Social Conditions of Gandak Command Area

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Social conditions of the present study is characterized by the demographic features, means of communication and transport network, market facilities etc. Demographic features of the study area and the state of Bihar have been taken from the Census Record of 2011. The figures presented in the following table will depict some idea of the problems faced by the people of the study area.

Firstly, the population density of the study area is very high in comparison to the statewide population density. This is the general characteristic of this region. The Sex Ratio in the study area is almost similar to that for the whole state. Given the preference of male children, this change seems to reflect increasing season or permanent outmigration from the area. The seasonal migration in search of employment mainly to Punjab, Haryana, Assam, Delhi, Kolkata, Gujarat etc. is a common phenomenon of the people of the region. The literacy rate of the region is also almost similar to that of the state of Bihar.

Table – 1

Gandak Command Area: Demographic Features

Sl. No.	Name of the District	Area (in '000 ha)	Total Population (2011)	Density (2011)	Sex Ratio (2011)	Literacy % (2011)
1.	Muzaffarpur	3172	4801062	1514	900	63.43
2.	Gopalganj	2033	2562012	1260	1021	65.47
3.	Saran	2641	3598660	1363	954	65.96
4.	Siwan	2219	3330464	1501	988	69.45
5.	East Champaran	3968	5099371	1285	902	55.79
6	West Champaran	5228	3935042	753	909	55.70
7.	Samastipur	2904	4261566	1467	911	61.86
8	Vaishali	2036	3495021	1717	895	66.60
	Study Area	24201	31436400	1299	927	62.55
	Bihar State	94163	104099452	1106	918	61.80

Almost all the districts show higher literacy rate except East and West Champaran in comparison to the state of Bihar.

Density

The population density is a relational concept in which man on the one hand and land on the other interacts with each other. That means that the nature of this relationship will speak of both, the present and future possibility of growth in a certain region. Generally in a densely populated area as under the present study, there is limited amount of natural resources. How are the resources utilized to fulfill the requirements of population, will depend upon the nature of demographic structure and density of population in the region. The arithmetic density or overall density of population is very much in practice in these days to know about the man-land ratio in the study area

Sex-Ratio

The male and female play both, the contrasting and complementary roles in the economy. As such, its study is vital for the analysis of two sexes which affect the social and economic relationship within a community. The sex-ratio may be found out by dividing the number of females by the number of males and multiplied by 1000. From the foregoing table-1, it is clear that district of Gopalganj, Saran and Siwan all forming the part of Saran Main Canal is having the Sex-Ratio higher that the average Sex-Ratio of the region while rest of the district which are formed from the Tirhut Main Canal is having sex-ratio lower than the average.

Literacy

Person who can read, write and understand the simple passage of information or notice in any language, is called 'literate'. Literacy is therefore a cultural trait of the population i.e. required for an all-round development of a person. Literacy is rather a measuring stick of the social refinement and development. It is one of the indicators of the quality of population in a certain region for the geographers. For them it is the qualitative dimension of population which is an explicit as well as reliable sign of the socio-economic development. As an influent, its spectrum is very wide encompassing the living standard, economy, caste structure, status of women, educational facilities, technological development, means of transport and communication etc. it is derived as %age of the total population with an equation as follows-

$$\text{Literacy}(\%) = \frac{\text{Total Literate Population of Dostrict} \times 100}{\text{Total Population of District} - \text{Total number of Children of } 0-6 \text{ age group of the district}}$$

The literacy rate of both, the male and female, is far higher in towns. The urban literacy rate, however, is not the same for all the towns. It varies according to the degree of urbanization, depending upon the different time-frames with respect to their evolution.

Development of Irrigation

There are several references to the practice of irrigation from wells, tanks, canals and directly from rivers is available from the history of ancient times. Ancient Indian civilization, by and large, developed in the river valleys. That civilization was well

equipped with the system of irrigation. References to irrigation are abounds in the folk – lore and ancient literatures of the country. Vedas refer to 'avata' or water wells, 'kulya' or cenal and 'sarsi' or dam indicating the fact that devices for irrigating land were known and practiced.

The nineteenth century is a landmark in the history of irrigation in India. It was a century of recurrent famines and droughts. There were 31 famines occurred in the country during the last century. About 18 famines occurred only in the last quarter of the century and the estimated mortality rate from all these famines was 32.4 million approximately. The need for extensive use of water potential and irrigation facilities was felt and irrigation works were undertaken to overcome the devastating famines that ravaged in several part of the country. The recurrence of drought and famines necessitated the development of irrigation to give protection against the failure of crops and to reduce large scale expenditure on famine relief.

In the study area, three agricultural seasons are recognized. The agricultural seasons are recognized. The agricultural year begins with the Kharif (Rainy) season from mid-June through mid- November, followed by Rabi (Winter) Season from mid- November to the end of February or mid- March and then followed by the Summer season, also known as hot season from mid-March until the monsoon rains come in mid-June.

The Gandak Command is primarily a kharif rice growing area. Wheat, Maize and Barley are the principal rabbi crops. Mustard is the major oilseed crop and sugarcane, jute, mesta and tobacco are the most important cash crops. A wide variety of crops are also grown including some perennial crops.

Table – 2

Change in Cropping Intensity in Gandak Command Area

Location	Cropping Intensity in Percent		cropping Intensity Outside the Command Area
	1966 - 67	2004 - 05	
Head Reach	161	163	149
Middle Reach	160	172	153
Tail Reach	150	155	149

Canal irrigation has not brought major changes to the area. The cropping intensity in the tail reach of the Gandak Command was 155 percent during 1984 – 85 (when the work on command area was stopped due to paucity of fund) only 5% more than the cropping intensity of 1966 – 67 before canal irrigation began and only a little more than the cropping intensity outside the command. Gandak project planners, however, had projected a cropping intensity of 180 percent within the command after completion of the irrigation project.

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