



“Agricultural Land Use Efficiency of Latur District for Use of Regional Planning”

Dr. Omprakash Wamanrao Jadhav
 Savneri Mahavidyalaya, Shirur Anantpal, Latur

Abstract:-

Today finding valuable land for agricultural is major challenge but with the help of agricultural land use efficiency level it is very easy. Other side improving the land use efficiency is chief goal of every government to increase production and productivity of region. Agricultural land use efficiency play major role in agricultural development and management. In this study an attempt has been made to find out circle wise Agricultural use efficiency. In this study Jasbir Singh's Method of Land Use Efficiency is used to measure the land use efficiency. Latur District of Marathwada region are chosen as study area. The regional variations in spatial pattern of land use efficiency are examined from 2002-2003 to 2012-2013.

The emphasis is on highlighting the basis of agriculture which influences agricultural efficiency. Agricultural efficiency is the levels of existing performance of unit at land which differentiate from one area to another. This study also helps for agricultural planning for sustainable development of this area.

1. Introduction:-

Agricultural land use efficiency is indicators of land utilization for agriculture. Agricultural land use efficiency represents the degree of optimum use and performance of cultivated as well as cultivable land. It is a dynamic but complex phenomenon. The efficiency of land use in a study region is determined by the interaction of physical, socio-economic and technological factors. A combination of natural and manmade factors makes land use efficiency a complex device. Agricultural land use efficiency is not new concept in the field of Geography. M. G. Kenall (1939) was the first to develop a measure for agriculture' land use efficiency on the basis of output per unit area and he devised the system of ranking coefficient method. Previously this method was applied in different countries of the world by L. D. Stamp (1960). In Indian region Shaft (1960), Sapre and Deshpande (1964), Bhatia (1967), Gupta (1968) and M. AM (1972) geographers paid attention to the study of land use efficiency. Jasbir Singh (1972) explained intensity of cropping level with help of ratio between net sown area and cropped area here the total area cropped as a percentage of the net sown and it indicates the intensity of cropping (Land use efficiency level).

2. Study Region

Latur district is part of marathwada region. Latur district is included ten tahsils. Latur district is divided into following ten tahsils. These are

Latur, Ahemadpur, Udgir, Jalkot, Chakur, Shirur Anantpal, Ausa, Deoni and Nilanga. Latur is separated from Solapur district in 1982. Latur district comprising the ten tahsils of Maharashtra plateau and mountain ranges. Except some small hillocks, the majority of district is covered by plateau region. Some few areas are occupied by river basis. Particularly Ahemadpur, Udgir, Jalkot and Chakur tahsil are very useful for Agriculture. The Manjra, Manyad, Terna, Tawarja, Gharni and Lendi river basis are very important. The average normal rainfall of study region is 805mm. There are lot of variation in spatial and spatical distribution of rainfall in study region. Study area lies between 17° 52' north to 18° 50' north latitudes and 76° 12' east to 77° 18' east longitudes. The average weight above mean sea level varies from 500 to 900 meters.

spatial and temporal change in land use efficiency.

circle wise land use efficiency in Latur district 2002-2003 to 2012-2013.

spatial and temporal change in land use efficiency.

Conclusion:-



This study is depended on past 11 Years data of agriculture. As per availability of data and format Jasbir Singh's Index of intensity of cropping method is very useful hence here this method is applied to calculate level of agriculture land use efficiency. The land use efficiency is refer to the number of crops grown on the area in any agriculture year (Singh, 1976) . The Index of Land use efficiency is calculated by using the following formula.

$$\text{Index of Land use Efficiency} = \frac{\text{Gross Cropped Area}}{\text{Net Sown Area}} \times 100$$

Here, The higher the index of the efficiency means higher the agriculture land use efficiency and the lower the index of the efficiency means the lower the agriculture land use efficiency and less utilized of the area sown area for cropping.

5. Result and conclusion

5.1. Agriculture Land use Efficiency

As per the index of land use efficiency the land use efficiency of study area has been changed in major three groups.

5.1.1 Tahsils of Low Agriculture Land Use Efficiency (100% to 135%)

It ranges from 100% to 135% in the study region. Low agricultural land use efficiency was observed in Udgir, Renapur and Shirur Anantpaltahsils during the period of 2002-2003. Low Agricultural land use efficiency were observed in Ahmadpur, Udgir, Nilanga, Latur, Renapur, Chakur, Jalkot, Shirur Anantpaltahsils during the period of 2012-2013.

5.1.2 Tahsils of Medium Agriculture Land use Efficiency (135 % to 170%)

It ranges from 135% to 170% in the study region. Medium agricultural land use efficiency was observed in Ahmadpur, Nilanga and Chakur tahsils. during the period in 2002-2003 Medium agriculture land use efficiency was observed in Ausatahsil during the period of 2012-13.

5.1.3 Tahsils of high Agricultural Land Use Efficiency (170% to 205 %)

It ranges from 170% to 205% in the study region. High agriculture land use efficiency was observed in Latur, AUSA, Deoni and Jalkot tahsils during the period of 2002-2003. High agriculture land use efficiency was not observed during the period of 2012-13.

Table No.1
Land Use efficiency in Latur District

Name of circle	2002 to 2003			2012 to 2013			Change in Land Use efficiency in %
	Gross cropped Area	Net sown Area	Index of Land use Efficiency in %	Gross cropped Area	Net sown Area	Index of Land Use Efficiency in %	
Latur	163818	89893	182.24	94269	71609	131.64	-50.6
Ahemadpur	83951	54878	152.98	81587	62737	130.0	-22.98
Udgir	15759	14193	111.20	77426	59226	130.73	19.53
Nilanga	134656	90294	149.13	141913	112553	126.0	-23.13
Ausa	150663	75122	200.55	139004	102514	136.60	-63.95
Renapur	69257	61336	112.91	70015	52445	133.50	20.59
Chakur	62623	44171	141.77	73739	56139	131.35	-10.42
Deoni	7398	4105	180.23	43533	33883	128.48	-51.75
Jalkot	6712	3500	191.77	32858	26158	125.61	-66.16
Shirur A.	14392	12456	115.0	39884	31594	126.24	11.24
Total district	709169	449918	157.62	794228	608858	130.55	-27.17

Source: Computed by the researcher (2019).

5.2 Changes in agricultural Land use efficiency

The index of agricultural Land use efficiency has been decreased in Latur District. Overall cropped area was 709169 hectares in 2002-2003 and it was 794228 hectares in 2012-13. The gross cropped area was 709169 hectares in 2002-2003 and it was 794228 hectares in 2012-13. The gross cropped area was 709169 hectares in 2002-2003 and it was 794228 hectares in 2012-13. The gross cropped area was 709169 hectares in 2002-2003 and it was 794228 hectares in 2012-13.



area has been increased 85059 hectares. Net sown area was 449918 hectares in 2002-2003 and it was 608850 hectares in 2012-13. During the period of 11 years the index of land use efficiency has been decreased by 27.17%.

The highest agricultural land use efficiency has been recorded in Ausa (200.55%) Tahsil and the lowest index of agricultural land efficiency has been observed in Udgir(111.20%) Tahsil during the period 2002-2003. During the period 2012-13 the lowest index of land use efficiency was again recorded in Jalkot (125.61%) and the highest index of land use efficiency has been noticed in Ausa(136.60%) tahsil.

The positive change in agricultural land use efficiency was observed in Udgir (19.53%), Renapur (20.59%) and Shirur Anaptal (11.24 %) Tahsils. The highest positive change in the index of agricultural land use efficiency has been recorded in renapur (20.59%) tahsil during the period under study.

The highest negative change in agricultural land use efficiency has been observed in Jalkot (66.16%) tahsil and the lowest negative change in index of agricultural land use efficiency has been recorded in Chakur (10.42%) tehsil during the period under study. The negative change in agricultural land efficiency was observed in Latur (50.6%) Ahemdpur (22.98%), Nilanga (23.13%), Ausa (63.95%), Chakur (10.20%), Deoni (51.75%) and Jalkot (66.16%). Due to urbanization, Physiography, soil types, nature of rainfall and irrigation land use efficiency has been changed in different circles in Latur tehsil.

References:-

- [1] Census of india (1991,2001 and 2011): District census handbook of Latur district.
- [2] Jasbir Singh & Dhillon, S.S, "Agricultural Atlas of India", Vishal publication Kurukshetra, India 1976, p.l.
- [3] Majid Hussain, "Systematic Agricultural Geography", Pub. By Rawat Publications Jaipur, 2007, Pp.1 to 430.
- [4] Rayamane, A.S., "A Spatio-Temporal Analysis of crop combinations in sedawgyi Region, Myanmar(Burma), The Deccan Geographer, Vol.41, No-1, 2003, Pp.55-63
- [5] Das, M.M, "Land Use Pattern in Asam", Geographical Review of India, Vol.43, No.3, Pub by Calcutta, Geographical society of india, 1981, Pp 243-244.
- [6] Gathde, D.G and et.al, "Agricultural Land use efficieny of Ratnagiri District, Maharashtra, Research Front journal, ISSN -2320-8341 special Issue No.1, Feb, 2017 Pp.139-142.
- [7] Government of Maharashtra Gazetteer of Latur District.