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Demographic Aspects of Scheduled Caste and Scheduled Tribe in Different Agro-climatic Regions of Western Rajasthan

B.S. Gupta and Roop Chand
Central Arid Zone Research Institute, Jodhpur 342 003, India

Abstract: A substantial portion of Rajasthan's population consists of scheduled caste and scheduled tribe. They were 76,07,820 and 54,74,881, which formed 17.29 and 12.44% during 1991. But in the case of western Rajasthan, the scheduled caste and scheduled tribe population to total population was 18.93 and 2.52%, respectively. The scheduled castes and scheduled tribe together contributed 21.45% to the total population in western Rajasthan. The density of population, the decennial growth rate of scheduled caste and scheduled tribe in different arid districts/agroclimatic regions are dealt with. Jhunjhunu has highest scheduled caste population density (41), whereas Jaisalmer has minimum population density (1). In the entire western Rajasthan, the density of tribal population was highest in Jalor 9.1 and lowest in Bikaner 0.1. The density of population of scheduled caste and scheduled tribe in western Rajasthan during 1981 was 12.0 and 1.6 persons km^{-2} which became 15.9 and 2.1 persons km^{-2} during 1991. Working population of scheduled caste and scheduled tribe and proportion of main workers, marginal workers to total population in different agro-climatic regions have been dealt with.

Key words: Scheduled caste, scheduled tribe, population density, decennial growth rate, occupation structure, change, agroclimatic regions, western Rajasthan.

Spatial and temporal variations in the density and distribution of total scheduled caste and scheduled tribe population in different arid districts/agroclimatic regions of western Rajasthan play significant roles in the field of population geography. In their spatial distribution in western Rajasthan as a whole, these communities have their own patterns. In order to understand districtwise agroclimatic disparities it becomes inevitable to investigate the most important demographic and human resource dimensions, i.e., the distribution pattern of human being. Previously, Sen (1972 a, b) classified and mapped the macro and micro agroclimatic regions in Rajasthan, showing their agroclimatic and cropping pattern characteristics. This paper deals with both the macro and micro agroclimatic units of western Rajasthan only.

Materials and Methods

The study is based on the analysis of 1991 Census data on scheduled caste and scheduled tribe in different arid districts/ agroclimatic regions of western Rajasthan. The agroclimatic regions of western Rajasthan (Table 1) are based on information in Agriculture Atlas of Rajasthan (Sen, 1972b).

Table 1. Agro-climatic regions of western Rajasthan

Macro Unit		Micro Unit	Districts included	Area (sq. km)
Arid	1a	Arid *kharif* monocropping	Jaisalmer, Barmer, Bikaner, Churu and Jodhpur	133712
	1b	Arid irrigated (*kharif* and *rabi*) cropping	Ganganagar	20634
Transitional between arid and semi-arid	2a	*Kharif* monocropping	Sikar, Jhunjhunu and Nagaur	31378
	2b	Irrigated *rabi* and *kharif* cropping	Pali and Jalor	23477

Agriculture Atlas of Rajasthan, ICAR, New Delhi, 1-51 p., 1972.

Results and Discussion

The general density of population in western Rajasthan varied from district to district during 1991. It ranged from 9 to 264 persons km^{-2}. The most densely populated district in western Rajasthan was Jhunjhunu with a density of 264, followed by Sikar 238, Nagaur 121 and Pali 120. The inequality of density of population in western Rajasthan may be related to many reasons. Density of population depends on the combined effects of different factors namely physical features, fertility of soils, rainfall, irrigation facilities, cultivated area, economic prosperity of the people and industrial and economic development of various regions.

Density of scheduled caste population

The density of scheduled caste population per sq. km was maximum in Jhunjhunu (41) and minimum in Jaisalmer (1). Average scheduled caste population density of western Rajasthan was 16, whereas for the entire Rajasthan state it was 22 persons km^{-2}. In seven districts, namely Jhunjhunu, Ganganagar, Sikar, Nagaur, Pali, Jalor and Churu, the scheduled caste population density was more than that of western Rajasthan as a whole. In the remaining districts, the scheduled caste population density was less.

High density areas are associated with economic prosperity, ideal physical environment, developed agriculture and transport facilities and other favourable conditions. On the other hand, poverty, backwardness, unfavourable natural conditions and lack of facilities are responsible for low population density in other regions. On the basis of scheduled caste population density, western Rajasthan is divided into four regions.

Areas of high population density (> 36 persons km^{-2}): Jhunjhunu (41) and Ganganagar (38) districts come under this category which is spread over 12.72% area of western Rajasthan, covering 30.74% of the total population. Facilities like sufficient rainfall and irrigation have made this area most densely populated. People from other adjoining areas migrate to these two districts for employment in agriculture resulting in higher density. Agriculture is highly developed here; as a result, the districts are the largest crop producers in western Rajasthan. Wheat, sugarcane, pearl millet, rape seed, mustard and cotton are cultivated on

large scale. The areas of these two districts are self sufficient in food production, therefore, population density is higher as compared to other districts. A large number of schools and colleges, drinking water facility, availability of electricity, etc., are the other important factors contributing to increase in population density. Copper mine in Jhunjhunu and sugarcane industries in Ganganagar are also responsible for higher population density.

Areas of moderate density of population (25-36 persons km^{-2}): Sikar with an area of 3.7% and population of 7.79% of western Rajasthan is the only district which comes under this category. The density of population in this district is more in Sikar, Neem Ka Thana and Laxmangarh tehsils where agriculture is well developed.

Areas of low density of population (13-24 persons km^{-2}): Nagaur, Pali, Churu, Jodhpur and Jalor are the five districts of low density of scheduled caste population. These districts cover 38.53% of the total area of western Rajasthan, and include 46.34% of scheduled caste population. Makrana in Nagaur district is world famous for its marble. Thousands of people are employed here. In Didwana of Nagaur district, the salt industries are developed. Agriculture in Churu and Jodhpur is not developed due to non-availability of water and electricity. Pali and Jalor districts have relatively fertile areas which could not be utilized agriculturally due to lack of irrigation facilities, resulting in low density of scheduled caste population. Some minerals like lime stone and gypsum are exploited in Churu, yet it has also not been able to attract population.

Areas of very low density (< 12 persons km^{-2}): Barmer, Bikaner and Jaisalmer are the districts in this category with 17.08% scheduled caste population of western Rajasthan. Jaisalmer, Bikaner, and Barmer extend over a large area where due to sandy plains, deep ground water, sand dunes, dust storms, low average annual rainfall and remote location, not only scheduled caste population density is very low but general population density is also low. Jaisalmer, where oil is being explored and irrigation water is also expected to be available soon, a rise in population density is expected in the future. Presently dry land farming and animal husbandry are the main occupations of the people. Irrigation facilities available from Indira Gandhi Canal in western Bikaner may cause greater concentration of scheduled caste population in Bikaner as compared to that in Jaisalmer and Barmer. Population movement is rapid in areas served by canal irrigation. People of Barmer, specially rural, are mostly dependent on rains for meeting their requirements.

Density of scheduled tribe population

Backward culture, unsuitable physical environment and tribal population are complimentary to each other. Not only in western Rajasthan but all over Rajasthan, the tribals are concentrated only at those places where civilized people have not stepped in.

In the entire Rajasthan, the density of scheduled tribe population in 1991 was 16 persons km^{-2} whereas it was 2 in western Rajasthan. With respect to density only four districts namely Jalor (9.1), Pali (6.5), Sikar (6.3) and Jhunjhunu (5.2) are important in western Rajasthan. In Barmer

and Jodhpur, scheduled tribe densities are low. Districts like Jaisalmer, Bikaner, Churu, Ganganagar and Nagaur have tribal population densities of less than one. Districtwise distribution of tribal population is unequal, which indicates that even today the population has its separate and specific concentration zones. On the basis of tribal population density the districts of western Rajasthan may be divided into four regions.

Areas of high density (> 6 persons km^{-2}): Jalor, Pali and Sikar districts are included in this category, covering 51% tribal population and 14.7% of area of western Rajasthan.

Areas with moderate density (3.1-6.0 persons km^{-2}): Jhunjhunu district occupying 2.83% of the area and 6.9% of schedule tribe population is included in this category.

Areas of low density (1.1-3.0 persons km^{-2}): Barmer and Jodhpur districts are categorised as low density regions. These two districts occupy 24.5% geographical area of western Rajasthan with 32.8% of scheduled tribe population.

Areas with very low density (< 1 person km^{-2}): This category is confined to Jaisalmer, Churu, Ganganagar, Nagaur and Bikaner districts. Area occupied by these districts is 57.9% of western Rajasthan covering 44.9% of scheduled tribe population.

Density of population in different agro-climatic regions of western Rajasthan

The general density of population in western Rajasthan increased from 65 persons km^{-2} in 1981 to 84 in 1991. The density of population varies from district to district under different agro-climatic regions. In *kharif* monocropping region under the arid zone, the general density of population during 1991 was 50 persons km^{-2}. Jodhpur (94), Churu (92) and Barmer (51) had higher densities than the arid *kharif* monocropping region as a whole. Bikaner (44) and Jaisalmer (9) had less density (Table 2). In Jaisalmer, the density retained its lowest ranking during 1971-91.

The density of scheduled caste population in arid *kharif* monocropping region of western Rajasthan increased from 6.4 persons km^{-2} in 1981 to 8.5 in 1991. Scheduled caste population also differs from district to district in western Rajasthan. In *kharif* monocropping region of arid zone, the density of scheduled caste population was 8.5 persons km^{-2}, which is greater than the density of Jaisalmer (1), Bikaner (8.3) and Barmer (7.8) and its density is less than Churu (18.5) and Jodhpur (14.4).

Similarly, the density of scheduled tribe population in western Rajasthan increased from 1.6 persons km^{-2} in 1981 to 2.1 in 1991. In *kharif* monocropping region, the density in Jaisalmer (0.40), Churu (0.40) and Bikaner (0.10) was less than that in Barmer (3.0) and Jodhpur (2.7).

Ganganagar is the only district which comes under arid irrigated *kharif* and *rabi* cropping. The general density of population was 98 persons km^{-2} during 1981 and 127 persons km^{-2} during 1991. The increase in density during the decade was mainly due to irrigation facilities. In the case of scheduled caste, the density in 1981 was 29 and increased to 38 persons km^{-2} during 1991. The density of scheduled tribe was less than 1 person km^{-2} during 1981 and 1 in 1991.

Table 2. Density of population, general, scheduled caste (SC) and schedudled tribe (ST) in different districts/agroclimatic regions of western Rajasthan

Micro unit	District	Population 1991			Area (sq. km)	Density (persons/sq. km)		
		General	SC	ST		General	SC	ST
1(a)	Jaisalmer	344517	50141	16697	38401	9	1	0.40
	Bikaner	1211140	225796	3195	27244	44	8	0.10
	Barmer	1435222	225324	84232	28327	51	8	3.00
	Churu	1543211	310694	7189	16830	92	18	0.40
	Jodhpur	2153483	328920	60811	22850	94	14	2.70
	Total	6687523	1140875	172124	133712	50	9	1.30
1(b)	Ganganagar	2622777	775800	8945	20634	127	38	0.40
2(a)	Nagaur	2144810	423273	4796	17718	121	24	0.30
	Sikar	1842914	258102	48887	7732	238	33	6.30
	Jhunjhunu	1582421	243287	30528	5928	264	41	5.20
	Total	5570145	924662	84211	31378	178	29	2.70
2(b)	Jalor	1142563	203241	96324	10640	107	19	9.10
	Pali	1486432	269736	80265	12387	120	22	6.50
	Total	2628995	472977	176589	23027	114	21	7.70
	W. Rajasthan	17509490	3314314	441869	208751	84	16	2.10
	Rajasthan	440059990	7607820	5474881	342239	129	22	16.00

District primary census abstract for scheduled caste and scheduled tribe.

In the transitional area between arid and semi-arid monocropping regions, the density was 134 persons km^{-2} in 1981 and 178 persons km^{-2} during 1991. Similarly, the density of scheduled caste and scheduled tribe, in this zone during 1981 were 21.8 and 2.0 persons km^{-2}, respectively, which increased to 29 for scheduled caste and 3 for scheduled tribe, during 1991.

In the transition area between arid and semi-arid irrigated *rabi* and *kharif* cropping, the density during 1981 was 93 persons km^{-2} which increased to 114 persons km^{-2} during 1991. Similarly, the density of scheduled caste and scheduled tribe in this region were 16.5 and 6.2 persons km^{-2} during 1981 which increased to 20.5 and 7.7 persons km^{-2}, respectively, during 1991.

Growth rate of scheduled caste and scheduled tribe

During 1981-91, scheduled caste and scheduled tribe recorded decennial growth rates of +32.21% and +36.09% in western Rajasthan whereas, in Rajasthan state, it was +30.30% and +30.88%, respectively. This, however, is variable in different agroclimatic regions as is evident from Table 3. Arid *kharif* mono-cropping region registered a growth rate of +33.39 and +49.77 in scheduled caste and scheduled tribe during 1981-91. But in arid irrigated *kharif* and *rabi* cropping (Ganganagar district), the decennial growth rate of scheduled caste and scheduled tribe was highest. Some of the main factors for the abnormal growth

Table 3. Spatial distribution of general population, scheduled case, scheduled tribe population and decennial growth rate in different agroclimatic regions of western Rajasthan

Mapping unit	Agroclimatic regions	Area (sq. km)		Decennial growth rate (1981-91)
1(a)	Arid *kharif* monocropping	133712	Gen.	+ 32.22
			SC	+ 33.39
			ST	+ 49.77
1(b)	Arid irrigated *kharif* and *rabi* cropping	20634	Gen.	+ 29.00
			SC	+ 31.57
			ST	+ 75.56
2(a)	Transitional between arid and semi-arid *kharif* monocropping	31378	Gen.	+ 32.07
			SC	+ 35.49
			ST	+ 34.49
	Western Rajasthan	208751	Gen.	+ 29.86
			SC	+ 32.21
			ST	+ 36.09
	Rajasthan state	342239	Gen.	+ 28.44
			SC	+ 30.30
			ST	+ 30.88

District primary census abstract for scheduled caste and scheduled tribe

rates are high birth rate and inmigration of agricultural labours. Transitional zone between arid and semi-arid *kharif* monocropping region registered a growth rate of 35.49% in scheduled caste and 34.49% in scheduled tribe, as against 24.62% and 24.31% in scheduled caste and scheduled tribe in transitional zone between arid and semi-arid irrigated *rabi* and *kharif* cropping .

Working population for scheduled caste and scheduled tribe

The main workers were classified into nine categories namely, (i) cultivators, (ii) agriculture labours, (iii) livestock, forestry, fishing, hunting, plantations orchards and allied activities, (iv) mining and quarrying, (v) manufacturing, processing, servicing and repairing in other than household industry, (vi) constructions, (vii) trade and commerce, (viii) transport, storage and communications, and (ix) other services. The working population is reclassified into three categories namely, (i) cultivators, (ii) agriculture labours, and (iii) workers other than cultivators and agriculture labours. Marginal workers were not included in total main workers (Table 4).

Farm workers of scheduled caste: Rajasthan being an agrarian state, the majority of population is engaged in agriculture. Similar is the case with western Rajasthan. People are dependent upon farming directly or indirectly. During 1991, 30.40% of general population in western Rajasthan were engaged as main workers, out of which 60.33% were cultivators and 9.75% were agriculture labourers (Table 4). 75.82% scheduled caste workers were dependent upon farming directly or indirectly in west-

Table 4. Distribution of general, scheduled caste and scheduled tribe working population in agroclimatic regions of western Rajasthan (1991)

Mapping unit	Agroclimatic regions	Caste	Total workers	Cultivators (%)	Agril. labours (%)	Other workers (%)	Marginal workers (%)
1(a)	Arid monocropping (kharif)	Gen	206889	63.1	5.4	31.4	24.6
		SC	370862	66.2	10.3	23.3	26.5
		ST	56579	68.6	11.1	20.2	27.1
1(b)	Arid irrigated (*Rabi* and *kharif*)	Gen	790833	52.3	18.2	29.3	23.5
		SC	237442	42.0	39.6	18.3	26.9
		ST	2719	15.0	16.6	68.3	11.9
2(a)	Transitional between arid and semi-arid monocropping	Gen	1565407	61.9	7.9	30.0	25.5
		SC	277646	54.6	19.7	25.6	23.75
		ST	20520	64.4	11.0	24.5	30.6
2(b)	Transitional between arid and semi-arid *Rabi* and *Kharif* cropping	Gen	834170	57.8	15.7	26.3	24.4
		SC	156949	45.9	30.9	23.1	23.0
		ST	65045	57.9	31.4	10.6	24.0
	Western Rajasthan	Gen	5259308	60.3	9.7	29.9	24.7
		SC	1042899	54.5	22.6	22.7	25.1
		ST	144855	62.2	20.3	17.4	25.9
	Rajasthan state	Gen	13915071	58.8	10.0	31.2	22.9
		SC	2450107	49.3	21.4	29.1	21.9
		ST	1908531	76.1	13.5	10.3	33.1

ern Rajasthan during 1981, whereas, 77.21% were dependent during 1991. During 1981-91, there was an increase of farming community by 1.39%. During the same period in Rajasthan state, there was an increase of 0.80% farmers. During 1991, the highest percentage of farm workers was found in the district of Churu (86.58%), followed by Jalor (85.32%) , Barmer (83.87%), Ganganagar (81.65%), Bikaner (72.92%), Pali (70.31%), Jhunjhunu (68.55%), Jodhpur (66.27%), Sikar (64.63%) and Jaisalmer (58.44%). From the foregoing analysis, it is revealed that in the districts Jodhpur, Pali and Sikar where the trend of urbanization and degree of literacy were higher, the percentage of population engaged in agriculture sector was less. In other words, there is a negative correlation between the degree of urbanisation and percentage of farm workers. Among the different agroclimatic zones, the working population of scheduled caste was the highest (33.18%) in transitional zone between arid and semi-arid irrigated *rabi* and *kharif* cropping, followed by arid *kharif* monocropping (32.51%), arid irrigated *rabi* and *kharif* cropping (30.67%) and transitional zone between arid and semi-arid *kharif* monocropping (30.03%). Among scheduled caste, the highest percentage of agriculture labours was found in arid irrigated *rabi* and *kharif* cropping (39.63%) and the least in arid *kharif* monocropping (10.39%).

Farm workers of scheduled tribe: In western Rajasthan 32.78% of scheduled tribe were engaged as main workers out of which 62.22% were cultivators and 20.33% agriculture labours, whereas in Rajasthan state 76.13% were cultivators and 13.54% agriculture labours (Table 4).

The percentage of farm workers varies from district to district. The highest farm workers of scheduled tribe during 1991 were in Jalor (93.51%) and the least in Ganganagar (31.70%). In eight districts of western Rajasthan, i.e., Jaisalmer, Bikaner, Churu, Jodhpur, Ganganagar, Nagaur, Sikar and Jhunjhunu, farm workers are less than western Rajasthan as a whole and Rajasthan state. Among different agroclimatic zones, highest workers in farming community were found in transitional zone between arid and semi-arid irrigated *rabi* and *kharif* cropping 89.79%, i.e., in Pali and Jalor districts, and least in Ganganagar, i.e., arid irrigated *kharif* and *rabi* cropping 31.70%. The number of farm workers decreased in 1991 from 1981 in all the districts except Bikaner, Barmer and Jalor districts. There were almost same farm workers during 1981 and 1991 in western Rajasthan, whereas in Rajasthan state there was an increase of farm workers by 1.31%.

Other workers: This category consists of segment of workers engaged in the occupations like forestry, livestock, fishing, mining and querrying, i.e., all main workers other than cultivators and agriculture labours. Other workers in general population during 1991 were found to be highest in Jaisalmer district (45.54%), followed by Bikaner (40.80%) and Jodhpur (39.81%). In the case of scheduled caste, maximum other workers were also found in Jaisalmer (41.56%) followed by Sikar (35.37%) and Jodhpur (33.73%). In the case of scheduled tribe, highest percentage of other workers were found in Ganganagar district (68.30%) (Table 4), followed by Bikaner (60.02%). Percentage of other workers in scheduled caste in Rajasthan state was higher (29.19%) than in western Rajasthan (22.79%). But in the case of scheduled tribe the percentage of other workers in western Rajasthan was higher (17.44%) than that in Rajasthan state (10.33%).

The economy of western Rajasthan and Rajasthan state is mainly dependent upon farming. Hence, minor section of the population is engaged in occupations other than cultivation. There is uneven distribution of minerals, poor means of transportation and communication, unfavourable climatic conditions, shortage of coal and petroleum, source of energy impediment in the growth of trade and industries in western Rajasthan and Rajasthan state. Consequently, industries could not flourish in western Rajasthan and this has retarded the growth of important activities like mining, quarrying, manufacturing, transportation and communication. Industrial backwardness has forced the majority of population to become dependent on agriculture, which is indicative of agro based industries.

Marginal workers: In 1991, 24.71% of western Rajasthan's general population were in marginal worker category. 25.18% of scheduled caste population in the region were in this category, whereas, it was 21.92% in the case of Rajasthan state. Among the scheduled tribe, it was 25.95%

in western Rajasthan and 33.17% in the case of entire Rajasthan (Table 4). The percentage of marginal workers to total workers in scheduled caste during 1991 was less than scheduled tribe population in Jaisalmer, Barmer (arid *kharif* monocropping region), Sikar, Jhunjhunu (transitional between arid and semi-arid *kharif* monocropping), Pali (transitional between arid and semi-arid *kharif* and *rabi* irrigated region), western Rajasthan and Rajasthan state as a whole. The percentage of marginal workers in scheduled caste during 1991 was the highest in Jhunjhunu (32.77%) and the lowest in Jodhpur (11.92%).

Among the tribal population, the percentage of marginal workers in western Rajasthan was 25.95%, which was higher than that in scheduled caste (25.18%). The percentage of marginal workers in the case of scheduled tribe during 1991 was maximum in Jhunjhunu (41.77%) and minimum in Bikaner (6.15%). Among the tribal population, the percentage of marginal workers to total workers was higher than the scheduled caste and general population in Jaisalmer, Sikar, Jhunjhunu, Pali and western Rajasthan and Rajasthan state as a whole during 1991.

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