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Land use pattern and sustainable - A case study of Hassan district

Y P Chandrashekara[1], B N Kantharaj[2]

1 *Assistant Professor, Department of Studies and Research in Geography, Karnataka State Open University, Mysuru*
2 *Dept of Public Instructions, DDPI office, Hassan*

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Abstract

The entire ecosystem encircling the land, soil, water with flora and fauna is the unique resource of Hassan district. The economic activities and productivity of all sectors depends on resource of this land to fulfill the demands of society. The study of land use is very essential to relieve the adverse impacts of land use and to improve the productive use of resources with minimum influence on future generation. In urban outlining land use preparation seeks to obtain and improve land use effectively and ethically way which could prevent land use disputes Land use also involves the management and modification of natural environment or more recent significant effects of land use, which includes planning, agriculture, industrial development and transport.

Keywords: Landuse; sustainable; land cover

Introduction

Hassan district lies in malnad and the maidan region of south Karnataka. Its geographical extent lies between 12° 13' to 13° 33' North latitude and between 75° 38' to 76° 38' East longitude with a Geographical area of 6826.15 sq. kms, it is bounded by Chickamagalur in North, Coorg in south, Mandya and Tumkur in east and Dakshina Kannada district in west.

The term land use is used to explain the uses to which the total geographical area is put on for various purposes, an attempt has been made here to work out how the geographical area of Hassan district has been put to various uses. Tables have been prepared for analytical purposes. The percentage of different categories of land uses has been computed and is given in a table

Hassan district is situated in South Karnataka which is a pioneer in agricultural development which is possible through irrigation from canal and tube wells as well as by rainfall. There are 8 taluks and 38 hoblis in district there are 2369 villages, among those 156 are not inhabited. The total population of the district is 17.8 lakhs which is about 2.91% of Karnataka's population.

The pattern of land use in Hassan district is shown in Table No-1 from which the following consideration can be drawn.

The observation in the table is the net sown area, the total geographical area of the district is 722311 hectares out of that 421335 hectares is the net sown area which covers 58.33% in 2018-19. Comparatively, this percentage is quite small

that is 0.88% when compared to 2013-14 but the net sown area is more than half using available sources of irrigation and land availability for cultivation.

The next major sector is land under non-agricultural use which covers 80610 hectares (11.16%). It has been increased up to 0.12% when compared to 2013-14. This is because of the influence of urbanization.

The total Fallow land occupies 77178 hectares or 11.16% which has been increased to 1.24% from 2013-14 this indicates the divergence of people from cultivation.

The forest area 8.13%, barren land 4.20%, cultivable wasteland 1.95% permanent pasture land 1.56%,and tress and groves 0.96% remains the same as 2013-14 up to 2018-19 but the forest land has not developed up to the available ratio of a good ecosystem.

The above discussion has presented a comparative picture of the changing land use pattern of Hassan district since 2013-14 on the nine-fold classification of the land. To get a more clear understanding of the land use pattern of the district, Taluk level use classification has been presented in the table from the year 2013-14 to 2018-19. The main points that emerge from the interpretation in the table 2 are as follows.

Table 1. Land use pattern in Hassan District (area in hectares) 2013-14 & 2018-19

SL. NO	Landform	2013-14	2018-19
1	Forest	58775 (8.13%)	58775 (8.13%)
2	Land put to non agricultural use	79770 (11.04%)	80670 (11.16%)
3	Barren land	30365 (4.20%)	30365 (4.20%)
4	Cultivable waste land	14142 (1.95%)	14142 (1.95%)
5	Permanent pasture	32943 (4.56%)	32943 (4.56%)
6	Trees and groves	6963 (0.96%)	6963 (0.96%)
7	Total fallow land	71669 (9.92%)	77178 (11.16%)
8	Net sown area	427684 (59.21%)	421335 (58.33%)
	Total	722311 (100%)	722311 (100%)

Sources: District book glances

When we examine Table 2.6 taluks are agricultural dominated taluks where the geographical area of net sown area average varies from 10 to 25%. Arasikere (24.48%), C.R. Patna (14.93%), Arakalagud (14.13%), Sakleshpura(12.15%), Belur(10.68%)and Hassan(10.52%) are having good net sown area whereas H.N.Pura and Alur are below average of 10%.

When compared to 2013-14 with 2018-19 Arakalgud, Aresikere and Sakleshpura taluks net sown area has been increased up to 1.76%, 2.62% and 1.46% respectively but Alur ,Belur ,C.R ptana, Hassan and H.N. Puras net sown area has been decreased when compared to 2013-14.

Forest area is dominated by Sakleshapura (44.52%) and Arasikere (25.60%) Alur has a very low forest area of 0.82%. The barren land is more in Arasikere (20.84%) as it is a rain fed taluk with decreased lower level water table. Alur has a very low % of barren land. Permanent pastures are more in Sakleshpura (36.01%) and C.R. Patna (28.15%) and very less in H.N Pura (0.72%). Tress and groves are more in Arasikere (49.04%) and Sakleshpura (29.57%) but Alur has very less trees and groves (1.66%). The cultivable waste land is more in Alur it is 28.10% but less in Holenarasipura (1.93%). There is no more changes in forest area, barren land, cultivable waste land, permanent pastures and tress and groves when compared to 2013-14 with 2018-19.

The non-agricultural land use is more in Hassan taluk (30.11%) as Hassan is district centre with SEZ region but least in Sakleshpura taluk (5.04%). The fallow land is high in Hassan taluk (24.41%) and less in Arasikere (3.71%) but the average of follow land has been increased in Alur, Belur, C R Patna, Hassan and Holenarasipura but it has been decreased in Sakleshpura, Arasikere and Araklgud.

Conclusion

By all the observations and comparisons made from 2013-14 to 2018-19, the land use pattern of Hassan district does not hold good for sustainable land use. Here in this district, it is observed that the net sown area has been decreased the following land and the non-agricultural use of land has been increased. This indicates that the sustainable use of land is not utilized to get more productivity in Hassan district.

References

1) Hassan district at a glance – District statistical office Hassan. (2013-14 and 2018-19). 2013.
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Table 2. Comparative land use of Hassan taluks 2013-14 & 2018-19

Taluk	Year	Forest	Non agricultural use	Barren land	cultivable waste land	Permanent pastures	Trees and groves	Fallow land	Net sown area
Alur	2013-14	0.82	8.97	4.11	28.1	5.44	1.66	11.24	4.74
	2018-19	0.82	9.01	4.11	28.1	5.44	1.66	12.22	4.02
Arakalgud	2013-14	4.18	7.07	11.07	25.17	9.04	3.11	7.71	12.37
	2018-19	4.18	7.14	11.07	25.17	9.04	3.11	4.66	14.13
Arasikere	2013-14	25.60	10.75	20.84	1.55	1.30	49.04	13.92	21.87
	2018-19	25.60	10.08	20.84	1.55	1.30	49.04	3.71	24.48
Belur	2013-14	11.28	7.32	12.72	19.01	17.65	1.68	10.27	12.81
	2018-19	11.28	7.36	12.72	19.01	17.65	1.68	13.07	10.68
C. R. Patna	2013-14	1.18	13.17	17.51	6.15	28.15	5.37	19.64	15.37
	2018-19	1.18	13.14	17.51	6.15	28.15	5.37	19.82	14.93
Hassan	2013-14	6.25	30.30	16.24	5.61	1.65	4.56	12.83	12.82
	2018-19	6.25	30.11	16.24	5.61	1.65	4.56	24.41	10.52
H. N. Pura	2013-14	6.13	17.34	8.34	1.93	0.72	4.98	8.43	9.311
	2018-19	6.13	17.25	8.34	1.93	0.72	4.98	11.90	9.05
Sakaleshpura	2013-14	44.52	5.03	9.12	12.45	36.01	29.57	15.92	10.69
	2018-19	44.52	5.04	9.12	12.45	36.01	29.57	10.18	12.15

Sources: District book glances