should not look at large-scale evictions as a solution to encroachment. Further, it is also necessary to inform the public about the available formal channels of getting access to land for them to gain tenure security through administrative means. Creating awareness especially in the remote areas is necessary. Also, the Local Governments should also be trained in giving awareness on the risk of further encroachment and environmental degradation to the occupants of the settlements since in this study there are evidences of encroachment of agricultural lands.

Resettlement of the occupants

In terms of resettlement of the occupants, it is very essential to consider the social and economic repercussions of relocating the occupants. Otherwise, this may not only result in the failure of the resettlement programme but can also

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trigger another encroachment in the process. Some of the resettlement programmes in other countries failed since they were socially neither affordable nor appropriate. The cost of transportation to the inner cities was unaffordable as well there were few employment opportunities. This was because of the non-engagement of the occupants in the planning and implementation There is a need for the proper land mapping exercise to effectively identify available land within close proximity to the urban areas and their original habitation. The planning authorities should understand the internal linkage of the place of habitation to that of livelihood and survival of the communities.

Mysore taluk is facing many problems both due to over expansion. Therefore, the surrounding towns such as Nanjangud, Srirangapattana, Bannur and Bilikere are developed as satellite towns. It decreases the pressure on Mysore city which is the urban centre of Mysore taluk.

Mysore Urban Development Authority and private developers are acquiring large number of agriculture area from 500 to 1000 acres. The remaining agricultural land surrounding the outer parts of the Mysore city of Mysore taluk should not convert into residential and other purposes.

Growth of population in Mysore city mainly from migration and natural cause. The movement of people from the neighbouring villages to city can be avoided by the establishment of industries in Hoblis of Mysore taluk. It decreases the migration to Mysore city.

Urbanization, industrialization and changing land use affect the atmospheric temperature, rainfall and wind direction of a taluk. This is the reason for degrading natural vegetation or declining the green belt area. The administrative authorities of the taluk have to take initiative and immediate steps to develop more number of parks and gardens in the prescribed areas.

Regular treatment, check and monitoring of ground water quality should be performed quarterly or biannually. Before discharging to distribution pipelines Necessary primary treatment, need to be performed on ground water. Underground water (UGD) line and ground water pipelines should have at least 1-meter distance and UGD system should be provided to all slums in order to avoid the sewage water being mixed with drainage and water pipelines.

Most of the lakes are dried due to urban expansion. The remaining lakes of the Mysore taluk should be preserved and conserved for sustainable development. The authority should take necessary actions to avoid the sewage water flow in to lakes.

The government should take action to control the land value. The government and Mysore Urban Development Authority should help the poor and needy people by construction of residential layouts in a cheaper cost.

In the recent past, private co-operative societies and developers have constructed many layouts and apartments. However, they are not following the rules and regulations of the government. They are not providing the space for parks and gardens and roads. Therefore, the administrative authority must implement the rules and regulation for providing the space for parks, gardens and roads.

The government and Non-Government Organizations have to bring necessary elements to educate and create awareness on changing climate, de-forestation water quality and so on.

V. FUTURE RESEARCH

Commercialization of agriculture is very dominant in the southern belt of the taluk due to which vast areas of land have been encroached. The authorities believe that easy access to the market also encouraged the farmers there to encroach further. Future research is to be carried out to see the impact of the commercialisation of agriculture on the limited natural resources and food security. Further, a study can also be done on the development of a land inventory in areas where there is high growth of commercialisation, urbanisation and environmental hazards, and also carry out a study on the potential uses of modern technologies to monitor land use changes in Mysore taluk.

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