



Geographical study of land use in Tonk district

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Abstract

The total area of the country determines the extent to which flat expanse of land is possible as a means of generation during the development process. As the development process progresses and takes new turns, the demand for flat land increases, land is required for new works and industries and more land is demanded for traditional uses. Generally, to meet the increasing demand for land in these new uses or traditional uses, the land under agriculture has to be cut and thus the land starts being used for non-agricultural purposes from agricultural use. For a developing economy whose main characteristics are the persistence of labor surplus and shortage of agricultural products. In the presented research paper, a geographical study of land use in Tonk district has been done.

Keywords :-General land use of Tonk district, land use pattern, forest land, agricultural land, fallow land, land unavailable for agriculture, changed form of land use and conclusions.

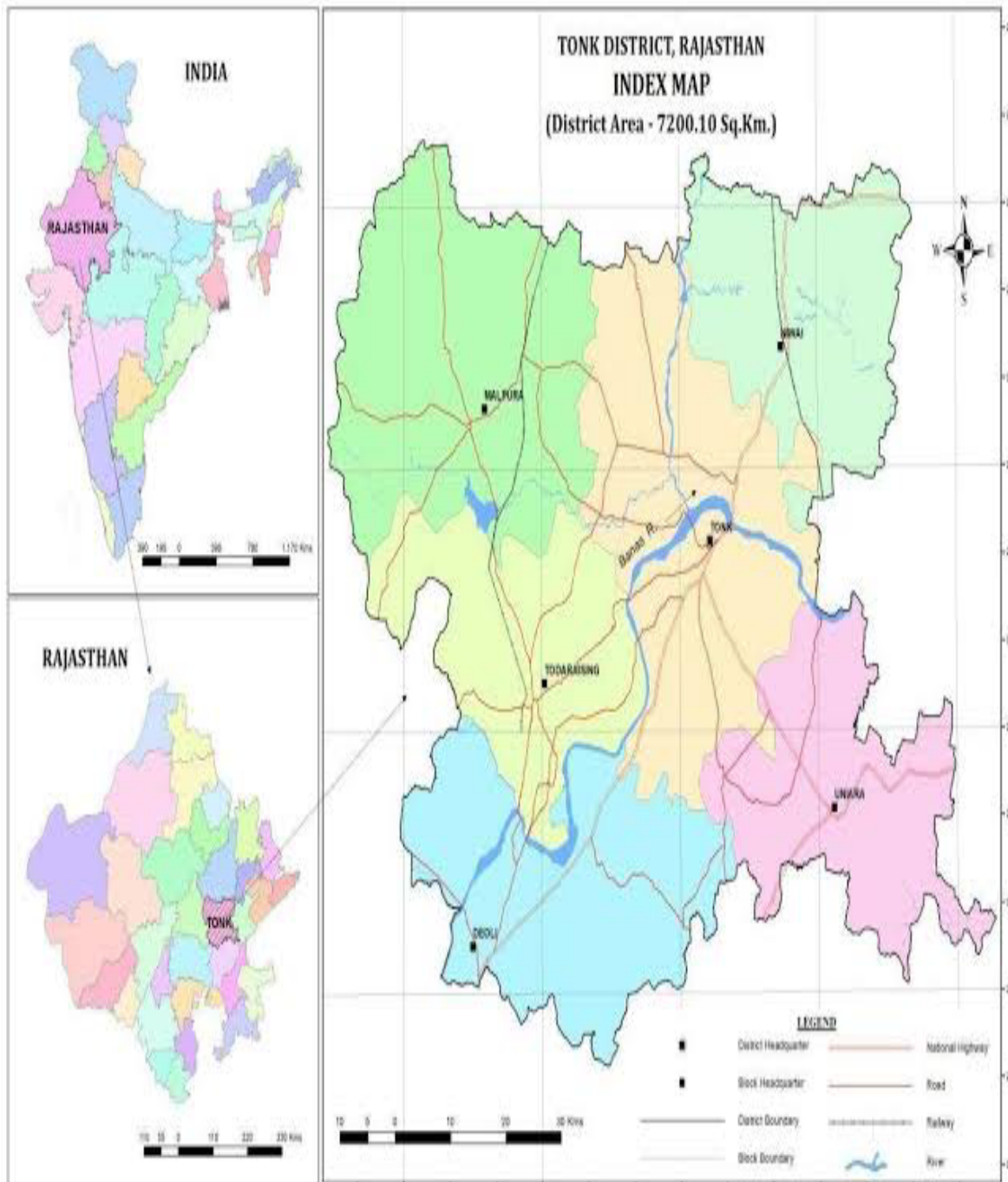
I. Introduction :-

Shifting of land from agricultural use to non-agricultural uses can become a serious problem. While on one hand this process leads to destruction of the source of livelihood of the common farmer, on the other hand serious imbalances can arise in the demand and supply of agricultural commodities from the point of view of the overall economy. The supply of agricultural commodities can give rise to many other serious problems in the economy. Therefore, it is considered necessary that as the demand for flat land increases during the development process, efforts should be made to make the barren, fallow and unused land suitable for agricultural or non-agricultural purposes. The effort should be to ensure that there is no reduction in the area of land available for farming, but to improve cultivable fallow land as far as possible. The land available for agricultural purposes should be increased. Land is the basis of all activities, it is on this basis that all

activities and economic activities are created and developed. India is a rich country in terms of land resources. The total geographical area here is 328.8 million hectares. India is the seventh largest country in the world in terms of area. Apart from being the basis of residential, industrial and transportation system, it is also the source of minerals, the basis of crops and forest produce and the nourisher of their diversity. The diverse abundance of Indian agriculture is rare for many economies of the world. There is a need for proper utilization and management of this valuable resource. Through proper land use, it can be passed on to the next generation while keeping its qualities intact while meeting the national needs. Proper land use and management is also necessary because the geographical area here is relatively less in terms of population. The geographical area here is 2.4 percent of the total geographical area of the world. Whereas about 15 percent of the world's population lives here.

Study Area :-

Tonk is situated in the north-eastern part of Rajasthan between 25 degrees 41 minutes to 26 degrees 34 minutes north latitude and 75 degrees 07 minutes to 76 degrees 19 minutes east longitude. Tonk district is bordered by Jaipur in the north, Bundi and Bhilwara in the south, Ajmer in the west and Sawai Madhopur district in the east. The geographical surface of the district is almost flat and its shape is kite-shaped. This district is 264.32 meters high above sea level. The important Banas river of the district divides it into two parts. Although Tonk district is one of the backward districts in the state in terms of industrialization, it has industrial potential. Namda, carpet, niwar and beedi making are the main cottage industries of the district. Apart from this, from the point of view of tourism in Tonk district, Sunehri Kothi, Maulana Abul Kalam Arabic Persian Research Institute, Hathi Bhata, Bisalpur Dam, Diggi Kalyan Temple and Todaraisingh's stepwell are the major tourist places.



Objective :-

- 1 To clarify land use in Tonk district.
- 2 To analyze the relationship of land use with agriculture in Tonk district.

Hypothesis :-

Land use is changing due to agricultural development in Tonk district.

Sources of data :-

In the presented research paper, secondary data has been used by obtaining it from District Statistics Profile and Land Records of District Collector Office.



Geographical study of land use:-

Land use data provides a use-wise description of the existing land area and explains how a piece of land can be efficiently made cultivable. The division of land use is mainly based on the fact whether the nature of the land is to grow under cultivated land or under pasture or forests. The details of land use are presented in nine headings namely forest, barren land used for agricultural use and land unfit for agriculture, permanent pasture land, land with trees and gardens, cultivable vacant land, current fallow land, other fallow land and pure agricultural land. This description is based on the recommendations of the Technical Committee on Coordination of Agricultural Statistics, appointed in 1948 by the Ministry of Food and Agriculture. In this context, study of land use structure becomes important. By studying the data related to land use structure, we can know what role the land element can play in the future development process. How much additional land can be obtained, in which area and from where?

1. Pattern and categories of land use :-

Land use refers to the activities used by humans in various forms of land (mountains, mountains, deserts, marshes, mines, transportation, housing, agriculture, animal husbandry and minerals). Land is mainly used for the production of crops. Its other uses are also for purposes like transportation, entertainment, housing, industry and business etc. Often land is used for multipurpose. For example, forest land is not only used as pasture, but it is also used for recreation, on the other hand, it is also necessary to see that no large part of the land is misused and if this happens then it should be made usable, such lands which are lying unused should be made cultivable. Land use planning should not be limited to mere assessment of the possibilities of more effective, consistent and improved use of land and the assessment of various potentialities inherent in it, but it should be more practical which can be inspired by the objective of maintaining the capacity of communication for the next generation. . The land use plan of an area should be inspired by such efforts which can be used in a more profitable manner so that every part of the land in that area can be used more profitably and is capable of

enhancing the well-being of both individuals and society. This use will also depend on the capacity of that area. In any land use plan, it is also necessary to determine the actual potential involved in scientific use so that its maximum possible use can be determined.

Although land use, land use and land resource use are often used as synonyms of each other, there is a subtle difference between them. Economists and geographers present different explanations of these. Land use in natural environment is a temporary process whereas land use adopted as per human desires is a long term process. This aims at a sustainable and systematic development. According to Wood, land use should not only be used in the context of natural landscape but also in the form of useful improvements based on human activities. Benjari also completely agrees with the views of the appropriate scholars and confirms their statement and says that land use is the result of the combination of both natural and cultural elements. According to Dr. Singh, for the stage before agriculture in which the natural environment is completely followed. The term 'land use' would be more appropriate. But when humans use land appropriately or inappropriately to fulfill their needs, it would be more appropriate to say "land use".

On the basis of proper analysis we can say that there is a difference in the use and utilization of land. Both the words are used for two conditions of land. According to the chronology, they can be said to be related to two different stages of agricultural development. Their difference can be clarified in this way, that land use means that land area which is in accordance with the characteristics given by nature and land use means the exploitation process of land use in which the practical use of land is done for a certain purpose or plan. Is related to. Some economists have used the term 'land resource use' in place of land use. In this context, he says that when man is able to use the land according to his needs and desires, then the land is converted into a resource, in other words we can say that when an area is Even where land use is being done to solve economic and social problems and the impact of the natural environment has reduced, then that situation can be called 'land resource use'. According to Barlow, "land resource utilization" is the axis of discussion of land problem and



its planning, for the study of which he has given the following five important approaches –

1. Establishment of an economically prosperous society.
2. Determining the state of land resource utilization and its optimum use.
3. Planning of maximum profit from land in proportion to various cost factors, (labor and capital etc.).
4. Suggestion of beneficial adjustment and change in the use of crop land based on demand.
5. To analyze the optimal and multi-purpose land use for an area and coordinate its suggestions for regional adoption.

According to Mr. Carial, "land use", "land use" and land resource use, all three are indicators of specific circumstances of land development. These circumstances are related to three different stages of development of land use, which are respectively different. -Accomplished at different times. Dr. Singh has expressed these conditions as follows.

It is clear from the above table that before agriculture, there was dominance of land forms like forests, desert lands, mountain plateaus everywhere. In this situation, only minimum profitable land use was possible. In this stage, wherever favorable conditions were available, temporary agriculture emerged. As a result of rapid population increase, the agricultural area increased and the non-agricultural area gradually shrank. In such a situation, there will be an increase in the area inaccessible to agriculture and a decrease in the cultivated capacity, but there will be an increase in the intensity of cropping sequence and agricultural capacity. In this stage, farmers will be more inclined towards mechanical farming methods and farming of cash crops based on demand and supply, this stage can be called the practical stage of agricultural development or 'land resource utilization'. In the phase of urban land resource utilization, the cultivated area becomes less as compared to the non-agricultural area and as a result of rapid cashification, it gradually decreases. Land use presents itself as an important economic resource on the basis of human utility. It is clear that the form of land use has been and will continue to change according to the development of human civilization and human needs. This change has been and will

continue to happen as a result of the stages of agricultural development. The diversity and specificity of agricultural work expresses the development and sequence of land use, which completely affects a person's living needs and his economic, cultural and social development. In the life of the people of the research area, the main meaning of land use is agriculture, which is the main key to the economy of this rural dominated area.

(A.) General land use in Tonk district:-

Based on the recommendations of the 'Technical Committee on Co-ordination of Agricultural Statistics' appointed by the Ministry of Food and Agriculture in 1948, details of various categories of general land use of Tonk district are being presented.

1. Forest and forest land :-

The geographical location, physical structure and diverse climate of the Indian economy support the growth and development of various types of trees and vegetation. For this reason, different types of forests and vegetation are found in India. From the point of view of environmental balance of the economy and greater benefits derived from forests, it is necessary to have the desired level of forests in the geographical area of the economy. And today, when industrial activities are being given prominence and encouragement in the economies, then the forest area being less than the expected standard will also be fatal for the economy. Generally it is expected that there should be forests on 33 percent of the country's land area. But the forest area on the total geographical area of India has been much less than this level. Whatever efforts were made for the development of forests during the British rule did not have any significant impact on the expansion of forest area. The policy of forest resource exploitation started by the British government continued for some time even after independence, the forest and tree land was brought under crops. The process of increasing production by increasing the area under crops continued. As a result, the share of forests in the total geographical area decreased to 22 percent in 1950-51. In 2016, 4.63 percent of the land in Tonk district comes under forest and forests. This land is 33280 hectares.



2. Land other than agriculture :-

In this title, those lands are included which are used for buildings, roads, railways etc. Similarly, those lands which are under water flows, rivers or canals are also included in this category. Apart from this, other non-agricultural uses are also included in this category. Lands are also included under this. In Tonk district this type of land is 50622 hectares which is 7.05 percent of the total land use.

3. Barren and non-cultivable lands :-

This category includes all those lands which are barren or not cultivable. This category includes mountainous, plateau and desert lands. These lands cannot be brought under crops without huge costs. Barren and non-cultivable lands may be in the middle of the agricultural area or in separate areas of it. In Tonk district this type of land is 21372 hectares which is 2.98 percent of the total land use.

4. Permanent pasture and grazing land :-

All grazing lands are included under this. This type of land can be grassland or permanent pasture. The pasture lands of village groups also fall in this category. In Tonk district this type of land is 40941 hectares which is 5.70 percent of the total land use.

5. Lands with diverse trees and gardens: -

In this category, all those cultivable lands which are not included in the pure agricultural area are included. But some can be used in agriculture. Under this, small trees, shade grasses, bamboo bushes and fuel wood trees are included which are not included in the title of plantation in the distribution of land use. In Tonk district this type of land is 236 hectares which is 0.033 percent of the total land use.

6. Agricultural waste land :-

This category includes the land which is available for cultivation but on which crops have not been grown in the current year and for the last five years or more. Such lands may be fallow or may be covered with bushes and forests. The land which cannot be used for any other purpose, which has been cultivated once but has not been cultivated for the last five years, also falls in this category. In Tonk district this type of land is 43874 hectares which is 6.11 percent of the total land use.

7. Current fallow land :-

In this category, the cultivated area can be included which is kept fallow only in the current year, for example, if a nursery area is not used for any crop again in the same year, then it is called current fallow. In Tonk district this type of land is 45818 hectares which is 6.38 percent of the total land use.

8. Other fallow land :-

Other fallow lands include those lands which were earlier under cultivation but are now permanently under cultivation for a period of more than one year but not less than 5 years. There can be many reasons for land becoming out of cultivation. Such as poverty of farmers, inadequate supply of water, adverse climate, land near rivers and canals and unprofitable farming etc. In Tonk district this type of land is 29689 hectares which is 4.14 percent of the total land use.

9. Net cultivated area :-

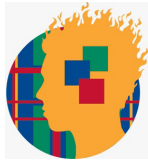
In this category, net sown area in the form of crops and crop production is included. Area sown more than once is also calculated once. This is less than the total sown area. Because it is the sum of total area sown and area sown more than once. In Tonk district this type of land is 452126 hectares which is 62.97 percent of the total land use.

Comparative study of land use in Tonk district:

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From the study of land use in the research paper, it is clear that the total land use area in the district is 717958 hectares, in which as per 2016-17, the area of forests is 33280 hectares i.e. 4.63 percent. The land use in the district in 2014-15 was 27464 hectares which was 3.83 percent of the total land use. While this percentage in Rajasthan is around 4.73, the percentage in the country is 24.16. In the year 2014-15, there was 222 hectares of land under tree groves and orchards in the district, which increased to 236 hectares in the year 2016-17.

In the year 2014-15, permanent pasture and grazing land in Tonk district was 40763 hectares, which is 5.68 percent of the total land use. This land increased to 40941 hectares under permanent pasture and grazing land in 2016-17, which is 5.70 percent of the total land use.



In the year 2014-15, the additional land suitable for agriculture in Tonk district was 51926 hectares which is 7.23 percent of the total land use. Similarly, in the year 2016-17, the additional land suitable for agriculture decreased to 50622 hectares. This is 7.05 percent of the total land use. This reduction was of 1304 hectares.

Similarly, in the year 2014-15, barren and cultivable land was 27257 hectares which was 3.80 percent of the total land use. In the year 2016-17, barren and cultivable land decreased to 21372 hectares which was 2.98 percent of the total land use. In the last 02 years, there has been a reduction in land use of 5885 hectares.

In the year 2014-15, cultivable vacant land was 42414 hectares which was 5.91 percent of the total land use. Similarly, in the year 2016-17, agricultural vacant land increased to 43874 hectares which is 6.91 percent of the total land use.

Similarly, in the year 2014-15, other fallow land and active fallow land in the district were 25987 hectares and 25445 hectares respectively, which in the year 2016-17, other fallow land and active fallow land in the district increased to 29689 hectares and 45818 hectares respectively.

In the year 2014-15, the actual sown area in the district was maximum 476480 hectares i.e. 66.36 percent of the current land use, whereas in the year 2016-17, the actual sown area in Tonk district has reduced to 452126 hectares i.e. 62.97 percent of the current land use. .

II. Conclusion:-

It is clear from the study that at present 37.03 percent of the agricultural area is uncultivated due to unavailability of favorable conditions for agriculture. If this land can be improved and trees can be planted, then this land can be used. It should be hoped that this barren land can be improved and utilized under the agricultural technology. Only 62.97 percent area is available for crop production in the district, i.e. 27.03 percent area is being used under other heads. In which the share of barren land, current fallow and other fallow land is 13.49 percent, which is a very important part, if it can be used for agricultural purposes, then the net agricultural area of Tonk district can be increased. As a

result of new agricultural technology, it is not a difficult task to bring this area under agriculture.

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