

## ANALYZATION OF DEMOGRAPHIC ASPECT IN ALAKNANDA BASIN : A GEOGRAPHICAL STUDY

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**Abstract:** Traditionally geographers have been classified geography into Physical and Human geography. Human geography has several sub branches, e.g. settlement geography, economic geography, political geography and population geography. Population geography is recently developed and specialized branch of human geography. Population is an important aspect, which varies over the surface of the earth, its plays a dominant role in determining the economy of the region. Not only economy of the region but also changing socio-cultural, political and environmental issues of the region.

The term '**Demography**' was first used by **Achille Guillard (1955)**. The word was derived from the Greek word 'Demos' which means 'People'. Economic, social, political, geographical, biological, ecological, anthropological determinants and consequences are closely related with population studies.

Geographically, in the upper part of the Alaknanda basin, population is very less and sparsely distribution in small size settlement depending upon the high altitudinal geomorphic features, availability of cultivable area and pilgrimage routes. In the middle part of river Alaknanda, between Karnprayag and Rudraprayag, population distribution observes gravity along the left bank due to the presence of magnificent river terrace, middle alaknanda river basin mostly prone for disasters (Landslide, cloud burst , flash floos etc.).In the lower part of basin, population distribution is confined to fans and river-terraces. In this article, we discuss the demographic analysis of Alaknanda river basin through on secondary data to fulfill the objectives.

**Key Words:** Demographic, Alaknanda river basin, Human geography, Disaster.

### 1. INTRODUCTION-

Geography deals with wide area of study. Geography had since long has been considered as an earth science where the study of earth received greater attention than its inhabitants. But geographers turn to attention the study of environment to man. Vidal-de-la-Blanches, Jean brunches where significance in giving anthropocentric orientation to geography. Traditionally geographers have been classified geography into Physical and Human geography.

Human geography has several sub branches, e.g. settlement geography, economic geography, political geography and population geography. Population geography is recently developed and specialized branch of human geography. Population is an important aspect, which varies over the surface of the earth, its plays a dominant role in determining the economy of the region. Not only economy of the region but also changing socio-cultural, political and environmental issues of the region.

**Trewartha (1953)** describes that population geography is the spatial study of human population, concerned with its spatial distribution. In this view Trewartha indicates that importances of population geography lies understanding regional differences in the people covering the earth provide focal point in geography.

The role of geographers in population studies is well expressed by many scholars. In word of Garnier, 'It is the business of context, studying also their causes characteristics and possible consequences.' Population geography may be defiend as the analysis and geographic interpretation of spatial variation of the structure and value of demographic phenomena and these phenomena analyse of size and change of population growth and distribution **Garnier 1978**.

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**2. STUDY AREA:**

The Alaknanda basin extends between 30°00'N to 31°00'N and 78°45'E to 80°00'E, covering of about 11396 sq.km. It represents the eastern part of the Garhwal Himalaya. Out of the total area of the basin 433 sq.km od under glacial landscape and 288 sq.km is under fluvial landscape. Uttarakhand state has eighteen development blocks of Bageshwar, Chamoli, Rudraprayag, Tehri garhwal, Pauri garhwal and Pithoragarh districts.

The Alaknanda river basin is characterised by hilly terrain, deep goarges and river valleys. The town along the bank of Alaknanda river are Badrinath, Vishnuprayag, Joshimath, Chamoli, Nandaprayag, Karnprayag, Rudraprayag, Srinagar and Devprayag. An altitudinal variation from 442m to 7816m in the Alaknanda catchment has given rise to a variety of climate ranging from sub-tropical, temperate, subalpine and to alpine.



Figure-1

**3. METHODOLOGY:**

The study is based on the secondary data to fulfil the objectives regarding demographic aspect like population growth, distribution, density, sex ratio and literacy of the Alaknanda basin tehsilwise. The data is obtained from census of India, district census handbook and publish and unpublished sources. The collected data to analyse and calculate.

**4. OBJECTIVES:**

The main objectives of this paper is:

- To analyse the important demographic aspect in Alaknanda basin.
- To know the changing pattern of demography in the study area.

**5. RESULT AND DISCUSSION:**

**5.1 Demography:** Demography is the statistical and mathematical study of the size composition and spatial distribution of human population. In word of Hauser and Duncan, ‘Demography’ means the study of population change of components such as fertility, mortality, size, territorial distribution and mobility of population (Phatak,1998).

**5.2 Distribution and density of population:** Distribution of population in Alaknanda river basin is not very densely populated as compared to other part of Uttarakhand. The population of the basin was 839393 in 1991; 956321 in 2001; and according to census it is 982632 in 2011. The female population is more (51.65%) as compared to male population (48.7%). Between 2001 and 2011, the density in Uttarakhand as a state has increased from 159 to 189 persons per sq. Km. which is substantial increase.

Table -1

Year	Disrtibution	India	Uttarakhand	Alaknanda basin
2001	Population	1028737436	8489349	956321

	Density	325	159	87
2011	Population	1210569573	10086292	982632
	Density	382	189	90

Source: Census -2001, 2011

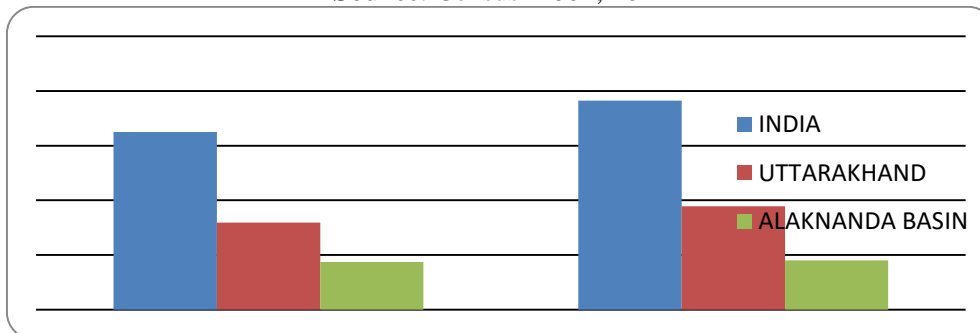


Figure-2

Table-2

Tehsil	2001		2011	
	Populat ion	Den sity	Populat ion	Den sity
Joshimath	39919	17	48202	21
Chamoli	91993	181	99982	197
Pokhari	35462	169	85890	171
Karnprayag	55170	302	56005	306
Tharali	88432	333	89114	335
Gairsain	59383	292	62412	307
Ukhimath	80185	348	87024	378
Rudraprayag	147254	593	91859	370
Jakholi	-	-	63402	589
Srinagar	49800	429	53689	462
Pauri	146074	247	135718	230
Devprayag	100824	331	94441	310
Kapkot	61825	117	64894	123

Source: District census handbook (2001,2011)

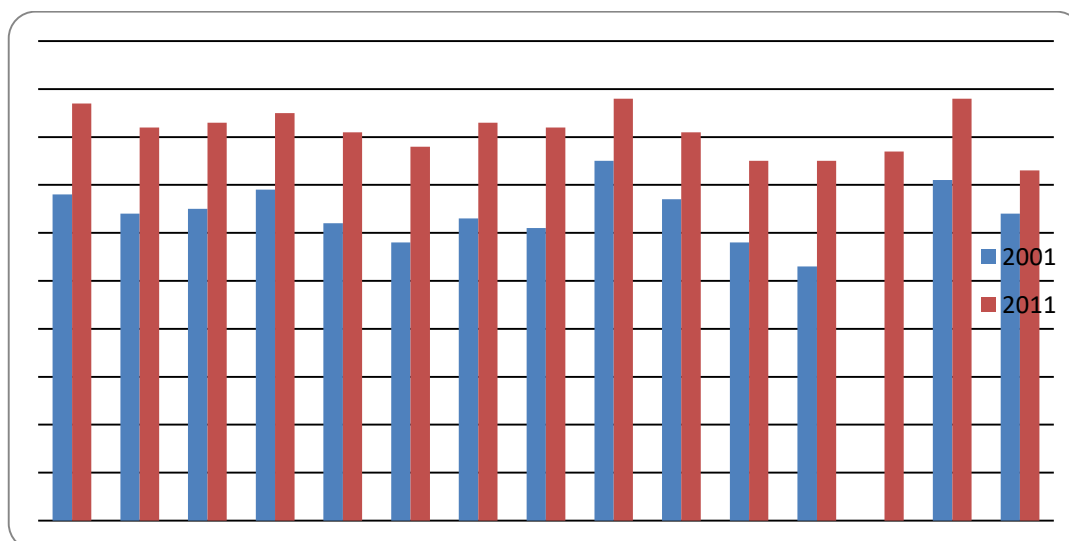


Figure-3 Population density of Alaknanda basin (2001,2011)

5.3 Literacy: The United nation Educational Scientific and Cultural Organisation (UNESCO) has drafted a definition ‘Ability to identify, understand, interpret, create, communicate, compute and use printed and written materials associate with varying contexts.’

According to the **National Literacy Mission**, defines ‘Literacy as acquiring the skills of reading, writing and arithmetic and the ability to apply them to one’s day- to- day life.

According to the census of India, literacy rate of Uttarakhand in 2011 is 88.33 percent and Alaknanda basin literacy rate in 2011 is 81.67 percent. Joshimath, Karnaprayag, Srinagar have the largest literacy rate of 85 to 88 percent respectively. At the other tehils Devprayag, Kapkot, Gairsain, Jakholi have lowest literacy rate of 75 to 78 in 2011.

**Table-3**

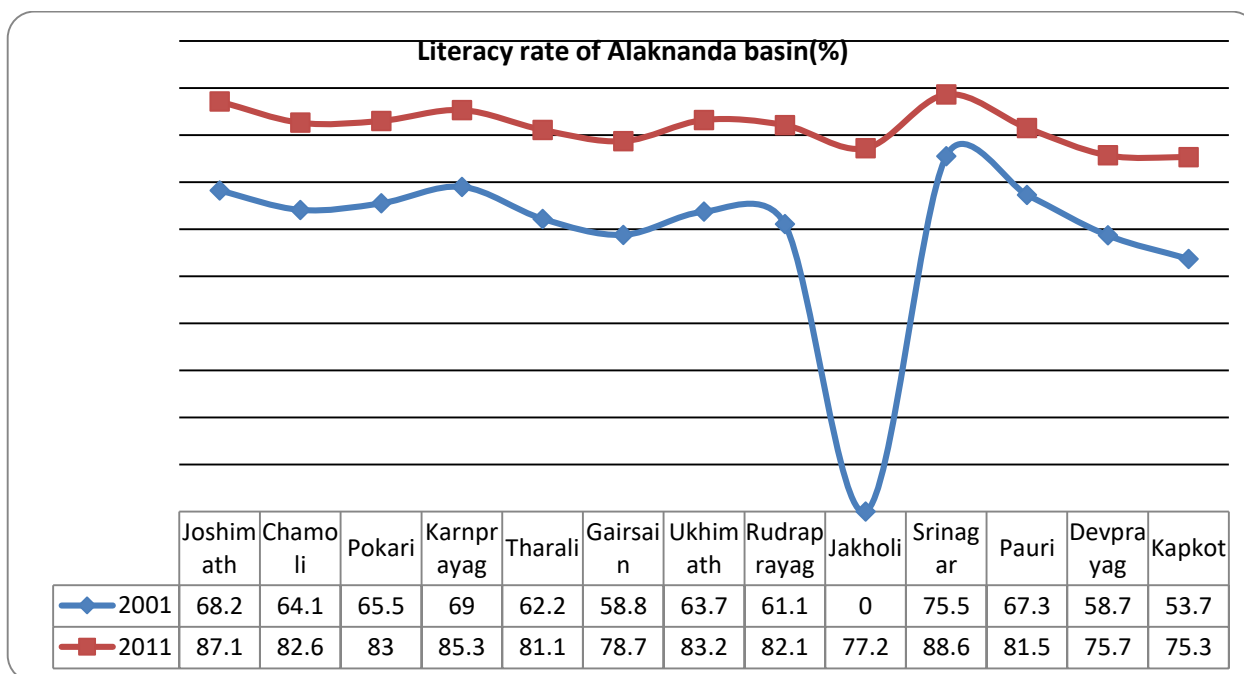
	India	Uttarakhand	Alaknanda basin
2001	64.8	71.6	63.3
2011	73.0	78.8	81.6

Compare literacy of Uttarakhand and Alaknanda basin (2001, 2011)

**Table-4-Tehsil wise literacy rate of study Alaknanda basin**

	2001	2011
Joshimath	68.2	87.1
Chamoli	64.1	82.6
Pokhari	65.5	83.0
Karnprayag	69.0	85.3
Tharali	62.2	81.1
Gairsain	58.8	78.7
Ukhimath	63.7	83.2
Rudraprayag	61.1	82.1
Jakholi	-	77.2
Srinagar	75.5	88.6
Pauri	67.3	81.5
Devprayag	58.7	75.7
Kapkot	53.9	75.3

Source: District census handbook (2001, 2011)



**Figure-4**

**5.4. Sex –ratio:** The sex ratio is the ratio of males to females in a population. In most sexually reproducing species, the ratio to be 1:1, this tendency is explained by Fisher’s principle. Sex ratio is the basic tool for the analysis for the composition of population. Increase in male and female population has also been uneven across rural and urban sector. Females/males ratios over almost all tehsils of study area are substantially lower in urban than in rural areas. The sex ratio of Alaknanda basin (1089) is higher than state average (963). The sex ratio in Jakholi (1186) tehsil is highest in Alknanda basin (1089) and state (963) and national average (943).

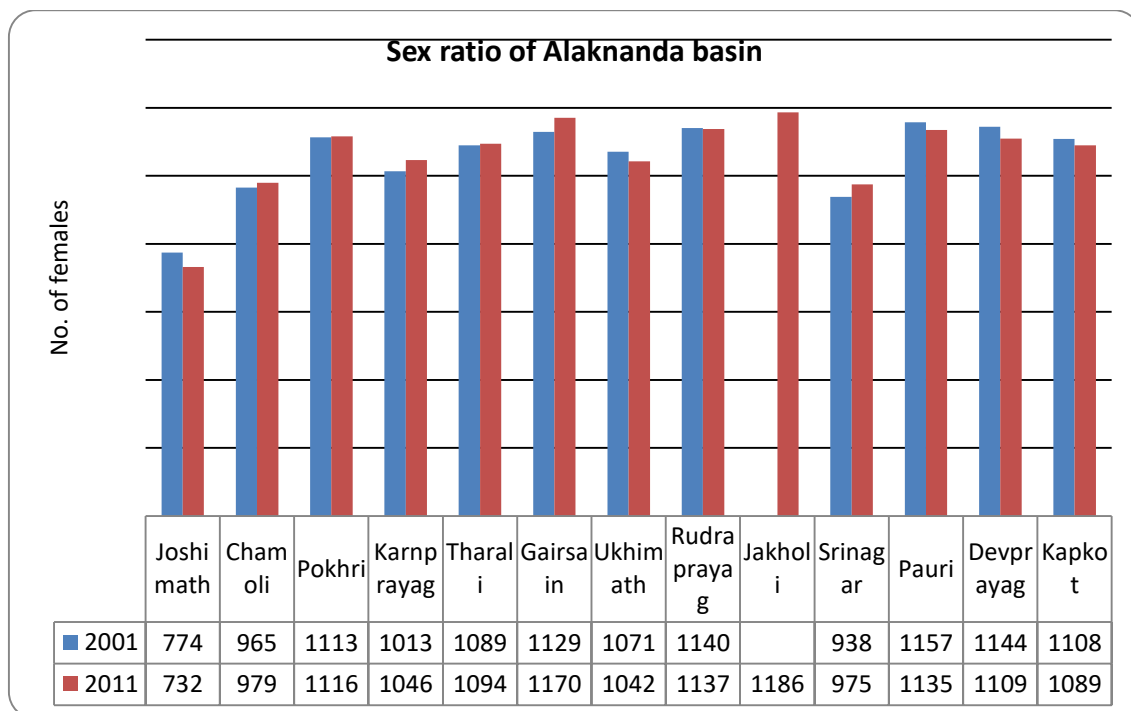


Figure-5 Source- District census handbook (2001, 2011)

## 6. CONCLUSION:

To sum up we can say that there are many dimensions of changing pattern of demography in Alaknanda basin of tehsil- wise. Some people are migrating to big cities, towns their native villages. Geographically, in the upper part of the basin, population is very less and these areas settlement are large in size. The data from the census is further analyzed in a study on out-migration of youth from rural Uttarakhand (Grunwait,2012) . The main push factors are low productivity and infrastructure, medical facilities. High population concentration is located in Jakholi, Srinagar, Rudraprayag, Ukhimath and Gairsain tehsils. It is followed by Tharali, Karnprayag and Devprayag. Because of here an educational hub, administrative offices, religious places, or availability of market or5 district headquarters etc.

Very low population is found in Joshimath, Kapkot, Chamoli and Pokhari tehsils; mainly because of steep slope, high altitude, dense forest and cold climatic condition. Due to permanent snow in Munsiari block (Pithoragarh) there is no human population

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