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SITUATION OF RURAL INFRASTRUCTURAL FACILITIES IN KOTA PANCHAYET OF AUSGRAM – II BLOCK OF EAST BURDWAN DISTRICT, WEST BENGAL, INDIA

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ABSTRACT

India is a developing country. About 70% of people live in rural India, depending on the primary sector of the economy. Rural infrastructures play a vital role in the improvement of the rural livelihood pattern through basic amenities like – road, drinking water, education, medical facilities, bank, power supply etc. Countries progress is assessed through the quality of infrastructure. Socio-economic infrastructures have a vital role in rural development phenomena. In this paper, an attempt has been made to study some basic socio-economic infrastructures in Kota panchayet area of Ausgram – II block through calculating weighted scores. Ranking of different mouzasbest on basic services has been done from census data. Besides a comparative analysis between the panchayet picture and block scenario has been done. Decadal changes in infrastructural development have been also shown. The mouzas having rail and frequent road networks are more developed but forest-based mouzas are less developed. Simple statistical and cartographic techniques have been employed to complete this paper. Some recommendations have been suggested for further development of the study area.

***KEYWORDS**: Rural Infrastructure, Rural Development, Socio-Economic Services, Weighted Score, Human Development*

INTRODUCTION

Infrastructure is considered the backbone of any nation. For social and economic development of a country like – India, there need at first infrastructural development. India is a developing country of which about 70% of people live in rural India. So for proper development of this country, there needs rural infrastructural development at first like – education, transport, communication, water supply, health services, electricity and so on. Infrastructure is essential for a country's development and a country's development is assessed through the quality of infrastructure (Rao & Rao, 2018). The infrastructure plays an important role in rural livelihood system. Rural development has an important role in the growth of the Indian economy. Rural India plays a big role in this connection. So there need

further investments in rural India (Jha, Snajoy, 2016). Main objectives of rural development are economic, political and socio-cultural development through the improvement of services like – food, cloth, shelter, health, security, power supply, better education and other cultural amenities (Singh, Katar, 1986). All such amenities and facilities are the essential part of human resource development also. So without the development of human resource, the development of a nation remains incomplete. In this paper an attempt has been made to evaluate the level of rural infrastructural facilities of various mouzas of Kota Panchayet area of Ausgram – II block of East Burdwan district in terms of education, medical,

transport, drinking water, power supply etc. Decadal change of infrastructural development has been worked out. Besides the position of different mouzas from an infrastructural development point of view has been shown. Basically, it is an agricultural region with some industries here and there. For further development, there need more transport facilities, health care facilities, educational facilities, and drinking water facilities.

Study Area & the Rationale Behind the Selection of the Study Area

For the present study under investigation mouzas of Kota Panchayet of Ausgram – II block has been selected. Ausgram – II (C.D. Block) is an administrative division of BarddhamanSadar North subdivision of East Burdwan district. It is located approximately within $87^0 27' 30''$ E to $87^0 44' 00''$ E longitudes and $23^0 24' 00''$ N to $23^0 37' 30''$ N latitudes. There are seven panchayats like – Eral, Kota, Bhalki, Debsala, Bhedia, Amarpur, and Ramnagar with 106 mouzas. It is a block between two major river systems of Ajoy in North and Damador in South with red, alluvial and laterite soil. It is a part of 'Rarh' region of Bengal with scattered distributed sal forest cover. Land productivity is a moderate type. The studying panchayet Kota is located in the southwestern corner of this block, having almost similar characteristics as like the whole block area. It is an area with forest cover, red & lateritic soil along with the alluvial cover, industrial area, agricultural fields, rail and road networks. A dichotomy is found among the mouzas in case of rural infrastructures depending on its location which ultimately controls the livelihood pattern and development phenomena within the panchayet area. For this study, the Kota Panchayet area has been selected because Kota Panchayet area is the good admixture of both developed and undeveloped situations from the rural infrastructural development point of view. Some mouzas are covered by forest, lateritic and red soil with tribal population domination. On the other hand, some mouzas are near to industrial and urban area with good transport and communication system. The remote tribal-dominated mouzas have lack of basic rural services and amenities. Besides some place face water crisis during summer, drought condition, lower agricultural productivity, lack of irrigation facilities, soil infertility, soil erosion, lack of socio-cultural development etc. One of the aims of this study is to highlight such backward areas and to find out the possible causes of such backwardness. Not only that but to suggest some remedies for their further development. So the selection is justified.

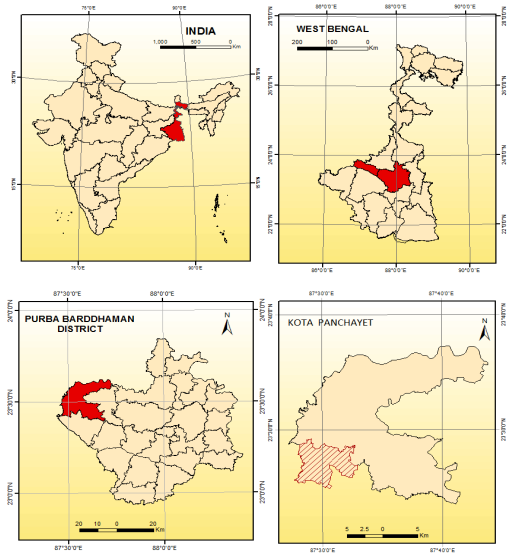

Figure 1: Location of the Study Area

Objectives of the Study

The major objectives are –

- To know the nature of rural infrastructures of different mouzas of Kota Panchayet area.
- To make a comparison between panchayet and block area in case of infrastructural development.
- To investigate the decadal change in case of basic rural amenities.
- To find out the recent problems and to formulate some further recommendations for the betterment of the panchayet area.

Database & Methodology

The present paper is mainly based on secondary data like – census data, books, journals, magazines, maps etc. Various statistical techniques like – weighted scores, percentage analysis, charts etc. have been employed. Some simple cartographic techniques have been also applied to prepare this paper.

Analysis and Interpretation

According to census report (2011) Ausgram – II block has a total 106 mouzas with 150896 totalpopulation. There are seven panchayets. Among them, Kota Panchayet is one of the important areas.

Table 1: Population Characteristics of Kota Panchayet

Name of the Mouzas	Village Area (ha.)	No. of Households	Total Population
Sonai	696.28	796	3185
Sonaiaima	53.03	6	22
SonaiaimaPurba	107.72	131	537
Ramnagarchak	19.78	2	13
Pondali	499.48	303	1180
Dharala	216.77	349	1500
Raghunathpur	135.68	296	1288
Kota Chandipur	817.82	1185	5177
Babrampur	180.89	231	1010
Shyamsundarpur	355.95	400	1535
Gopalmath	249.00	272	1220
Khandari	743.93	472	1985

(Source – census, 2011)

Kota Chandipur has the highest population and Ramnagarchak has lowest population in this Panchayet area. A number of households are also more in Kota Chandipur village. It's a real extension is also high. It enjoys maximum services and facilities. Ramnagarchak was totally uninhabited as per Census – 2001. But it is inhabited now.

Table 2: Various Infrastructural Facilities & Services in Different Mouza – 2011

Name of the Mouza	Educational	Medical	Drinking Water Source	Transport (Communication)	Post, Telegraph & Telephone	Banking	Power Supply	News Paper& Magazine	Recreation & Cultural Facility	Total Facilities
1. Sonai	6	4	5	8	5	2	4	1	4	39 (10.48)
2. Sonaiaima	0	0	2	7	2	0	4	0	2	17 (4.57)
3. Sonaiaimapurba	0	0	2	6	1	1	4	0	2	16 (4.30)
4. Ramnagarchak	0	01	01	7	1	0	1	0	1	12 (3.23)
5. Pondali	2	04	04	12	7	2	2	1	5	39 (10.48)
6. Dharba	6	02	01	12	7	2	1	1	6	38 (10.22)
7. Raghunathpur	4	02	03	12	6	2	1	1	6	37 (9.95)
8. Kota Chandipur	13	06	05	13	5	2	4	1	6	55 (14.78)
9. Balarampur	3	03	03	11	5	2	1	1	5	34 (9.14)
10. Shyamsundarpur	2	03	03	11	5	3	1	1	3	32 (8.60)
11. Gopalnath	2	01	03	08	4	3	2	1	2	26 (6.99)
12. Khandari	4	01	03	07	4	2	1	1	3	27 (7.26)
Total	**42 (11.29)**	**27 (7.26)**	**35 (9.41)**	**114 (30.65)**	**52 (13.98)**	**22 (5.91)**	**26 (6.99)**	**9 (2.42)**	**45 (12.10)**	**372 (100)**

(Brackets indicate percentage) (Source – Compiled by the Author from census 2011)

As per census – 2011 number of total facilities are more in Kota Chandipurmouza (14.78%) Pondali and Sonai jointly have the same level of services i.e. 2nd position and Dharala has a 3rd position. Ramnagarchak has the last position. Here nine infrastructural facilities have been treated. Among them, transport has the 1st position (30.65%). Then post, telegraph, telephone, and internet facilities have the 2nd position (13.98%) and Recreation & cultural facilities hold 3rd position i.e. 12.10% share. Newspaper supply has last position (2.42%). The good condition of Kota Chandipur, Pondali, Sonai and Dharala are due to their perfect location near to the proximity of semi-urban centers like – Panagarh and Budbud. Not only that but National Highway – 2 and Eastern Railway Main branch are passing just at the edge of this mouza. This mouza also enjoy another opportunity like – educational, medical, banking, power supply etc. due to they are this kind of advantageous location. On the other hand, Ramnagarchak, Shyamsundorpur, Gopalnath, Khandari, Baharampur, have the bad condition due to their location in forest-based lateritic and red soil area. So these are inaccessible and remote them the previous ones. Besides this mouza have poor tribal population concentration. Drinking water condition is not suitable as there is lower groundwater table due to edhapic& physical drought condition. Medical, banking and educational facilities are not so satisfactory.

Table 3: Various Infrastructural Facilities & Services in Different Mouza – 2001

Name of the Mouza	Educational	Medical	Drinking Water Source	Transport (Communication)	Post, Telegraph & Telephone	Banking	Power Supply	News Paper& Magazine	Recreation & Cultural Facility	Total Facilities
1. Sonai	2	3	3	2	2	0	1	1	2	16 (10.19)
2. Sonaiairam	0	0	2	1	1	0	0	0	2	06 (3.82)
3. Sonaiaimapurba	0	0	2	0	1	0	0	0	2	05 (3.18)
4. Ramnagarchak	0 U	0 N	0 I	0 N	0 H	0 A	0 B	0 I	0 T	0 E (0) D
5. Pondali	2	3	04	0	2	0	1	1	2	15 (9.55)
6. Dharala	3	02	3	1	2	0	1	1	2	15 (9.55)
7. Raghunathpur	2	0	4	1	2	0	1	1	2	13 (8.28)
8. Kota Chandipur	6	5	4	2	2	0	1	1	2	23 (14.65)
9. Balarampur	2	2	03	2	2	0	1	1	1	14 (8.92)
10. Shyamsundarpur	2	2	4	2	2	1	1	1	2	17 (10.83)
11. Gopalmath	2	3	4	2	2	1	1	1	1	17 (10.83)
12. Khandari	2	2	4	2	2	1	1	1	1	16 (10.19)
	23(14.65)	22 (14.01)	37 (23.57)	15 (9.55)	20 (12.74)	03 (1.91)	09 (5.73)	09 (5.73)	19 (12.10)	157 (100)

(Brackets indicate percentage) (Source – compiled from census 2001)

As per 2001 census, from a total facilities point of view, Kota Chandipurmouza has the 1st position (14.65%). Than Shyamsundorpur and Gopalnath jointly have the 2nd position (10.83%) and the third position goes to Sonai and Khandari (10.19%) jointly. From an individual service point of view, as per this census report drinking water supply has the 1st position (23.57%), then educational has a 2nd position (14.65%) and medical has a 3rd position (14.01%). The banking sector has last position (1.91%).

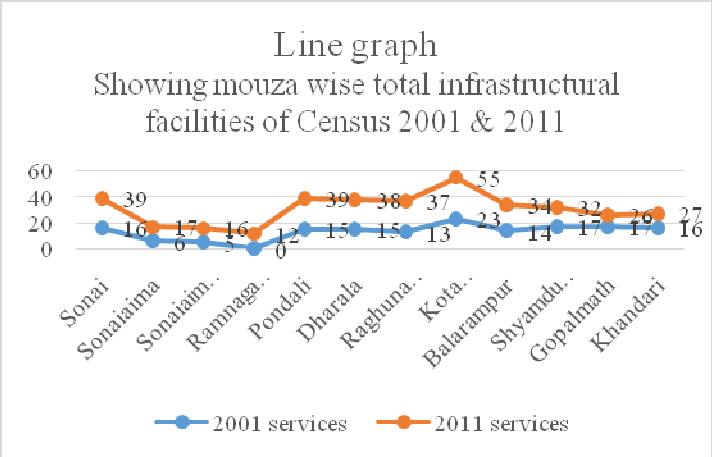

Figure 2

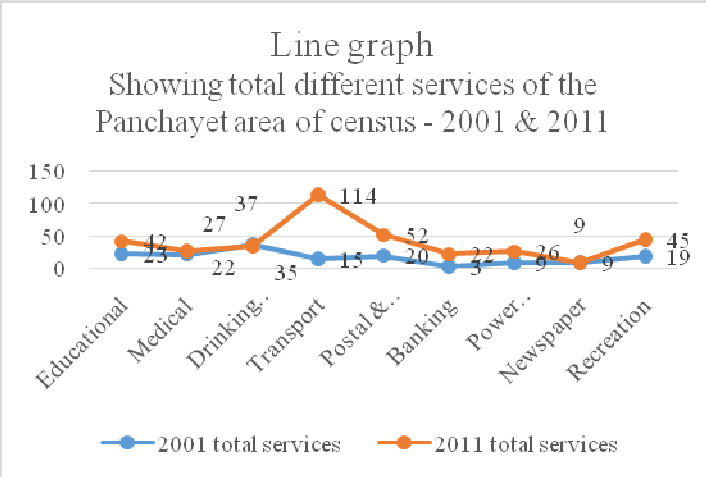

Figure 3

Table 4: Decadal Change of Various Total Services in Kota Panchayet Area

Sl. No	Facilities	Services in 2001	Services in 2011	Difference	% Change
1.	Educational	23	42	19	82.61
2.	Medical	22	27	05	22.73
3.	Drinking water	37	35	-2	-5.41
4.	Transport	15	114	99	660
5.	Post, Telegraph, Telephone & Internet	20	52	32	160
6.	Banking	03	22	19	633.33
7.	Power supply	09	26	17	188.89
8.	Newspaper & magazine	09	09	0	0
9.	Recreation & cultural facilities	19	45	26	136.84
Total		**157**	**372**	**215**	**136.94**

(Source – compiled from census 2001 & 2011)

When we analyze the decadal change of infrastructural development, we look that is overall 136.94% infrastructural improvement. It indicates a positive change in infrastructural facilities over time. It is due to Government help, people's consciousness and participation in various activities, people's educational and financial development etc. The maximum increase is found in case of transport development due to central and state road improvement policies like – Pradhan Mantri Gram SadakYojana etc. Banking service has a good hike due to microfinance, change of savings habit, ATM facilities, a tendency towards co-operative services etc. Unfortunately, drinking water sector has negative growth. As population increases but the source of drinking water is not increasing as the same rate.

Table 5: Decadal Change of Village Wise Total Facilities

Sl. No	Mouza	Total Facilities of 2001	Total Facilities of 2011	Difference	% Change
1	Sonai	16	39	23	143.75
2	Sonaiaima	06	17	11	183.33
3	SonaiaimaPurba	05	16	11	220.0
4	Ramnagarchak	0	12	12	1200.00
5	Pondali	15	39	24	160.0
6	Dharala	15	38	23	153.33
7	Raghunathpur	13	37	24	184.62

Table 5: Contd.,					
8	Kota Chandipur	23	55	32	139.13
9	Balarampur	14	34	20	142.86
10	Shyamsundarpur	17	32	15	88.24
11	Gopalmath	17	26	09	52.94
12	Khandari	16	27	11	68.75
	Total	**157**	**372**	**215**	**136.94**

(Source – Complied from census 2001 & 2011)

In case of village wise decadal change of facilities, except Ramnagarchak as it was uninhabited in 2001, SoaiaimaPurba has maximum change i.e. 220% then Raghunathpur has 184.62% Soaiaima has 183.33% and Pondali has 160% change in case of supply of various facilities. Shyamsundorpur, Gopalnath, and Khandari have lesser change due to their remote forest-based location.

Table 6: Comparison between Block Picture with Panchayet Picture in Case of Infrastructural Development (2011)

Sl. No	Services	Total Ausgram – II Block (Services)	Total Kota Panchayet (services)	% difference in Case of Kota Panchayet then Total Block Area
1	Educational	559 (19.54)	42 (11.29)	-8.25
2	Medical	295 (10.31)	27 (7.26)	-3.05
3	Drinking water	302 (10.56)	35 (9.41)	-1.15
4	Transport	670 (23.42)	114 (30.65)	+7.23
5	Post, Telegraph, Telephone & Internet	244 (8.53)	52 (13.98)	+5.45
6	Banking	132 (4.61)	22 (5.91)	+1.3
7	Power supply	220 (7.69)	26 (6.99)	-0.7
8	Newspaper & Magazine	88 (3.08)	09 (2.42)	-0.66
9	Recreation & cultural facilities	351 (12.27)	45 (12.10)	-0.17
	Total	**2861 (100)**	**372 (100)**	

(Brackets indicate percentage) (Compiled by the Author from Census – 2011)

When we compare total block infrastructural facilities with Panchayet picture we find that transport, post & telephone and banking services have a positive growth i.e. upward position than the block position. Educational and medical services are placed in the lower position than the average block condition.

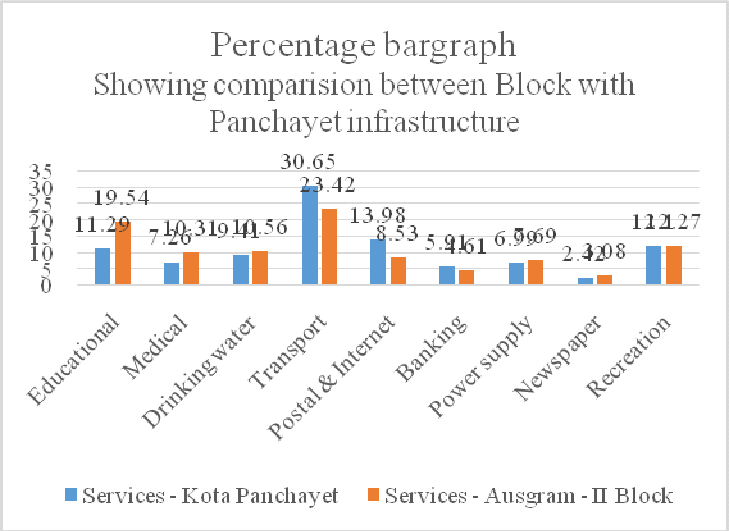

Figure 4: Mean of the Total Facilities of Each Villages (2011)

Mean is the simple average which computes the central value or average.

Table 7: Total Facilities of Different Mouzas

Sl. No	Mouza	Total Facilities
1	Sonai	39
2	Sonaiaima	17
3	SonaiaimaPurba	16
4	Ramnagarchak	12
5	Pondali	39
6	Dharala	38
7	Raghunathpur	37
8	Kota Chandipur	55
9	Balarampur	34
10	Shyamsundarpur	32
11	Gopalmath	26
12	Khandari	27

(Compiled by the Author from Census – 2011)

$\overline{\text{Mean}}$ (X) = $\frac{\sum x}{n}$

$= \frac{372}{12}$

= 31

Where $\overline{X}$ X = mean

$\sum X$ = Variables (services) / 372

n = total villages / 12

Standard Deviation (SD) of Total Facilities of Each Mouzas – 2011

It gives proper weightage of deviation from individual values to its mean. So higher deviation is given higher weightage and vice versa.

$$SD = \sqrt{\frac{\sum x^2}{n} - \left(\frac{\sum x}{n}\right)^2}$$

Where X = variables / services

n = number of observations / villages

Table 8: Different Services

		X (Services)	X^2
1.	Sonai	39	1521
2.	Sonaiaima	17	289
3.	SonaiaimaPurba	16	256
4.	Ramnagarchak	12	144
5.	Pondali	39	1521
6.	Dharala	38	1444
7.	Raghunathpur	37	1369
8.	Kota Chandipur	55	3025
9.	Balarampur	34	1156
10.	Shyamsundarpur	32	1024
11.	Gopalmath	26	676
12.	Khandari	27	729
		$\sum x$= 372	$\sum x^2$ = 13154

(Source – Census 2011)

$$SD = \sqrt{\frac{13154}{12} - \left(\frac{372}{12}\right)^2}$$

$$= \sqrt{1096.17 - 961}$$

$$= \sqrt{135.17}$$

= 11.63

From the result of the mean of the total facilities of each village, it is said that about 50% mouzas i.e. Kota Chandipur, Sonai, Pondali, Dharala, Raghunathpur, Baharampur, Shyamsundorpur, have a better position than the whole panchayet average position. The value of Standard division is 11.63.

Mean of Each Facility of the Kota Panchayet (2011)

Table 9: Different Facilities

Sl. No	Facilities	Number (X)
1.	Educational	42
2.	Medical	27
3.	Drinking water	35
4.	Transport	114
5.	Post, Telegraph, Telephone & Internet	52
6.	Banking	22
7.	Power supply	26
8.	Newspaper & magazine	09
9.	Recreation & cultural facilities	45
Total		$\sum X = 372$

(Compiled by the Author from Census – 2011)

$$\text{Mean } (\bar{X}) = \frac{\Sigma x}{n}$$

$$= \frac{372}{9}$$

$$= 41.33$$

Standard Deviation (SD) of Each Facility of Panchayet (2011)

Table 10: Different Facilities

Sl. No	Facilities	Number (X)	(X^2)
1.	Educational	42	1764
2.	Medical	27	729
3.	Drinking water	35	1225
4.	Transport	114	12996
5.	Post, Telegraph, Telephone & Internet	52	2704
6.	Banking	22	484
7.	Power supply	26	676
8.	Newspaper & magazine	09	81
9.	Recreation & cultural facilities	45	2025
		$\sum X = 372$	$\sum X^2 = 22684$

(Compiled by the Author from Census – 2011)

$$SD = \sqrt{\frac{\Sigma x^2}{n} - \left(\frac{\Sigma x}{n}\right)^2}$$

$$= \sqrt{\frac{22684}{9} - \left(\frac{372}{9}\right)^9}$$

$$= \sqrt{2520.44 - 1708.44}$$

$$= \sqrt{812}$$

= 28.50

On the other hand from the result of the mean of each facility of the Panchayet, it is noticed that about 45% services i.e. transport, postal & telephone, recreation, and education have comparatively good position. Here the value of Standard division is 28.50. Other infrastructures need to be developed soon.

Here the functional weightage has been calculated by dividing each total service by total villages.

After calculating weightage scores for individual services the weightage scores for individual mouzas in different services have been calculated by multiplying the total number of a particular service with the functional weightage score of that service. Then these are summing up to the get for both service wise and mouza wise total scores as well as percentage values for them. Then categorization is done on the basis of these individual scores.

Table 11: Functional Weightage of Different Facilities in Panchayet Area – 2011

Sl. No	Facilities	Number	Total Villages	Functional Weightage
1.	Educational	42	12	3.50
2.	Medical	27	12	2.25
3.	Drinking water	35	12	2.92
4.	Transport	114	12	9.50
5.	Post, Telegraph, Telephone & Internet	52	12	4.33
6.	Banking	22	12	1.83
7.	Power supply	26	12	2.17
8.	Newspaper & magazine	09	12	0.75
9.	Recreation & cultural facilities	45	12	3.75

(Compiled by the Author from Census – 2011)

From the functional weightage analysis of different facilities, it is seen that transport has the 1st position, post & telephone has 2nd position and Recreation has a 3rd position. Newspaper supply has the last position. It is similar to that of percentage analysis.

Table 12: Weightage Scores of Mouzas 2011

Sl. No	Mouzas	Educational	Medical	Drinking Water	Transport	Post, Telegraph, Internet	Banking	Power Supply	Newspaper	Recreation	Total
1	Sonai	6X3.5 = 21	4X2.25 = 9	5X2.92 =14.6	8X9.5 = 76	5X4.33 = 21.65	2X1.83 = 3.66	4X2.17 = 8.68	1X0.75 = 0.75	4X3.75 = 15	170.34 (9.01)
2	Sonaiaima	0x3.5 = 0	0X2.25 = 0	2X2.92 = 5.84	7X9.5 = 66.5	2X4.33 = 8.66	0X1.83 = 0	4X2.17 = 8.68	0X0.75 = 0	2X3.75 = 7.5	97.18 (5.14)
3	SonaiaimaPurba	0x3.5 = 0	0X2.25 = 0	2X2.92 = 5.84	6X9.5 = 57	1X4.33 = 4.33	1X1.83 = 1.83	4X2.17 = 8.68	0X0.75 = 0	2X3.75 = 7.5	85.18 (4.51)
4	Ramnagarchak	0x3.5 = 0	1X2.25 = 2.25	1X2.92 = 2.92	7X9.5 = 66.5	1X4.33 = 4.33	0X1.83 = 0	1X2.17 = 2.17	0X0.75 = 0	1X3.75 = 3.75	81.92 (4.33)
5	Pondali	2x3.5 = 7	4X2.25 = 9	4X2.92 = 11.68	12X9.5 = 114	7X4.33 = 30.31	2X1.83 = 3.66	2X2.17 = 4.34	1X0.75 = 0.75	5X3.75 = 18.75	199.49 (10.55)
6	Dharala	6x3.5 = 21	2X2.25 = 4.5	1X2.92 = 2.92	12X9.5 = 114	7X4.33 = 30.31	2X1.83 = 3.66	1X2.17 = 2.17	1X0.75 = 0.75	6X3.75 = 22.5	201.81 (10.68)
7	Raghunathpur	4X3.5 = 14	2X2.25 = 4.5	3X2.92 = 8.76	12X9.5 = 114	6X4.33 = 25.98	2X1.83 = 3.66	1X2.17 = 2.17	1X0.75 = 0.75	6X3.75 = 22.5	196.32 (10.39)
8	Kota Chandipur	13X3.5 = 45.5	6X2.25 = 13.5	5X2.92 = 14.6	13X9.5 = 123.5	5X4.33 = 21.65	2X1.83 = 3.66	4X2.17 = 8.68	1X0.75 = 0.75	6X3.75 = 22.5	254.34 (13.46)
9	Balarampur	3X3.5 = 10.5	3X2.25 = 6.75	3X2.92 = 8.76	11X9.5 =104.5	5X4.33 = 21.65	2X1.83 = 3.66	1X2.17 = 2.17	1X0.75 = 0.75	5X3.75 = 18.75	177.49 (9.39)
10	Shyamsundarpur	2X3.5 = 7	3X2.25 = 6.75	3X2.92 = 8.76	11X9.5 =104.5	5X4.33 = 21.65	3X1.83 = 5.49	1X2.17 = 2.17	1X0.75 = 0.75	3X3.75 = 11.25	168.32 (8.90)
11	Gopalmath	2X3.5 = 7	1X2.25 = 2.25	3X2.92 = 8.76	8X9.5 = 76	4X4.33 = 17.32	3X1.83 = 5.49	2X2.17 = 4.34	1X0.75 = 0.75	2X3.75 = 7.5	129.41 (6.85)
12	Khandari	4X3.5 = 14	1X2.25 = 2.25	3X2.92 = 8.76	7X9.5 = 66.5	4X4.33 = 17.32	3X1.83 = 5.49	1X2.17 = 2.17	1X0.75 = 0.75	3X3.75 = 11.25	128.49 (6.80)
	Total	**147 (7.78)**	**60.75 (3.21)**	**102.2 (5.41)**	**1083.0 (57.29)**	**225.16 (11.91)**	**40.26 (2.13)**	**56.42 (2.98)**	**6.75 (0.36)**	**168.75 (8.93)**	**1890.29 (100)**

(Brackets indicate percentage) (Compiled by the Author from Census – 2011)

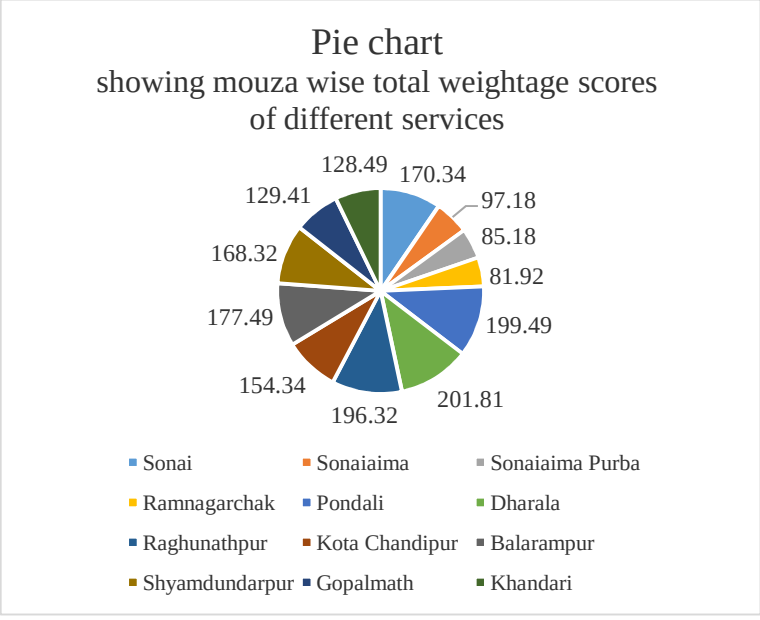

Figure 5

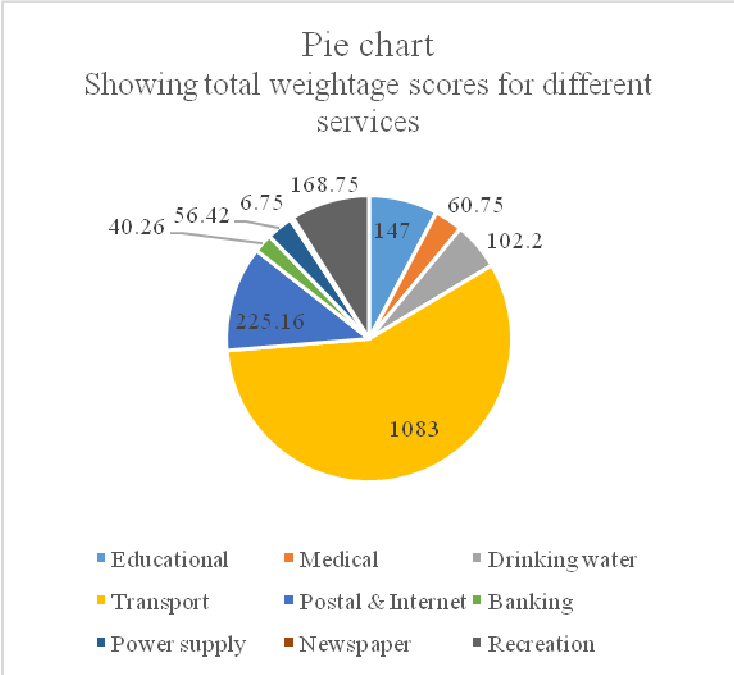

Figure 6

As per the result of the weightage scores of different mouzas, we can categorize them into three groups –

Table 13: Categorization of Villages as Per Weightage Scores

Position	Range (Weightage Scores)	Villages
Low position	Below 5	SonaiaimaPurba (4.51) Ramnagarchak (4.33)
Moderate position	5 – 10	Sonai (9.01), Sonaiaima (5.14), Balarampur (9.39), Shyamsundorpur (8.90), Gopalmath (6.85), Khandari (6.80)
High	Above 10	Pondali (10.55), Dharala (10.68), Raghunathpur (10.39), Kota Chandipur (13.46)

As per the result of the weightage scores of different services, we can categorize them into three groups –

Table 14: Categorization of Different Services as Per Weightage Scores

Position	Range (weightage Scores)	Services
Low	Below 5	Medical (3.21), banking (2.13), power supply (2.98), newspaper supply (0.36)
Moderate	5 – 10	Educational (7.78), drinking water (5.41), recreation and cultural (8.93)
High	Above 10	Transport (57.29), post, telephone & internet (11.9)

One matter is also found that the amenities and services decrease from the mouzas with close vicinity of smaller towns like – Panagarh, Budbud towards forest-based remote mouzas.

Major Findings

- From the infrastructural development point of view Pondali, Dharala, Raghunathpur, and Kota Chandipur have a better position.
- Sonaiaima, SonaiaimaPurba, and Ramnagarchak have poor infrastructural facilities.
- The services from transport and postal, telephone and internet have developed a position.
- From census 2001 to census 2011, there is an overall 136.94% hike in case of infrastructural development in the Panchayet area.
- With respect to total block area, this Panchayet area has a better position in case of transport, postal, telephone and banking services than other panchayets or the block as a whole.

Major Problems Found in the Study Area

Though some mouzas enjoy good infrastructural facilities still there are some problems as services are not well distributed throughout the region –

- The condition of medical facilities is not developed in Sonai, Ramnagachak, Gopalmath and in Khandari due to their forest-based remote location.
- Schooling is not found in Sonaiaima, SonaiaimaPurba, and in Ramanagarchak.
- Sources of drinking water facilities are poor in Ramnagarchak, Dharala. It depends are only one source.
- Transport facilities especially the means and road condition is not developed in Khandari, Ramnagarchak, Sonaiaima, and in SonaiaimaPurba due to their inaccessibility.
- Sonaiaima, SoaniaimaPurba, and Ramnagarchak have poor communication services and internet facilities.
- Bank-related activities are totally absent in Sonaiaima and in Ramnagarchak.
- Newspaper and magazines supply is not found in Sonaiaima, SonaiaimaPurba, and in Ramnagarchak.
- Cultural and recreation levels are poor in Sonaiaima, SonaiaimaPurba, and in Ramnagarchak.

Recommendations for Sustainable Rural Infrastructural Development

- Local Administration and Panchayet should take proper action plans to solve the problems immediately.
- There need local people's participation with government or non-government activities regarding future infrastructural development and maintenance.
- In Dharala and Ramnagarchak other sources of drinking water are to be provided like – 'Sajaldhara', deep tube well, mini submersible etc.
- Pradhan Mantri Gram SadakYojana (PMGSY) is to be popularized in remote inaccessible forested mouzas as

roads are called the lifeline of civilization or development.

- Good sanitation, drinking water facilities etc. are to be provided through "Mission Nirmal Bangla" in remote tribal villages.
- MSK (MadhyamikSikshaKedra), SSK (SishuSiksha Kendra) are to be constructed in non-school villages through 'SarbaSiksha Mission'
- Besides the ICDS project, KanyashreePrakalpa etc. should be fruitfully implemented for health and educational development in the Panchayet area.
- In some mouzas near to G.T. Road and Panagarh town area, there need more educational institutions – poly technique college, technical college, general degree colleges, higher secondary schools, English medium schools etc. to spray urban educational facilities in the rural area.
- Various recreational schemes of government, scholarships, funding, grants for folk artists, students and provision of games & sports development are to be arranged by local Administration or NGO's.
- Modern recreational facilities like – children's park, playground, club, gym, etc. are to be built.
- To strengthen banking service, there need to construct village co-operative, micro-financing facilities, microcredit system etc.
- There need medicine shops and weekly service of private MBBS doctor's, ambulance service etc.
- Health checkup camp, Govt. health insurance facilities and construction of new health centers for the improvement of health status of Panchayet area.
- Besides mass awareness is to be grown to improve to the level of infrastructural development.
- Proper government rules and findings along with their implementation are also important in this regard.

CONCLUSIONS

For proper livelihood, there need improved infrastructural facilities whether it is urban or rural areas. Basic socio-economic infrastructures like education, medical, water supply, transport, power supply are the main driving force of human life. In Kota Panchayet, the level of infrastructural development is moderate type as half of the mouzas enjoying a good condition which is near to the urban centers. Still, forest-based villages have many problems. These problems should be solved by a better understanding of local people and administration, then only there will be a balanced development.

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