The Spatial Analysis of Demographic Studies Of Ujh Watershed, Jammu And Kashmir (India)

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Abstract- *Water is the most precious natural resource found in requisite amount on planet earth. It's an attractive factor when people choose where to live. Watershed, an area on land that drains all the streams to a common outlet encompasses both ground and surface water. Understanding the demographic aspects of watershed is as important as the natural factors. It describes immense relationship of population with different socio economic parameters and helps to know how far the growth rate of population is keeping pace with growth rate of the economy. The aim of present research is to study the village/town wise spatial analysis of demographic aspects of Ujh watershed using census of India statistical data (2011) through delineation of watershed boundary from ASTER data in Arc GIS software. For the analysis of various selected demographic aspects the present study area is divided into five categories from very low, low, moderate, high to very high according to the data range of each parameter taken in the study respectively. However sex ratio in the study area is categorized into three classes: low, moderate and high. As per the calculated results of the study the majority of villages/towns of watershed fall under high literacy rate and moderate sex ratio. Low and very low main and marginal workers in watershed to some extent would have impacted the economy of study area.*

Keywords**:** Watershed, Demographic Aspects, Socio Economic, Economy, Census of India
Introduction

Water is one of the most essential natural resource for all life forms on earth. Rain water, surface water and ground water are the main sources of water found in adequate amount on our planet. Water accounts for 71 percent of the total earth surface of which only 0.3 percent is available as fresh water for human use (Khatri et al. 2014). Watershed is an area of land that is drained/shred by a river and its tributaries into a larger water body. Every water body is part of one or another watershed and a large watershed contains numbers of small-small watersheds. The terms drainage basin/area, catchment basin/area is interchangeably used for watershed. Temperature, precipitation, humidity, latitude, altitude, topography, vegetation type and winds altogether determine the climate that plays dominant role in shaping landforms and managing the stream flow. The movement of streams in a watershed is highly guided by geology as it determines topography, shapes drainage basin and also influences water flow; e.g.: there is more erosion in soft rocks and weathering in regions having limestone or dolomite. Likewise topography also

depends upon the geology of the particular region. It influence slope angle/steepness of slope that permits the force of gravity to quicken the speed of water in stream channels of a river and as a results the water flowing with high energy erodes the material and deposit it elsewhere. The water runoff after heavy rainfall leads to soil erosion once soil reaches its saturation. It is basically the wearing away or detachment of organic nutrient rich fertile soil down the slope. The high potential of erosion is conditional on the intensity and time duration of rains. Sheet, gully, rill and bank erosion are the numerous types of water erosion that impacts watershed. Along with the natural factors like climate, geology, topography; there are human factors that influences watershed. The complex and dynamic human-water interrelationships embedded in heterogeneous landscape seeks questions like where human live in relation to water resources (Fang et al. 2019). Rapid increase in demography worldwide strains the water resources and effects water quality. The rise in household's population along watershed increases water stress on ecosystem. Therefore the changing structure of human population adversely affects the water demand. Even the involvement of humans in various anthropogenic activities including diverse agricultural practices, urban and industrial activities, deforestation etc. has impacts on watershed. Dense vegetation cover, contour farming in hilly terrain holds the soil and prevents it from blowing down with surface runoff. The demand for ecological functions provided by the forests increases with increase in population as it is an essential resource of energy for improving living environment and human development. For that reason forests are being cut down for construction for mode of transportation, clearance of land for residence and industries etc. exert influence on watershed.

Study Area

The origin of Ujh river is from Kailash Mountains at the elevation of 4200 meters in pir panjal range in middle Himalayas. Ujh river is one of the major tributary of river Ravi. The catchment area of the river extends between 32° 51′ 50″ and 32° 19′ 39″ north latitudes and 75° 40′ 53″ and 75° 23′ 13″ east longitudes. The total length of the river is 1105.68 kilometers and areal basin length is calculated as 65.40 kms spread over the catchment area of 1020.06 square kms and having 209.41 kilometers of perimeter (Arc GIS). The river originates from the south east part of Ramnagar tehsil of Udhampur district, flows in the east west direction, then divert towards the south and starts flowing in the southern slope through series of narrow gorges, cascades in the Billawar tehsil and intermittent flat areas in the Kathua tehsil of Kathua district in the union territory (UT) Jammu and Kashmir. The general physiographic features of the area is rugged topography, snow covered mountain ranges cut into precipitous ridges and deep ravines with steep to gentle slopes. The river also travels through the plain areas of Kathua district. The climatic condition varies significantly in the region from sub-tropical hot climate in the plains and kandi belt to severe cold climate of the hills. The average rainfall ranges between 200 to 1200 millimeters in different parts of the study area. The latitude and longitude location of each village/town falling under the Ujh watershed is shown in table 1.

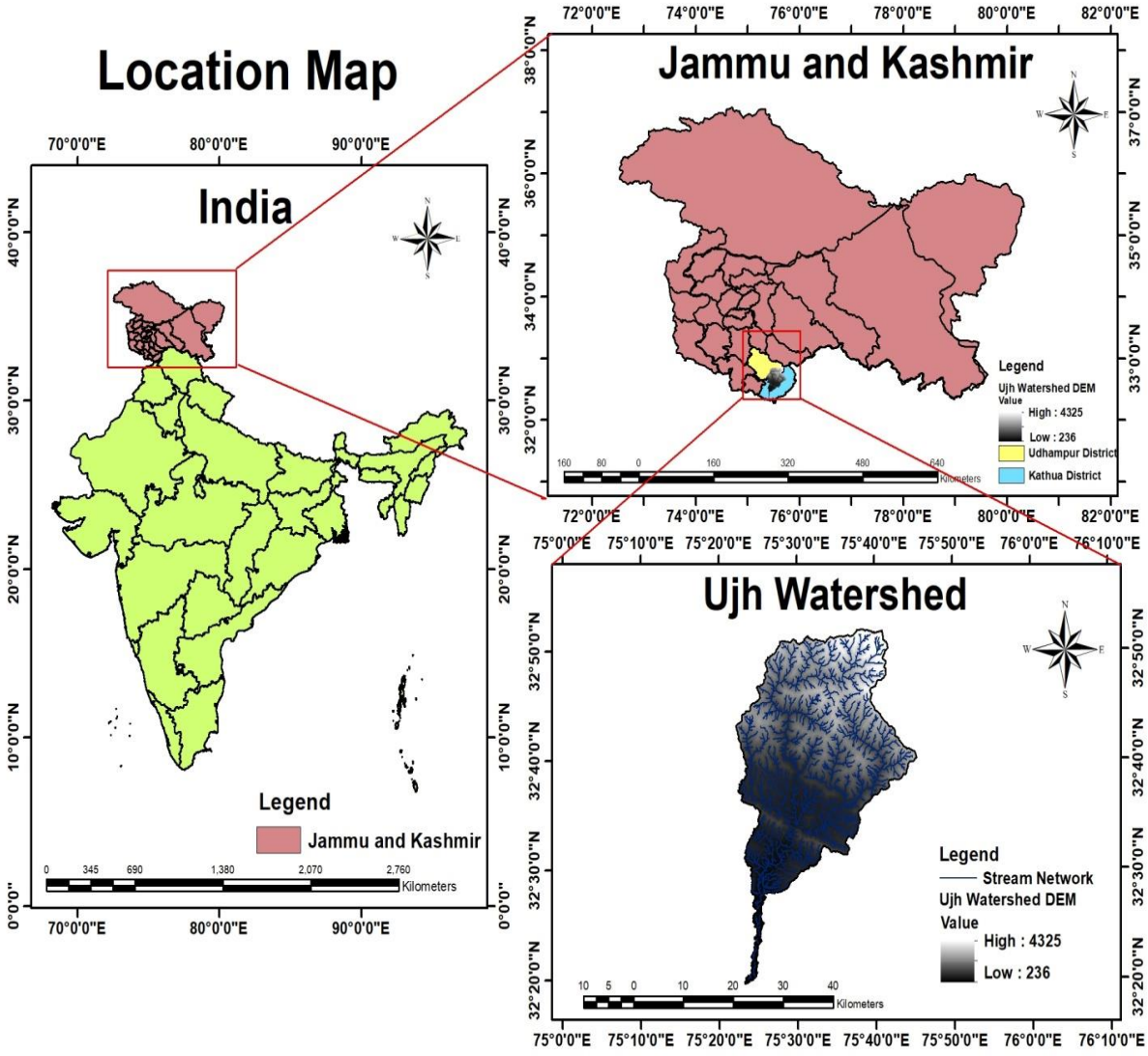

Figure 1: Location map of study area

Aim and Objectives

The aim of the present research is to study the village/town wise spatial analysis of demographic aspects of Ujh watershed in Jammu and Kashmir, India and the following objectives has adopted to come out with best possible results.

- Village/town wise analysis of population (2011)
- Village/town wise analysis of literacy rate and sex ratio (2011)
- To find out the village/town wise population engaged as workers (2011)

Material and Methods

The ASTER and Reflection Radiometer global DEM data with 30 meters resolution downloaded from Earth Explorer - USGS web portal of National Aeronautics and Space Administration (NASA) to delineate the watershed. The DEM data were again used to calculate the length of the

river, area and perimeter of the basin. The data of selected demographic aspects of present study has been gathered from District Census Handbook of district Kathua (Census of India, 2011) and District Census Handbook of district Udhampur (Census of India, 2011). For the analysis of various selected demographic aspects the present study area is divided into five categories from very low, low, moderate, high to very high according to the data range of each parameter taken in the study respectively. However sex ratio in the study area is categorized into three classes: low, moderate and high. Each village/town was placed in a particular category of classes and therefore the percentage of villages/town following under each category has been calculated accordingly. The Excel software has been used for the computation of data and the entire mapping has been done in Arc GIS Software.

Results and Discussions

Beside the natural conditions prevailing in the environment, study of demographic aspect is immensely important for a healthy watershed. Humans have always been an integral part of such ecosystems. The human settlement especially in rural areas continues to emerge near accessibility of water resource. "Several new phenomena and trends in water resources will influence how civilizations of the 21st century will evolve" (Yevjevich 2009). Thus water resources (principally rivers) have been imitated by the people for settlement.

Population Distribution

The socio economic life of people is highly influenced by population explosion as it threatens the balance between available natural resources and population. The increase and decrease in population affects the availability of natural resources. Growth of slums in urban areas through rural urban migration became a concerning issue today. The harsh climatic conditions of hills, steep slopes and infertile soil that impedes its ability to stimulate healthy crop makes difficult for population to live and establish permanent settlements in these areas. Therefore the physiography determines the distribution of population of that particular area. The village/town wise population distribution of watershed is well presented through table 1.

Table 1: Village/town locations and total population of Ujh watershed

S.No	Name of Village/Town	Latitudes	Longitudes	Total Population	S.No	Name of Village/Town	Latitudes	Longitudes	Total Population
CD Block: Lohai Malhar, Tehsil: Billawar (Kathua)					36	Mandli	32° 36′ 47″ N	75° 30′ 20″ E	15305
1	Bhattwal	32° 43′ 44″ N	75° 29′ 54″ E	1393	37	Muni	32° 34′ 17″ N	75° 35′ 11″ E	1525
2	Baggan	32° 37′ 42″	75° 38′ 57″ E	6101	38	Palehal	32° 34′ 47″	75° 37′ 04″ E	1483

		N					N		
3	Badnotta	32° 43′ 58″ N	75° 37′ 35″ E	3113	39	Pallan	32° 32′ 44″ N	75° 34′ 32″ E	1651
4	Dhannu Parol	32° 39′ 30″ N	75° 30′ 28″ E	2737	40	Parnala	32° 33′ 32″ N	75° 35′ 35″ E	2269
5	Dheutta	32° 38′ 34″ N	75° 42′ 29″ E	2384	41	Rampur	32° 35′ 35″ N	75° 32′ 03″ E	1603
6	Dodu Falal	32° 39′ 34″ N	75° 29′ 26″ E	2737	42	Seri	32° 33′ 57″ N	75° 35′ 40″ E	1573
7	Kahug	32° 38′ 43″ N	75° 31′ 32″ E	2602	43	Siyalna	32° 35′ 53″ N	75° 26′ 35″ E	2077
8	Kindli	32° 44′ 29″ N	75° 36′ 11″ E	1156	44	Sukral	32° 39′ 08″ N	75° 35′ 16″ E	717
9	Lahari	32° 38′ 02″ N	75° 33′ 50″ E	2805	45	Tehr	32° 34′ 50″ N	75° 32′ 48″ E	2923
10	Machhedi	32° 42′ 02″ N	75° 35′ 56″ E	4653	46	Thantha	32° 36′ 05″ N	75° 28′ 43″E	1002
11	Malahar	32° 41′ 34″ N	75° 39′ 41″ E	4482	47	Thara Kilwal	32° 37′ 10″ N	75° 26′ 14″ E	3195
12	Malar	32° 41′ 08″ N	75° 41′ 47″ E	1280	48	Tilla	32° 36′ 11″ N	75° 34′ 37″ E	1142
13	Marhoon	32° 39′ 54″ N	75° 42′ 29″ E	2435	49	Ucha Pind	32° 37′ 53″ N	75° 26′ 35″ E	2507
14	Najot	32° 39′ 38″ N	75° 34′ 40″ E	2806	50	Billawar (Town)	32° 36′ 48″ N	75° 36′ 14″ E	4978
15	Sadrota	32° 43′ 24″ N	75° 32′ 42″ E	3013	Total				85249

Total				43697	CD Block: Barnoti, Tehsil: Kathua (Kathua)				
CD Block: Barnoti, Tehsil: Billawar (Kathua)					51	Bhorthain	32° 30′ 38″ N	75° 25′ 33″ E	2508
16	Aglidhar	32° 33′ 08″ N	75° 29′ 08″ E	1603	52	Chak Bhagta	32° 24′ 54″ N	75° 25′ 30″ E	899
17	Barotta	32° 35′ 07″ N	75° 29′ 07″ E	2147	53	Forlain	32° 26′ 03″ N	75° 25′ 14″ E	6462
18	Bathari	32° 37′ 08″ N	75° 33′ 46″ E	1411	54	Jakhale	32° 32′ 50″ N	75° 28′ 12″ E	1647
19	Beral	32° 33′ 23″ N	75° 34′ 00″ E	1069	55	Jugian	32° 20′ 40″ N	75° 24′ 39″ E	469
20	Bhaddu	32° 34′ 46″ N	75° 32′ 36″ E	4555	56	Juthana	32° 30′ 22″ N	75° 28′ 04″ E	3113
21	Billawar	32° 36′ 48″ N	75° 36′ 14″ E	2177	57	Mahi Chak	32° 24′ 12″ N	75° 25′ 09″ E	1097
22	Danbrah	32° 33′ 49″ N	75° 37′ 08″ E	3134	58	Nangal	32° 22′ 18″ N	75° 24′ 32″ E	527
23	Danjisdhar	32° 36′ 38″ N	75° 24′ 29″ E	2375	59	Rakh Hushiari	32° 26′ 55″ N	75° 24′ 21″ E	1941
24	Darung	32° 35′ 33″ N	75° 30′ 32″ E	2231	60	Suraj Beli	32° 23′ 49″ N	75° 25′ 02″ E	-
25	Derli	32° 35′ 28″ N	75° 25′ 53″ E	850	Total				18663
26	Dewal	32° 35′ 40″ N	75° 34′ 01″ E	2042	CD Block: Barnoti, Tehsil: Hiranagar (Kathua)				
27	Dharalta	32° 31′ 10″ N	75° 32′ 02″ E	2307	61	Dhangdev Pur	32° 23′ 20″ N	75° 24′ 34″ E	613

28	Dharmkot	32° 35′ 49″ N	75° 32′ 26″ E	2879	62	Kore Punoo	32° 19′ 45″ N	75° 23′ 18″ E	1315
29	Dungara	32° 34′ 58″ N	75° 30′ 11″ E	3358	63	Mukund Pur	32° 20′ 14″ N	75° 23′ 26″ E	1049
30	Harnotta	32° 35′ 48″ N	75° 29′ 06″ E	567	64	Nihal Pora	32° 19′ 40″ N	75° 23′ 34″ E	-
31	Kaha	32° 37′ 59″ N	75° 22′ 51″ E	1471	65	Salal Pur	32° 20′ 17″ N	75° 24′ 08″ E	1439
32	Kishan Pur	32° 36′ 33″ N	75° 37′ 26″ E	1858	Total				4416
33	Komala	32° 38′ 27″ N	75° 28′ 41″ E	486	CD Block: Ramnagar, Tehsil: Ramnagar (Udhampur)				
34	Lakhari	32° 38′ 18″ N	75° 24′ 21″ E	1915	66	Kiya	32° 45′ 54″ N	75° 25′ 43″ E	1917
35	Malti	32° 35′ 53″ N	75° 33′ 16″ E	2864	Total				1917

Source: Google Earth Pro and Census of India (2011)

Table 2: Class wise distribution of total population in Ujh watershed

S.No	CD Block	Very Low		Low		Moderate		High		Very High	
		< 1000		1000.01-2000		2000.01-3000		3000.01-4000		> 4000	
		No. and % of Villages/Towns									
Billawar Tehsil (Kathua)											
1	Lohai Malhar	-	-	3	4.68%	7	10.93%	2	3.12%	3	4.68%
2	Billawar	4	6.25%	14	21.87%	12	18.75%	3	4.68%	2	3.12%
Kathua Tehsil (Kathua)											
3	Barnoti	3	4.68%	3	4.68%	1	1.56%	1	1.56%	1	1.56%
Hiranagar Tehsil (Kathua)											
4	Barnoti	1	1.56%	3	4.68%	-	-	-	-	-	-
Ramnagar Tehsil (Udhampur)											

5	Ramnagar	-	-	1	1.56%	-	-	-	-	-	-
Total No. of Villages/ Town		8	12.5%	24	37.47%	20	31.24%	6	9.36%	6	9.36%
		64									

Source: Compiled by Authors

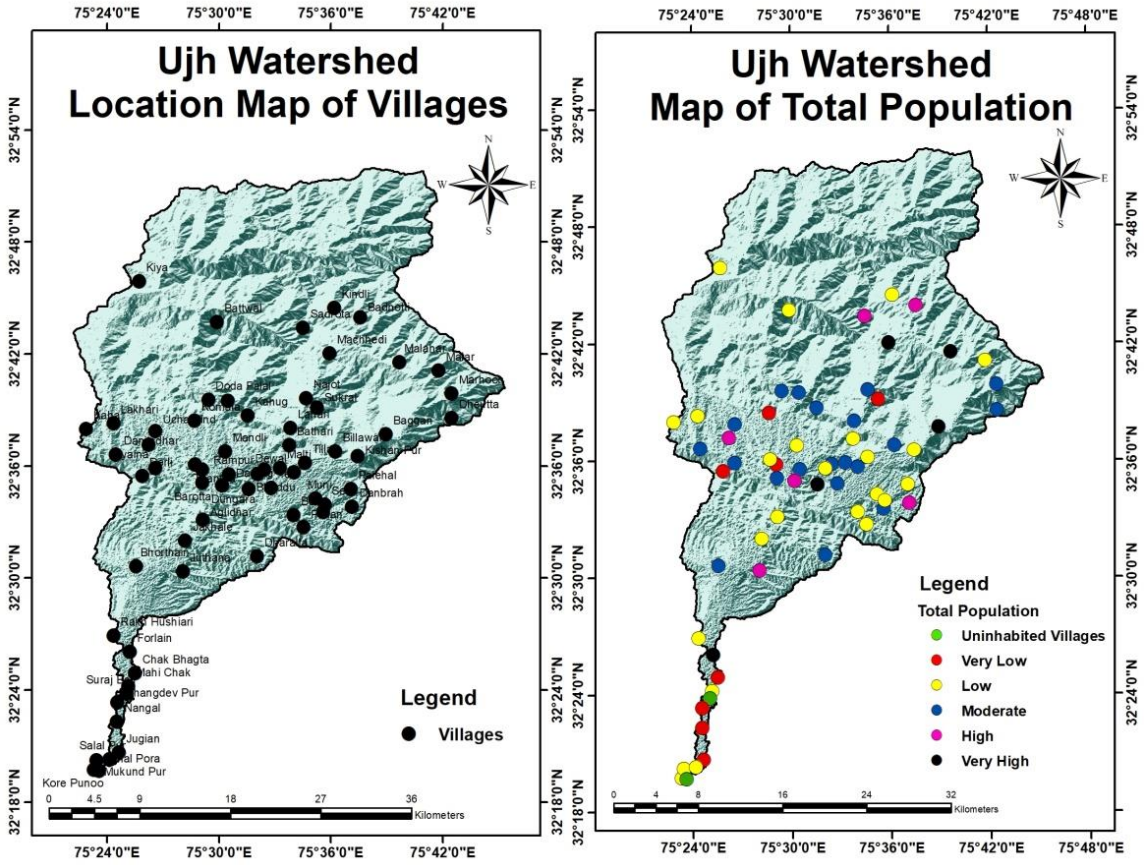

Figure 2 (a): Location map of Villages/Town (b): Total population of Ujh watershed

The Ujh watershed is spread over two districts: Kathua and Udhampur, four tehsils: Billawar, Kathua, Hiranagar in district Kathua and Ramnagar tehsil in district Udhampur and five CD Blocks. Lohai Malhar CD Block comprises of total fifteen villages, Billawar CD Block includes thirty four villages and a town, Barnoti CD Block (Kathua tehsil) consists of ten villages, Barnoti CD Block (Hiranagar tehsil) covers five villages and Ramnagar CD Block with only one village. From the total sixty six villages/towns in the study area Suraj Beli and Nihal Pora are uninhabited villages and consequently the data of sixty four villages/towns has been taken into consideration. The categorization of population distribution has been done to analyze the data and study shows that there is approximately 12.5% under very low population category, 37.47% under low, 31.24% under moderate, 31.24 % under high and 9.36% under very high category of population. The percentage of villages/town under each category is represented through table 2.

Literacy Rate

Acquiring good education enhances better employment prospects and better source of income. Highly skilled population within watershed strengthens the individual's growth and boost socio economic status of the region. The census of India defines literacy as; "a person aged seven and above, who can both read and write with understanding in any language" is called literate. The literacy rate of India at the time of independence was merely 14% that gradually increased and India today stands with 74.04% of literacy rate in 2011 (Desai 2012). A literate person understands the pros and cons of population growth and its pressure over the finite resources. The literacy rate of Ujh watershed is divided into five categories ranging from very low (< 40), low (40.01-50), moderate (50.01-60), high (60.01-70) and very high (>70) category. The study resulted that 7.81% of the total literacy rate of villages/town lies in very low, 10.93% in low, 23.42% in moderate, 51.55% in high and 6.24% in very high class of category (Table 3).

Sex Ratio

As per the census of India sex ratio is defined as "the number of females per 1000 males in the population". It is one of the important indicators to compute the status (equality) of men and women at a given period of time in a society. Sex ratio depends upon the birth of child at particular sex, difference in mortality rates among different sexes under different age groups and sex selective migration. Sex selective abortions are again one of the major reasons for declining sex ratio in India (Chandrasekarayya et al. 2009). Female feticide, female infanticide, education and importance of women power in present era, poverty, status of women in society, lack of women empowerment, male dominating society, infant and maternal mortality rate, impact of population policies like "hum do humare do" are some other factors affecting sex ratio in a particular region. If in case of "hum do humare do" both the children in the family would born as son child can affect sex ratio in that way. The percentage of village/town wise sex ratio following under each category is shown in table 4. The sex ratio of study area is categorized into three categories: Low (<850), Moderate (850.01-900), High (>900). The present study shows that there is 14.05% of the total village falls under low, 49.98% in moderate and 35.92% in high category.

Table 3: Class wise distribution of literacy rate in Ujh watershed

S.No	CD Block	Very Low		Low		Moderate		High		Very High	
		< 40		40.01-50		50.01-60		60.01-70		> 70	
		No. and % of Villages/Towns									
Billawar Tehsil (Kathua)											
1	Lohai Malhar	5	7.81%	6	9.37%	4	6.25%	-	-	-	-
2	Billawar	-	-	-	-	7	10.93%	25	39.06%	3	4.68%
Kathua Tehsil (Kathua)											
3	Barnoti	-	-	1	1.56%	3	4.68%	4	6.25%	1	1.56%
Hiranagar Tehsil (Kathua)											

4	Barnoti	-	-	-	-	1	1.56%	3	4.68%	-	-
Ramnagar Tehsil (Udhampur)											
5	Ramnagar	-	-	-	-	-	-	1	1.56%	-	-
Total No. of Villages/ Town		5	7.81%	7	10.93%	15	23.42%	33	51.55%	4	6.24%
		64									

Source: Compiled by Authors

Table 4: Class wise distribution of Sex Ratio in Ujh watershed

S. No	CD Block	Low		Moderate		High	
		< 850		850.01-900		> 900	
		No. and % of Villages/Towns					
Billawar Tehsil (Kathua)							
1	Lohai Malhar	-	-	6	9.37%	9	14.06%
2	Billawar	5	7.81%	21	32.81%	9	14.06%
Kathua Tehsil (Kathua)							
3	Barnoti	3	4.68%	3	4.68%	3	4.68%
Hiranagar Tehsil (Kathua)							
4	Barnoti	1	1.56%	2	3.12%	1	1.56%
Ramnagar Tehsil (Udhampur)							
5	Ramnagar	-	-	-	-	1	1.56%
Total No. of Villages/ Town		9	14.05%	32	49.98%	23	35.92%
		64					

Source: Compiled by Author

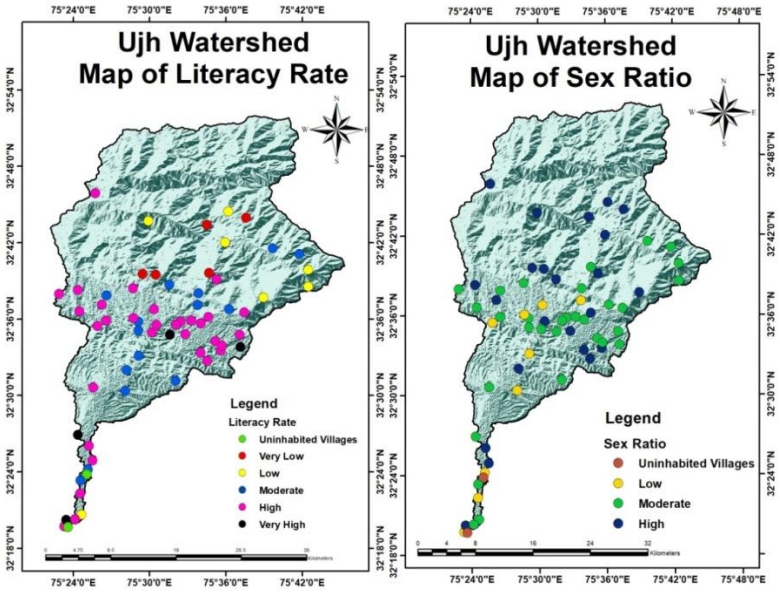

Figure 3 (a): Literacy rate in Ujh watershed (b): Sex ratio in Ujh watershed

Occupational Structure

Occupational structure is basically the engagement of population (workforce) in different economic ventures. The involvement of people into these economic activities is refers as active population. Further the active population is classified as main and marginal workers on the basis of duration of work in a year. Thus the population engaged in any economic activities for a reference period six months and more than that are stated as main workers and the population engaged in any kind of economic activity for a period of less than six months in a year is part of marginal workers. There is a proportion of population who are not involved in any kind of occupation/ earning and are depended upon other person for their livelihood constitute non workers/non active population. This category generally includes people of zero to five and sixty and above years of age group. Studying occupational structure provides data regarding the various economic activities and the numbers/percentage of population (workforce) available in that particular watershed. The village/town wise total, main and marginal workers are presented in table 5, 6 and 7.

Table 5: Class wise distribution of total workers in Ujh watershed

S.No	CD Block	Very Low		Low		Moderate		High		Very High	
		< 500		500.01-1000		1000.01-1500		1500.01-2000		> 2000	
		No. and % of Villages/Towns									
Billawar Tehsil (Kathua)											
1	Lohai Malhar	-	-	12	18.75%	1	1.56%	1	1.56%	1	1.56%
2	Billawar	12	18.75%	19	29.68%	3	4.68%	1	1.56%	-	-
Kathua Tehsil (Kathua)											
3	Barnoti	4	6.25%	4	6.25%	-	-	1	1.56%	-	-
Hiranagar Tehsil (Kathua)											
4	Barnoti	4	6.25%	-	-	-	-	-	-	-	-
Ramnagar Tehsil (Udhampur)											
5	Ramnagar	1	1.56%	-	-	-	-	-	-	-	-
Total No. of Villages/ Town		21	32.81%	35	54.68%	4	6.24%	3	4.68%	1	1.56%
		64									

Source: Compiled by Authors

As per the present research Ujh watershed occupies 32.81% of villages/town under very low category, 54.68% in low, 6.24% in moderate, 4.68% in high and 1.56% of villages/town in very high class of categories of total workers. The main workers separately constitutes 20.3% in very low, 29.67% in low, 28.11% in moderate, 17.18% in high and 4.68% in very high category class. The villages/town wise percentage distribution of marginal workers of Ujh watershed in very low, low, moderate, high and very high category is 53.11%, 24.99%, 9.36%,7.8% and 4.68% respectively. Similarly, the non workers population of study area is categorized into five classes: very low (< 1000), low (1000.01-2000), moderate (2000.01-3000), high (3000.01-4000), very

high (> 4000) and there is 32.81% of the villages/town in low, 42.17% in low, 17.18% in moderate, 6.24% in high and 1.56% in very high class of categories (Table 8).

Table 6: Class wise distribution of main workers in Ujh watershed

S.No	CD Block	Very Low		Low		Moderate		High		Very High	
		< 200		200.01-400		400.01-600		600.01-800		> 800	
		No. and % of Villages/Towns									
Billawar Tehsil (Kathua)											
1	Lohai Malhar	4	6.25%	2	3.12%	3	4.68%	4	6.25%	2	3.12%
2	Billawar	4	6.25%	13	20.31%	13	20.31%	4	6.25%	1	1.56%
Kathua Tehsil (Kathua)											
3	Barnoti	2	3.12%	3	4.68%	1	1.56%	3	4.68%	-	-
Hiranagar Tehsil (Kathua)											
4	Barnoti	2	3.12%	1	1.56%	1	1.56%	-	-	-	-
Ramnagar Tehsil (Udhampur)											
5	Ramnagar	1	1.56%	-	-	-	-	-	-	-	-
Total No. of Villages/ Town		13	20.3%	19	29.67%	18	28.11%	11	17.18%	3	4.68%
		64									

Source: Compiled by Authors

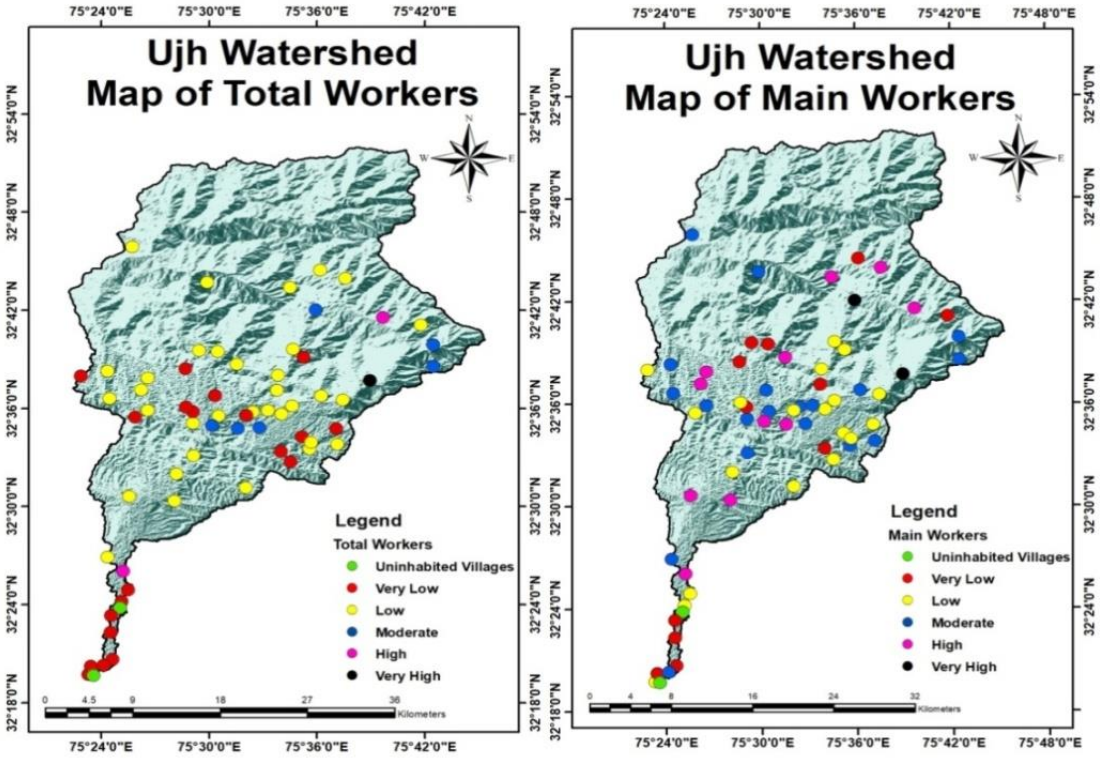

Figure 4 (a): Total workers in Ujh watershed (b): Main workers in Ujh watershed

Table 7: Class wise distribution of marginal workers in Ujh watershed

S.No	CD Block	Very Low		Low		Moderate		High		Very High	
		< 200		200.01-400		400.01-600		600.01-800		> 800	
		No. and % of Villages/Town									
Billawar Tehsil (Kathua)											
1	Lohai Malhar	5	7.81%	2	3.12%	2	3.12%	3	4.68%	3	4.68%
2	Billawar	18	28.12%	12	18.75%	3	4.68%	2	3.12%	-	-
Kathua Tehsil (Kathua)											
3	Barnoti	6	9.37%	2	3.12%	1	1.56%	-	-	-	-
Hiranagar Tehsil (Kathua)											
4	Barnoti	4	6.25%	-	-	-	-	-	-	-	-
Ramnagar Tehsil (Udhampur)											
5	Ramnagar	1	1.56%	-	-	-	-	-	-	-	-
Total No. of Villages/ Town		34	53.11%	16	24.99%	6	9.36%	5	7.8%	3	4.68%
		64									

Source: Compiled by Authors

Table 8: Class wise distribution of non workers in Ujh watershed

S.No	CD Block	Very Low		Low		Moderate		High		Very High	
		< 1000		1000.01-2000		2000.01-3000		3000.01-4000		> 4000	
		No. and % of Villages/Towns									
Billawar Tehsil (Kathua)											
1	Lohai Malhar	4	6.25%	4	6.25%	5	7.81%	2	3.12%	-	-
2	Billawar	9	14.06%	19	29.68%	5	7.81%	2	3.12%	-	-
Kathua Tehsil (Kathua)											
3	Barnoti	4	6.25%	3	4.68%	1	1.56%	-	-	1	1.56%
Hiranagar Tehsil (Kathua)											
4	Barnoti	4	6.25%	-	-	-	-	-	-	-	-
Ramnagar Tehsil (Udhampur)											
5	Ramnagar	-	-	1	1.56%	-	-	-	-	-	-
Total No. of Villages/ Town		21	32.81%	27	42.17%	11	17.18%	4	6.24%	1	1.56%
		64									

Source: Compiled by Authors

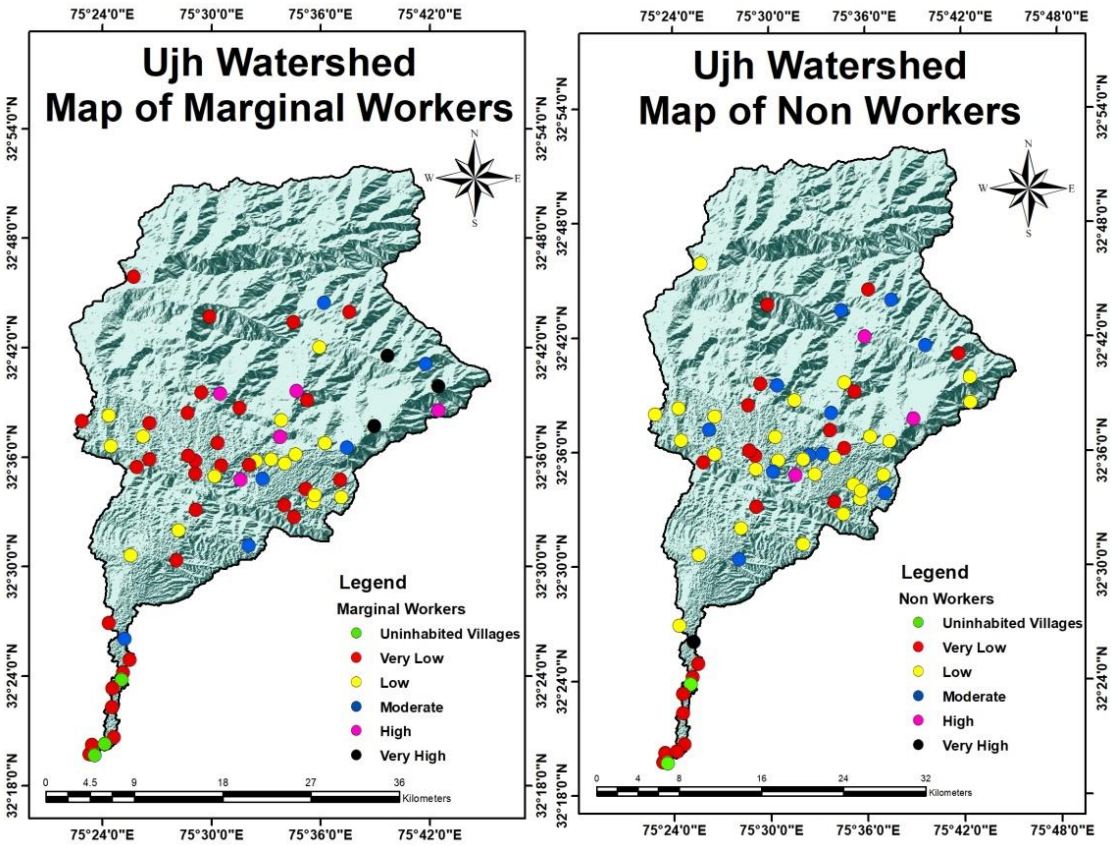

Figure 5 (a): Marginal workers in Ujh watershed (b): Non workers in Ujh watershed

Conclusion

The village/town wise analysis of population distribution, literacy rate, sex ratio and occupational structure has been carried out for the spatial analysis of demographic studies of Ujh watershed. The geospatial technology using remote sensing data worked effectively to delineate watershed boundary by selecting the appropriate coordinate system to fix accurate latitudes and longitudes of the study area and the entire mapping of the research paper was done in Arc GIS software. Based upon the data the entire study of demographic aspects was categorized into five different classes except the categorization of literacy rate into three classes and results of each village were drawn accordingly. The present research resulted that the maximum population of the watershed settles in gentle to plain slopes. Based upon the classified categories of the study the other demographic aspect of Ujh watershed includes high literacy rate, moderate sex ratio, low main workers and very low marginal workers. Even after having the high literacy rate, it has low working population that hinders the growth of economy of the study area.

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