

Problems of rural development in flood prone Dariapur Anchal of Saran district (Bihar)

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Abstract

The paper purports to highlight the problems of rural development in flood - prone Dariapur anchal of Saran district (Bihar). Its proneness to flood is due to the fluvial reasons. Firstly, it is in the inter-conal section of the Gandak cone. The inter-cones are generally water receptacles in the region under review. Secondly, its Hardia (in the east) and Mahartha (in the west) Chauras are so sensitive to the water logging that in local folk-saying it is conceived to become submerged even under water, water only made by frogs.

The methodology here used is the observational - descriptive in which tools are the statistical tables and the map of its abiotic setting. The study has shown that the pace of rural development which remained slow till before the setting up of the Rail wheel factory at Bela near Block office has gained momentum and has transformed the landscape even in an adverse environment. Its deterministic role is over while the possibilistic doctrine has become a reality in this part of Saran district.

Keywords: population pressure, work-force, geographical density, illiteracy, general literacy, female literacy, rural service centre, rural industry, development level and industrial intensity

Introduction

Abiotic Setting

The south eastern section of Saran district Dariapur anchal extending from the latitudes 25°45'N to 25°54'N and longitudes from 84°55'E to 85°10'E has an area of 225.72 km² and a total population of 2, 96,164 persons (2011). It is approachable by both, the road and rail within an hour from Chapra, the Distt. Hqtrs and within one and half hour from Muzaffarpur, the commercial capital of Bihar. Patna, the state capital can be approached rather sooner than both Chapra and Muzaffarpur.

The landscape in Dariapur anchal is made of a dead level depositional plain, drained by Mahi and its two tributaries i.e. Dabra and Gandaki. Mahi River is a significant physical feature in this anchal which from hydrographic point of view clearly divides it into the two unequal halves, the bigger in the east and the remainder in the west (Fig 1). The Wn one is prone to flood by both, the back flow of Ganga into its tributaries and S pill from Ghaghara River. The flood however, is not only a curse but a boon as well by spreading fresh silt and making the soil naturally fertile (Singh S.B. 1986)^[1]

Table 1: Pressure of population (1961-2011)

Census Year	Area in Hect	Total Population	Cumulative % growth	Per capita Land	Density of population km ²
1961	22572.00	98682	-	0.23	437.18
1981	.....	143878	45.79	0.16	637.41
2001	.....	228372	58.72	0.09	1011.74
2011	.....	296164	29.68	0.07	1312.08
Cumulative % growth 1961-2011			200.11		

Source: District census Handbook, Saran - 1961 and 2011, Series -11, Part XII-B.

Population Pressure

In an area of 225.72 km², this section of the district reserves a total population of 2, 96,164(2011) persons. The population pressure has increased fastly over the 50 years during 1961-2011 (Table 1). The cumulative percentage growth in the beginning (1961-81) over 20 years has been worked out to 45.79%, followed by 58.72% Cumulative growth in the next 20 years during 1981-2001. Yet more startling is the cumulative growth of over 200% during 50 years in between 1961 and 2011.

Its immediate effect is in the extraordinary swelling of the geographical density of population from 413.18 persons in 1961 to 1312.08 persons Km² in 2011. The swelling however, which was slow in the beginning (1961-81) has

gained momentum later on during 1981-2001 and upward till now (2011). The geographical density of population which was 637.41 persons in 1981, has gone upto 1312.08 persons per km² in 2011. Its negative effect on the size of per capita land is very profound. It was nearly quarter of one hectare (0.23) in 1961 but it has shrunk to 0.07 hectare in 2011 i.e. nearly less than two 'kathas' of land per head. That means now the cadastral resource is inadequate even for mere subsistence. It may entail into either shifting of the work force from the farming to non-farming activities or even out - migration of the work force from the area under review. In either way it indicates increasing pressure on the land. It has aptly been observed that "An ominous impact of the unbridled and unprecedented growth of population is

visible in the diminution of the per capita land to the extent to lose even the meaning as far as its viability in terms of

the maintenance of a person is concerned" (Parashar S. 2007: P-286) [2].

Table 2: Dariapur C.D. Block: Literacy

Census Year	Total Population	Total Literates	Percentage	Males	Male Literates	Percentage	Females	Females Literates	Percentage
1961	98682	18530	18.77	46005	15574	33.85	52627	2956	05.61
1981	143878	36722	25.52	71608	30106	42.04	72270	6616	09.15
2011 (over 7 years age)	296164	141803	58.77	52224	87089	70.47	143940	54714	46.49
Saran Dist (2011)	3598660	2157454	65.96	2622821	1285767	77.03	1929041	871767	84.42
Bihar State(2011)	103804637	54390254	63.82	54185347	32711975	73.39	49619290	21678279	53.33

Source: As of the Table 1

Literacy in Dariapur C.D. block as shown in the column 4th, 7th and 10th of the Table 2 as percentage of the total population till 1981 and of over seven years of age of 2011 as well as of the total males and females, is indicative of a consistent increase in the general literacy rate over the period between 1961 and 2011. But the sex-wise differential in general literacy is worth mentioning. In case of the males, it accounts for 70.47% while in that of the females, it is 46.49% in 2011. The percentage increase however, in case of the females is more rapid i.e. from 5.61% in 1961 to 46.49% in 2011 while the corresponding increase in case of males is from 33.85% in 1961 to 70.47% in 2011. It is an

evidence of the growing emphasis on the literacy and education of females in the anchal.

Dariapur anchal compared to both, the district under study and the State of Bihar, is far behind with regard to the level of literacy. The general literacy rates as contained in the Table 2 are 58.77%, 65.96% and 63.82% (2011) for the anchal, district and state respectively. Literacy being one of the indicators of development, the anchal under study is trailing behind the district and so is true of the male and female literacy rates as well. The development level of Dariapur anchal in this regard is lower than both the district and state of Bihar.

Table 3: Number of Illiterates 1961-2011

Census Year	Total Population	Total Literates	Total Illiterates	Male Literacy (%)	Female illiteracy (%)	Female Literacy (%)	Female Illiteracy (%)
1961	98682	18530	80152	33.85	66.15	05.61	94.39
1981	143878	36722	107156	42.04	57.96	09.15	90.85
2001	228372	84189	144183	49.47	50.53	23.50	76.50
2011	296164	141803	154361	70.47	29.53	46.49	53.51

Source: As per the Table 2

It is evident from both, Table 2 and 3 that the general literacy rate is on rise in the anchal as well as in case of both, the males and females. It is sufficient for the pleasure of demographers, planners and policy makers. But on the other hand, the upsurge in the number of illiterates in all the decades here under review is problematic with respect to development. The illiterates outnumbering the literates generally fail to understand the crux of the problem which is to be confronted during the drives of development process. Sometimes, they become obstacles in the area before development schemes. The foregoing Table 3 further reveals that the number of illiterates both in Saran district and in the state of Bihar has for the first time become lower than the number of literates. But in the anchal under review, the number of illiterates are still higher than the number of literates.

Thus it appears that the development level of Dariapur anchal in this regard is far lower than that of both, the district and state

Table 4: Work Force, 1961-2011

Census Year	Total Population	Workers	Percentage	Non workers	Percentage
1961	98682	18530	18.77	80152	81.23
1981	143878	36722	25.52	107156	74.48
2001	228372	84189	36.86	144183	63.14
2011	296164	71466	26.65	196690	73.35

Source: As per Table 3

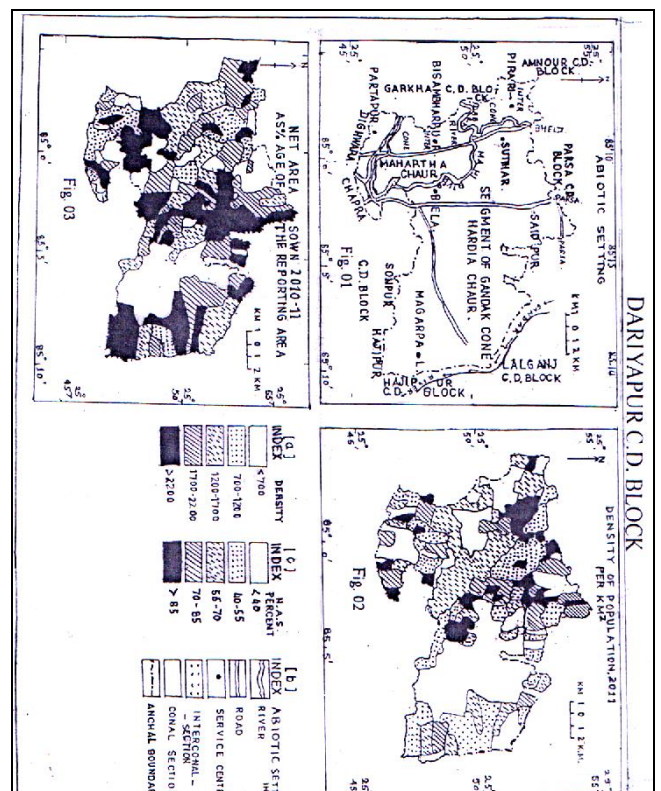


Fig 1

The work force as contained in the Table 4, is revealing of a very high dependency ratio in which only 28.19% of the total population is composed of the workers, main and marginal taken together while more than 2/3 (71.81%) of the total population is composed of the infant and adolescent under 19 years of age and invalid over 60 years. Apparently, it is indicative of an acute pressure over the working population i.e. about only one-fourth of the total population. More so, with the declining percentage of the workers from 32.19% in 1961 to 28.19% in 2001, the economic pressure further poses to become explosive in terms of the population resource relationship.

The decline in the percentage strength of workers in 1981 in comparison to 1961 as detailed in the Table 4, may be assigned to an incessant addition of the young population because of a decline in the death rate while the birth rate being constant and unaffected by the measures adopted by the Family Welfare, previously Family Planning.

The work force in 2001 accounting for 28.19% of the total population is more potential than that of 1981 (24.59%). The corresponding percentage in case of the male work-force though had only nominal decline from 43.58% in 1981 to 43.31% in 2001, it is encouraging in the sense that the increase in young population has at least been slowed down during 1991-2001. The trend in case of the female work-force is not the same as in the case of the males. It shows rather an ambiguous trend with 19.64 %, 5.74 % and 12.75 % in 1961, 1981 and 2001 respectively. The decline in this case from 1961 to 1981 is inconsistent with the general trend. Besides, it is reverse of the total work-force. It may be on account of a faulty enumeration at the time of census or error in the printing.

Impact of Hardia and Mahārtha Chāurs Cultivable Land.

The impact of Hardia and Mahārtha chāurs is tangible on

the extent of net area shown in the area under study. It is evident that the net cultivated land is under 40% of the total area reported in the area occupied by these chāurs. Not only this but also in villages situated along the chāurs the extent of net cultivated land is from 40% to 55% (Fig.3). That means the cultivability of land in this Anchal to a very great extent is determined by the hydrographic conditions prevailing in these chāurs. The extent of cultivability exceeds the limit of 70% of the area reported only in those villages which are away from the chāurs, situated on natural levies long-long ago formed by the ancient rivers like Gandak, Gandki, Chhoti Gandaki etc.

Rural Industries

Rural industries with respect to its type and nature over the last 40-50 years have largely changed in Dariapur anchal. The weaving of cloth and blanket which was conspicuous as a cottage industry in 1961, is on decline and in its place now, the engineering and electric works have gained prominence. Rice, flour, pulse and oil-milling being concerned with the food for both the rich and poor, are almost stable in the anchal whereas others facing competition with the foreign goods, have dwindled and are almost dead and extinguished. The increasing use of modern facilities (cycle, scooter, Rickshaw) of life, has further broadened the scope of repair works in the anchal. Now on every cross - road, there is at least a shop of the cycle repair. The change in the nature of rural industries has its impact on the number of persons employed in the industry as well. The industrial activities in 1961 were Conducted by 1253 households but at present, leaving a few with the blanket weavers, according to experience, they are now few and far between. Over the recent few years as well (1997-98 and 2005-06) there is instability with regard to both, the number of registered units and the number of persons employed therein.

Table 5: No. of registered industrial units and of persons employed in small scale industries, 1997-98, 2005-2006

	1997-98	98-99	99-2000	2000-01	01-02	02-03	03-04	04-05	05-06	Average
No. of Units	06	02	-	05	04	03	02	-	-	2.3
Persons employed	20	06	-	10	16	10	02	-	-	7.11

Source: Bihar Vittiya Sarvekshan 2006-07

Table 6: Industrial intensity (Based on the average of nine years from 1997-98 to 2005-06)

Unit average of nine years	Ratio (x)	Persons employed (average of years)	Ratio (y)	X+Y	Industrial intensity
2.30	3.03	7.11	1.83	4.86	2.43

It appears that even the registered units are short-lived and likewise the number of persons employed in those units is highly fluctuating. Probably, fluctuations are due to the unstable state of economy in the anchal. Units of a certain type of industry are registered with hopes and aspirations but when they run under loss, they are bind up and then units from some other types are set-up. Thus for want of fund and due to the inherent weak economic base of the entrepreneurs, the death and re-birth of the industrial units are frequent in the anchal.

As a result, only a few of the units on average remain alive. The average of the industrial intensity for nine years from 1997-98 to 2005-2006, has been worked out to only 2.4. Similarly as shown in the Table 6, the number of persons employed on average for the nine years has been worked out to 7.11. Its ratio with the district with regard to the units and employed persons is of 3.03 and 1.83 (Table 6). The

industrial intensity calculated is 2.43 i.e. the lowest in Saran district. It may be attributed to its isolation from Sonepur and Dighwara towns, resulting from its uncongenial hydrographic conditions which hamper movement at least for six months in a year. Both, from Dighwara and Sonepur, it is only uneasily accessible and that too after a great effort. Here rural service centres even of the lowest order in the hierarchy, ascertained for Saran district, are only Bela, Sutihar, Pirari, Pratappur, Magurpal Nuran, Bishambharpur, Sajapur Matihan and Saidpur. They are far apart from each other as well as, far from the villages which they have to serve. According to the population of 2011 however, some more service centres with more than 1% as commercial population have come into existence.

The low development level discerned up till now is now full of hopes after the setting of Rail wheel factory at Bela near the Block headquarters. Its road linkage to Naya Gaon

Railway station and further via Govind Chak to Pahleja-Digha Ganga Rail and Road bridge, has brought the area nearer to Patna, the distance being only 27 kilometers i.e. motorable hardly within half an hour from the factory site to the state capital. At the same time, Sitalpur-Sonho road via Dariapur and Parsa has been increased in width, facilitating bus services originating from Siwan-Gopalganj and even from beyond the UP - Bihar border to pass through this road and to reach over Patna and even up to Ranchi (Jharkhand). During the same period roads connecting villages have been made metalled. Now only lanes and streets connecting doors, within villages are unmetalled.

The construction of bridges over Mahi River and over its tributary at Mujauna has brought about a rejuvenation in the agro - economy of the anchal. There are three bridges hardly within a distance of one Kilometer on Mahi River of which the bridge at Bramua completes the linkage between the eastern and western sections of the anchal which has earlier been obstructed by Mahi River. Another bridge near Siwala at Bela has provided the same sort of linkage in the central section of the anchal. The third bridge northward near Bhusi tola is likewise serviceable in the northern section. Altogether with these developments, the anchal now is much better with respect to the infrastructure of socio-economic development. Its immediate outcome is the evolution of new rural service centres at the two ends of the bridge sites.

The role of electrification in the recent development is worth mentioning. Now there is no village without electrification. Even tolas and the dispersed houses are having electric connections. As a result, with the availability of electric energy now here people can enjoy almost all the modern amenities and facilities of life.

Rural Service Centers

Since it is essential to deliver rural goods and services to the urban markets and urban services and products to the rural population for creating an integrated system of production and exchange (Singh R. B. 1986)^[1]

The pre-existing service centres namely Sutihar, Bela, Saidpur Pirari, Bishambharpur, Pratappur, Mangarpal Nuran and Sajanpur Matihan with respect to the balanced spatial organization are not sufficient to provide adequate services to the people.

The travel distance between the service centre and the villagers severed is an important aspect of the I.R.D. The standard distance (Roy P. and Patil B.R. 1977) in this regard, fixed in uniformity with observations (Thaha A. and Thaha M.1979)

Conclusion and Suggestion

It has been established from the foregoing study that the human endeavour and ingenuity can change the destiny of people even in adverse environment. Here the area of study which grappled for over sixty years for the facilities and amenities of life, has become successful only within ten years during 2010-2020. There is no gain saying from the fact that the endeavours which were made prior to 2010, have also contributed to the achievement in the area concerned.

The pace of development which is at present, will continue to exist provided the policy-makers continue to perform their duties. Besides, the awareness of the vigil people will be indispensable for development.

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