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PATTERNS OF GENERAL LAND USE IN KATHUA DISTRICT, J&K

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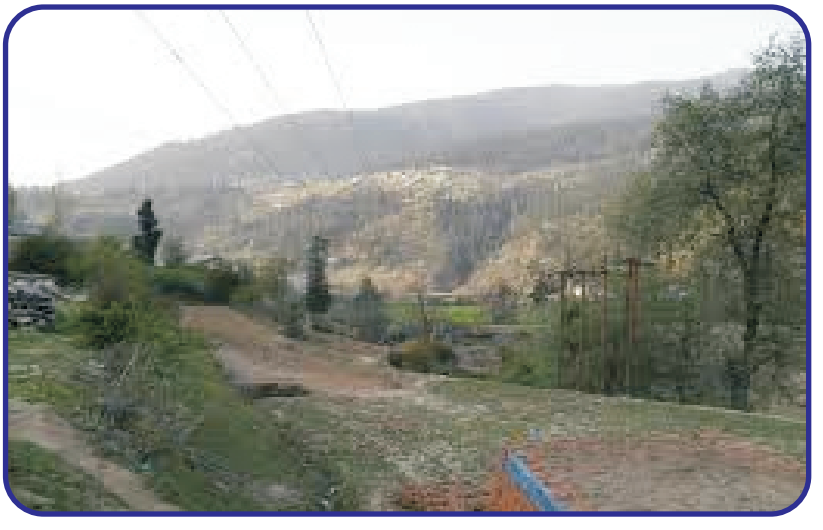
ABSTRACT

Land is the main source of livelihood for millions of years ago for mankind. It is the basic natural resource and regarded as the most important area of the earth's surface. It is by for the most significant asset of the nation and from the earliest times man has used it to satisfy his multiple needs. In the light of the above, an attempt has been made to study the pattern of General land use of Kathua District. For the present study, secondary data is used which is obtained from the Revenue Department (Lal Kitan).

KEYWORDS :General Land , agricultural land , topography, poor soil cover.

INTRODUCTION :



The study of the agricultural land use patterns in Kathua district is quite relevant and significant because it provides livelihood to bulk of the population of the study region. The study region cannot be categorized as agriculturally developed region due to hilly and rugged topography, poor soil cover, and lack of irrigational facilities, social backwardness and lack of modern technology. Few portion of the study region are hilly and rugged where it is quite difficult to raise the crops. On the other hand the command area of the district has now emerged as the grain bowl of the state with the completion of prestigious Ravi-Tawi irrigation project. It is clear that agriculture is the occupation of the masses in district Kathua as elsewhere in the state. Eighty percent of its population directly or indirectly depends on agriculture in the district. Obviously; agricultural development is the main stay for the overall growth and development of its people. The entire village area is hilly and sloppy with continuous tracts of undulating high ridges.

Kathua district is situated in the southern part of Jammu and Kashmir State lies between 320 17' to 320

55' North latitude and 750 17' to 750 55' East longitude. The Kathua district serves as the gateway for rest of the country to enter Jammu and Kashmir through its famous town Lakhanpur. The district has four tehsils and nine blocks. The district is surrounded by Punjab in the South-East, Himachal Pradesh in the North East, District Doda and Udhampur in North and North –West, Jammu in the West and Pakistan in the South West. The present study includes the nine blocks of the district Kathua. These nine blocks are Kathua, Barnoti, Hiranagar, Ghagwal, Basholi, Bani, Lohai-Malhar, Billawar and Duggar. The General land use in the study area has been considered in the five categories namely area under forest, barren land, land put to non- agricultural use, fallow land other than current fallow land, net sown area. The data base used here unpublished revenue secords (Lal Kitab).

General Land use Classification

Table 1.0 Percentage of Land use for Kathua District (2000-01 to 2009-10)

Blocks	Area Under Forest		Barren Land		Land put to non agriculture use		Fallow Land		Net sown area	
	2000-01	2009-10	2000-01	2009-10	2000-01	2009-10	2000-01	2009-10	2000-01	2009-10
Kathua	21.31	20.32	17.20	16.90	32.30	31.0	6.56	5.50	22.60	26.9
Barnoti	21.33	21.01	17.01	16.01	32.31	31.31	4.55	3.90	23.78	25.8
Hiranagar	15.94	15.04	5.29	4.20	30.29	31.20	6.12	4.12	42.33	44.7
Basholi	16.98	16.08	42.79	42.86	18.18	17.08	5.06	5.06	16.03	18.80
Bani	64.56	65.56	8.00	5.0	13.04	11.72	5.07	5.05	10.06	12.0
Duggan	42.51	42.94	20.74	20.74	15.05	15.00	8.90	4.92	12.71	16.4
Billawar	38.94	38.94	8.25	8.53	26.45	25.40	7.36	7.35	18.97	19.7
Lohai-Malhar	38.95	39.0	8.24	8.04	26.47	26.45	7.36	7.36	18.96	19.2
Ghagwal	18.0		15.25		20.8		15.15		30.8	

Source: Unpublished Revenue Records (Lal Kitab)

FORESTS

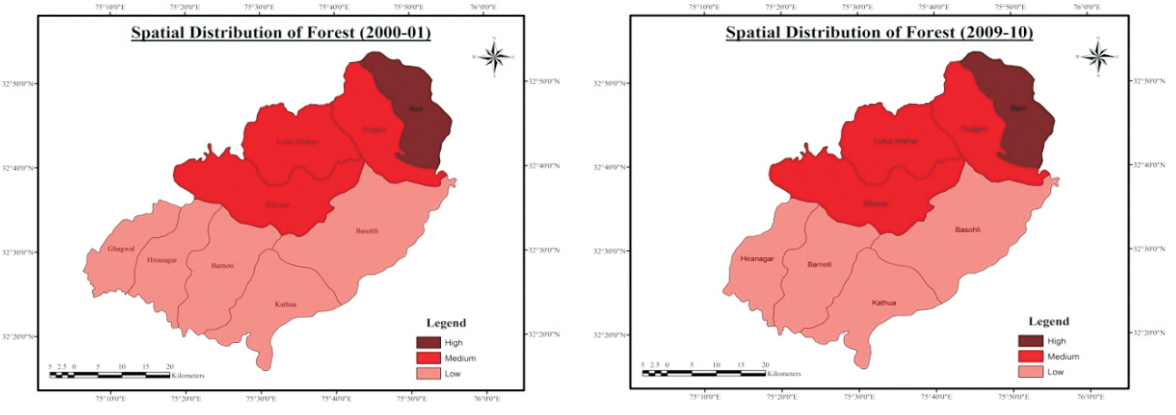
The analysis of the table 1.0 reveals certain interesting features in the use of land of our study region. Forest land includes all those areas which are actually wooded and are classed and administered as forests through certain laws, irrespective of their ownership. These may be owned by the individuals or by the Government. As per our national policy 60% of the total area in a hilly and mountainous region should always remain under forest cover but the area under forests but in the study area all the blocks fall short of natural average as for as forest cover is concerned except block Bani.. Duggan block with 42.1 % of the total area under forest stands at number two in so far as the area under forest commands and yet this percentage fall short by 17.49% of the area under forest as per national forest policy. Duggan is followed by Billawar and Lohai-Malhar blocks coverage 38.94% and 38.95% of their respective areas under forests during 2000-01. The least area under forests is found in Hiranagar block (15.94%). Although, there seems to be some temporal variation in the area under forest from 2000-01 to 2009-10. It can, thus be said that the areas under forest remained almost static during the period under our study and minor temporal variations can be overlooked for being

insignificantly low.

Table 2.0 Spatial Distribution of Forests in Kathua District (2000-01 to 2009-10)

Categories	Name of the Block 2000-01	Number of Blocks	Name of the Blocks 2009-10	Number of Blocks
High (>50%)	Bani	1	Bani	1
Medium (30-50%)	Duggan, Billawar, Lohai-Malhar	3	Duggan, Billawar, Lohai-Malhar	3
Low (<30%)	Ghagwal, Basohli, Hiranagar, Kathua, Barnoti	5	Basohli, Hiranagar, Kathua, Barnoti	4

Source: Prepared on the basis of Table 1.0



The analysis of table 1.0 and 2.0 reveals that there exists a lot of variation in the concentration of areas under forests over space in particular and over time in general. If we go by the advocacy of National Forest Policy of India (1988), then only Bani block satisfy the requirement of area under forest by holding more than 60% of their geographical area. All other block fall much below the required strength of area under forests in our study region. As such, only one block is categorized as the high concentration of area under forest in the study area. Three blocks of the study region contain 30 to 50% of their respective areas under forests and are categorized as area of medium concentration under forest (table 2.0). It is surprisingly unfortunate to find five blocks in 2000-01 and four blocks in 2009-10 namely Kathua, Barnoti, Hiranagar and Basohli and Ghagwal (2000-01) as having less than 30% of their respective areas under forests and as a result, of it these blocks have been included as area of low concentration of forests.

Thus in case of Kathua block, the decrease being negligible hardly needs any explanation i.e. from 21.31% to 20.32%. Barnoti(21.33%), Hiranagar(15.94%), Basohli(16.98%) shows decrease in area from 2000-01 and 2009-10. the above figures is for the year 2000-01 and in 2009-10 the variations are Barnoti(21.01%), Hiranagar(15.04) and Basohli(16.08%). The other remaining blocks marginally increased from 64.56% (Bani to 65.56%, 42.51 %(Duggan) to 42.94% and 38.95 % (Lohai-Malhar) to 39.0%. Thereafter, the block Billawar is stagnated around 38.94% throughout the period under investigation. So far as change is concerned the forest land use in Kathua district observed no change during the study period i.e. from 2000-01 to 2009-10, this is attributed the proper management by the

forest department in the study region.

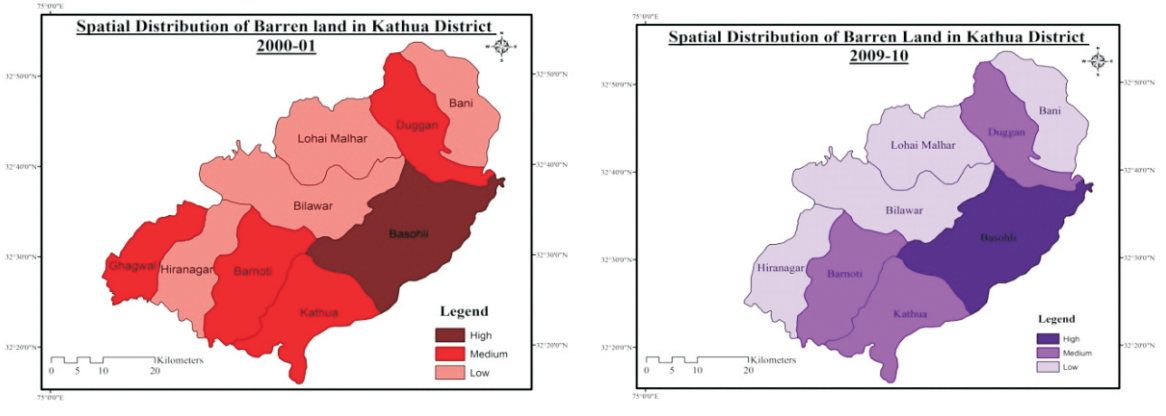
BARREN LAND

As name implies it is that type of land which is not available for cultivation. This category of land includes the land under mountain, deserts etc. which is not cultivated. If one tries to bring it under cultivation it require very high investment which becomes economically unavailable, and as such it is left as it is and classed as barren land. Such land apart from mountains, hills and deserts may also exist in isolated block within cultivated holdings. The analysis of table 1.0 reveals that there exists a variation in the concentration of areas under Barren land. The highest percentage of Barren land is found in the block Basohli (42.79%) which further decreased to 42.16% in the year 2009-10. This decrease being negligible hardly needs any explanation. The area barren land is lowest found in the block Bani in both the periods under investigation. The blocks which shows the decrease of area from 2000-01 to 2009-10 are Kathua(17.20% to 16.90%), Barnoti(17.01% to 16.01%), Hiranagar(5.29% to 4.20%), Basohli(42.79% to 42.16%), Bani(8.0% to5.0%) and Lohai-Malhar(8.24% to 8.04%). The further assessment of the data reveals some glaring facts regarding the barren land. As for an example, in block Duggan the percentage under barren land showed a mixed trend over study region.

Table 3.0 Spatial Distribution of Barren Land in Kathua District (2000-01 to 2009-10)

Categories	Name of the Block 2000-01	Number of Blocks	Name of the Blocks 2009-10	Number of Blocks
High (>30%)	Basohli	1	Bani	1
Medium (15 to 30%)	Duggan, Kathua, Barnoti, Ghagwal	4	Duggan, Kathua, Barnoti	3
Low (<15%)	Hiranagar, Bani, Billawar, Lohai-Malhar	4	Hiranagar, Bani, Billawar, Lohai-Malhar	4

Source: Prepared on the basis of Table 1.0



As far as spatial distribution of Barren land is concerned the analysis of table 3.0 is very important. The analysis of table 3.0 clearly gives a picture of area under barren land in a district as a

whole. From the above table it is very clear that there is only one block namely Basohli that falls under the category of high concentration of area under barren land (more than 30%). So far as the category of medium concentration of areas under barren land (15 to 30%) is concerned, there are four blocks in 2000-01and only three blocks in the year 2009-10. The three blocks consistently hold themselves in the above said category from 2000-01 to 2009-10. These blocks are Kathua, Barnoti and Duggan. If we give a cursorily look at the table 3.0 and analyze the category of low concentration of areas under barren land (less than 15%), we find that four blocks Hiranagar, Bani, Billawar and Lohai-Malhar are there in both the years. The reason behind the decrease in this category is due to rapid growth of population, technological advancement, proper irrigation, use of chemical fertilizers and introduction of scientific implements etc. The people convert barren land into cultivated land.

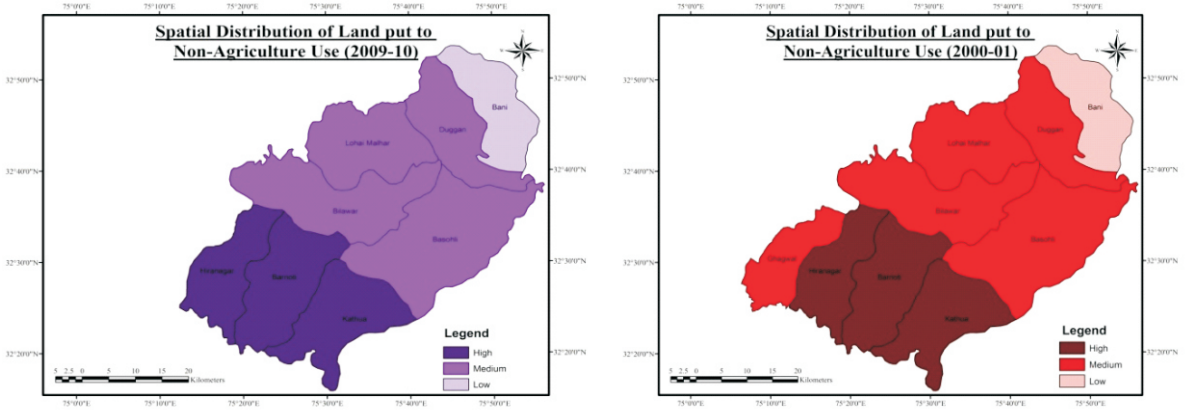
LAND PUT TO NON- AGRICULTURAL USES

This category of land includes all lands occupied by settlements, roads, railways, water bodies such as rivers, canal etc. Amongest the entire block Kathua and Basholi shows more than 30% of its geographical area falls in the category of land put to non- agricultural. This is due to the fact that in these blocks very high percentage of land is occupied by the settlements, roads and railways. These blocks are highly developed in the whole district. The other blocks where the more land put to non agricultural uses are Hiranagar, Billawar, Lohai-Malhar and Ghagwal. The lowest percentage in the above said category is found in the block Bani i.e. 13.04 in the year 2000-01 and reduced to 11.72% in the year 2009-10. If we put a cursory look at the table 1.0 block Barnoti, Kathua and Hiranagar with considerable high percentage(above 30%) of its area, which is put to no- agricultural uses. The reason already has been explained.

Table 4.0 Spatial Distribution of Land put to Non Agriculture use in Kathua District (2000-01 to 2009-10)

Categories	Name of the Block (2000-01)	Number of Blocks	Name of Block (2009-10)	Number of Blocks
High (>30%)	Kathua,Barnoti, Hiranagar	3	Kthua,BarnotiI, Hiranagar	3
Medium (15-30%)	Basohli, Duggan Billawar,Lohai-Malhar & Ghagwal	5	Basohli, Billawar, Lohai Malhar, Duggan	4
Low (<30%)	Bani	1	Bani	1

Source: Prepared on the basis of Table 1.0



A glance at table 4.0 reveals certain interesting features regarding the concentration of land under non- agricultural uses over both space and time. The lowest concentration (<15%) of the land in the above said category exists only in one block Bani out of the nine blocks in 2000-01 and eight blocks in the year 2009-10 throughout the period under consideration. As far as medium concentration (15 to 30%) is concerned five blocks exist in this category during 2000-01 and four blocks during 2009-10. The blocks are Basohli, Duggan, Billawar, Lohai-Malhar and Ghagwal. Thereafter, the high concentration (>30%) of areas put to non agricultural uses are found in three blocks Kathua, Barnoti and Hiranagar in both the periods under investigation. The data further reveals said that the total area is decreased from 2000-01 to 2009-10. Only one block Hiranagar shows slight increase in the area i.e. from 30.29% to 31.20%. The variation is so small that it hardly needs any explanation. The decrease in land put to non-agricultural use is due to development of irrigation, high yielding variety of seeds, improvement in agronomic practice, flood control and soil conservation measures which resulted in the shift of this land to net sown area.

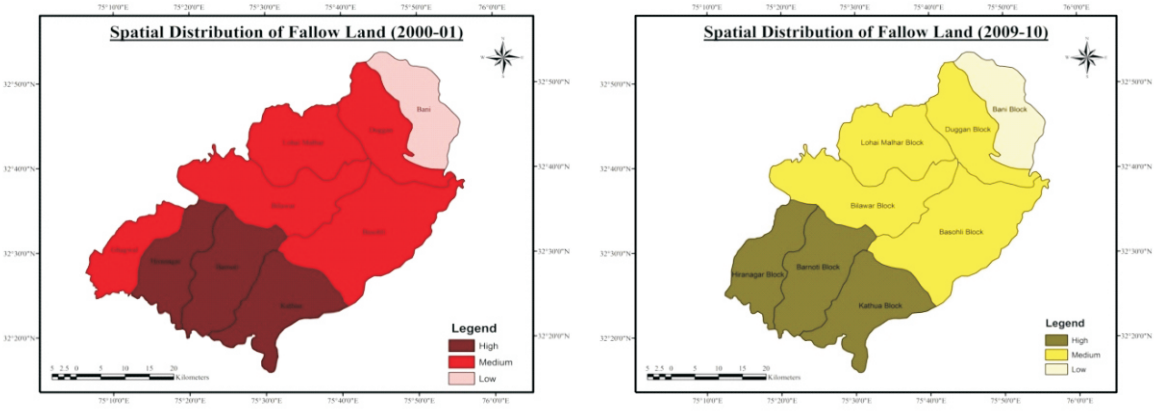
FALLOW LAND

The fallow land is that part of the cropped area which is not cultivated for a season in some parts of the region but for a period of one year in other parts. This is done to allow the soil to regain its fertility or is due to lack of water supply. In other words, it should include all lands which were taken up for cultivation but are temporarily out of cultivation for a period of not less than one year and not more than five years. If we analyze the table 1.0, we found that maximum area under fallow land is under block Ghagwal in the year 2000-01 and block Lohai-Malhar in the year 2009-10. The minimum land under the above said category is in the block Barnoti in both the years under investigation. This fluctuation in the area left as fallow can be attributed to the fluctuation in the rainfall which directly control the cultivation of land which are directly depend on monsoons and winter rains. The reason behind that is due to rapid growth of population farmers do not kept their land fallow. In order to fulfill their needs the people convert the fallow land into cultivated land.

Table No. 5.0Spatial Distribution of Fallow Land in Kathua District (2000-01 to 2009-10)

Categories	Name of the Block 2000-01	Number of Blocks	Name of Block 2009-10	Number of Blocks
High (>30%)	Kathua, Barnoti, Hiranagar	3	Kathua, Barnoti, Hiranagar	3
Medium (15 to 30%)	Basohli, Duggan, Billawar, Lohai-Malhar, Ghagwal	5	Basohli, Duggan, Billawar, Lohai-Malhar	4
Low (<15%)	Bani	1	Bani	1

Source: Prepared on the basis of Table 1.0



The analysis of the table 5.0 clearly gives the picture of the distribution of fallow land in the entire study region. Yet there is variation of areas under fallow land over both time and space. From the analysis of the above said table, one thing that very clearly emerges is that the four blocks Ghagwal, Duggan, Billawar and Lohai-Malhar in the year 2000-01 and block Billawar and Lohai-Malhar in the year 2009-10 in the category of high concentration of land under fallow land. Block Billawar and Lohai-Malhar remained with the category of high concentration throughout the period under investigation. The Duggan block thereafter fails to find its place in the above said category in the year 2009-10. On the other hand the area under fallow land between 5 to 7% is considered under medium category. On the basis of the classification depicted in table 5.0, it is clear that block Kathua, Basohli, Bani and Hiranagar joins this category during 2000-01 and Kathua, Basohli and Bani block in the year 2009-10 and then again Hiranagar fails to occupy its place in the above said category during 2009-10. The block Barnoti in the category of low concentration(<25%) in 2000-01 and continuously remains there from 2000-01 to 2009-10, but in the year 2009-10, the above said category is joined by two more blocks and the blocks are Hiranagar and Duggan. In modern times with advanced techniques of agriculture it is no longer necessary to keep lands fallow. The main purpose of keeping land fallow is to recover the fertility lost by continuous cultivation of crops. This objective can be fulfilled by growing crops in rotation with leguminous crops and by the use of fertilizers and organic manures.

NET SOWN AREA

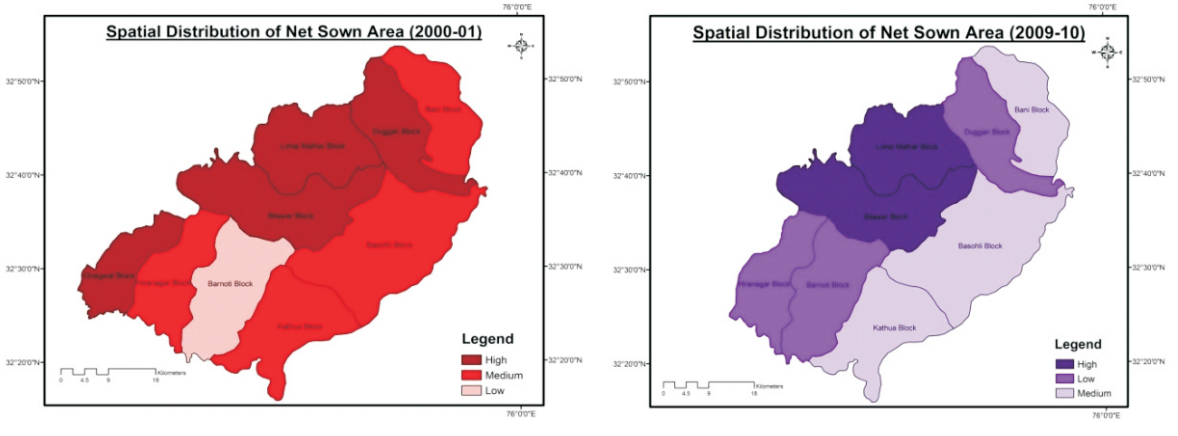
The net sown area is the actual area under crops on which sowing is done at least during a year. It does not include double cropped area and in itself constitutes the area cultivated for growing crops is

considered as net sown area. In fact, net sown area is class of area, which is directly involved in feeding the human and livestock population. The low proportion of arable land is the result of physical constrains which hamper the development of land for agricultural purposes. If the data for the study region is taken in to consideration, it then becomes evident that a negligible upward trend is witnessed in the net sown areas. The maximum net area sown is under block Hiranagar. It is 42.33% in 2000-01 and 44.7% in the year 2009-10 and the minimum area under net area sown is under block Bani in both the consecutive years. It is very important to mention here that all the block of the Kathua district shows increasing trend. It means the area under net area sown is increased from the year 2000-01 to 2009-10. The highest change is shown in the block Kathua and Duggan. In Kathua and Duggan blocks the net sown area increased from 22.60% to 26.9% and 12.71% to 16.4% from 2000-01 to 2009-10.

Table 6.0 Spatial Distribution of Net Sown Area in Kathua District (2000-01 to 2009-10)

Categories	Name of the Block 2000-01	Number of Blocks	Name of the Blocks 2009-10	Number of Blocks
High (>7%)	Ghagwal, Duggan, Billawar, Lohai-Malhar	4	Billawar, Lohai-Malhar	2
Medium (5 to 7%)	Kathua, Hiranagar, Basohli, Bani	4	Kathua, Basohli, Bani	3
Low (<5%)	Barnoti	1	Barnoti, Hiranagar, Duggan	3

Source: Prepared on the basis of Table 1.0



The distribution of net sown area over the space in the study area is neither static nor uniform. There are two blocks out of nine (2000-01) and three blocks out of eight (2009-10) is under the category of high concentration where more than 25% of the total area of blocks is covered by net sown area. These blocks are Hiranagar, Ghagwal and Barnoti, Kathua and Hiranagar. Hiranagar block is the only block which is able to mention their position under high concentration in both the periods under our investigation. Further, steps down to the category of medium concentration (15-25%) in 2000-01, the blocks are Kathua, Barnoti, Basohli, Billawar and Lohai-Malhar. In the year 2009-10, the blocks are Basohli, Duggan, Billawar and Lohai-Malhar. In 2009-10, the Barnoti and Kathua are in high

concentration group but in 2000-01, the following blocks joined the category of medium concentration. Again two block Bani and Duggan would have been the part of low concentration (<15%) in the year 2000-01 and in 2009-10, the block Bani joined the above said category. It is however, noteworthy to mention that Bani is the only block that remains in the category of low concentration. In the final analysis, it can be said that Bani block records the lowest percentage of area (<15%) under net sown area throughout the entire period of investigation and on the other hand the highest percentage of areas under net sown area are found in Hiranagar block during 2000-01 to 2009-10. All other blocks hold areas between these two extremes during the whole period of study.

CONCLUSION

In the light of the above study it has been raveled that there is no remarkable change during the study period i.e. 2000-01 to 2009-10. However it shows & increase of area under forest in Bani block, this is attributed to the proper management by the forest department in the study region. Block Hiranagar wholes & increase of 0.91 % of area under the category of land put to non-agriculture uses, which indicates the maximum construction of houses, buildings, roads, bridges etc in the foresaid block. The net sown area in all the blocks of Kathua district shows increasing trend. The highest change shown in block Kathua and Duggen which increased from 22.60% to 26.9% and 12.71% to 16.4% from 2000-01 to 2009-10. In case of fallow land more area is under block Kathua, Barnoti and Hiranager in both the consecutive years.

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