SOCIO-ECONOMIC DISPARITIES AND ITS MITIGATION PLANNING STRATEGIES: A CASE STUDY IN SELECTED C. D. BLOCKS OF NADIA DISTRICT, WEST BENGAL

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Abstract: Disparity between regions is an anathema in case of regional development i.e., overall development of a nation. The uneven distribution of socio-economic benefits accrued from income, wealth, natural resources, social goods, institutions, infrastructures has a major contribution to increase in socio-economic disparities. Development, to be ensured, necessitates proper balance between regions. The study of socio-economic disparity covers selected blocks (viz., Krishnanagar-I, Karimpur-II, Tehatta-I and Chapra) of Nadia district representing at micro level. This area is selected for study because several socio-economic disparities are apparent among these regions. Krishnanagar-I is the Headquarter of Nadia district where infrastructure is well developed. But the other C.D.Blocks (Karimpur-II, Tehatta-I and Chapra) are lagging behind in this respect.Various components are responsible for causes of socio-economic disparities among the four community development blocks (CDB) of Nadia district in case of income, educational facilities, health facilities, agricultural production, transport facilities etc. With the help of some statistical methods, i.e., Location Quotient, Lorenz Curve and Gini-coefficient, Sopher's Index, Composite Index, socio- economic disparity in the study area has been attempted to measure.And for the solution to these problems several steps have been suggested by the surveyed people. For reducing the worse impacts on society as well as economy of the study area government and local initiatives takes some policies, action plans, projects etc.Hence, the study might give directions to trim down the block level socio-economic disparity with an ultimate goal of reaching national integration through a balanced regional development.

Keywords: Disparity, Socio-economic, Block, Level, Sustainable Development

INTRODUCTION:

Disparity between regions is an anathema in case of regional development i.e., overall development of a nation. The uneven distribution of socio-economic benefits accrued from wealth, income, natural resources, social goods, institutions, infrastructures has a major contribution to increase in socio-economic disparities. Development, to be ensured, necessitates proper balance between regions and that is to say, unequal distribution has to be lessened."Social inequality occurs when resources in a given society are distributed unevenly. It is the differentiation of access of social goods …"[1] to the people of society."Social inequality linked with economic inequality, usually is described on the basis of the unequal distribution of income or wealth. However, social and natural resources other than purely economic resources are also unevenly distributed in most societies and may contribute to social status."[2]Hence, reduction in socio-economic disparities in a nation is vital from the standpoint of maintaining national integration.

STATEMENT OF THE PROBLEM:

In developing countries like India socio-economic disparity occurs at the macro level. It occurs in different ways between the rural and urban areas. Socio-economic disparity leads to several problems especially in rural areas. Socio-economic disparity hampers the social, economic and culture as well as political development in the developing countries. Insurgency, dialect between rural and urban, migration, income differences are the impact of socio-economic disparities and reduce the economic growth of the developing countries. Socio-economic disparity occurs in West Bengal at the meso level due to the wide differences between north and south as well as between the west and east in case of physiographic divisions as well as cultural divisions. Disparity located in Nadia district at micro level between rural area and urban area. Among the selected four C.D.Blocks (Karimpur-II, Tehatta-I, Chapra and Krishnanagar-I) located wide differences between the rural sector as well as urban sectors in social, political as well as economic identity which leads the socio-economic disparities in the study area.

JUSTIFICATION OF SELECTION OF THE STUDY AREA:

The four C.D. Blocks of Nadia District, viz. Krishnanagar-I, Karimpur-II, Tehatta-I and Chapra have been selected for the present research. This area is selected for study because several socio-economic disparities are apparent in these regions. Krishnanagar-I is the head quarter of Nadia district where infrastructure is well developed. But the other C.D.Blocks (Karimpur-II, Tehatta-I and Chapra) are lagging behind in this respect. Thus the macro level socio-economic disparities (in India) represented in meso level (Nadia District), may be expected to be witnessed at micro

level, i.e., at these selected blocks and the households surveyed. In these regards, the relevance of the study comes into light which are the basic concerns of the Geographers, especially of the planners.

RESEARCH QUESTIONS:
During the present research work, following questions have been examined and these questions are taken into consideration for identifying the scenario of socio economic disparities in the study area.
● What are the existing disparities in the study area?
● What are the major causes of socio economic disparities in the study area?
● What are the major impacts of socio economic disparities in the study area?
● What are the steps taken by the local as well as government for the solution of socio economic disparities in the study area?

OBJECTIVES OF STUDY:
 The major objectives of this study work are mentioned below:
● To find out the social-economic disparate characteristics of the study area.
● To measure and analyze the socio-economic disparities of the study area.
● To point out some mitigation strategies of this socio-economic disparities in the study area.

DATA BASE:
This study work is based on both primary data and secondary data. Primary Data has been collected from the local people as well as respondents of the Karimpur-II, Tehatta-I, Chapra and Krishnanagar-I community development block (CDB) of Nadia district, West Bengal based on perception study with the help of well-structured questionnaire.Secondary Data has been collected from various sources which include , District census handbook of Nadia, documents of agricultural department, health department, education department of Block Development Office (BDO) of Karimpur-II, Tehatta-I, Chapra and Krishnanagar-I and statistical department of collector building of Nadia district. Various websites of internet sources, research articles, replica and journals have been used for this study work as secondary data.

METHODOLOGY:
The methodology adopted can be divided into the following three parts:
Pre-Field Stage: In this stage, literature review was studied, necessaries maps and secondary data has been collected from different websites, research articles and journals. Also a well-structured questionnaire has been prepared for the perception study in the study area.
**Field Stage:** In this stage, perception study has been done in the study area based ona well-structured questionnaire. Based on systematic random sampling, 51 number of households from each four community development blocks (Karimpur-II (51), Tehatta-I(51), Chapra(51) and Krishnanagar-I(51)) have taken into consideration as sample size which is 204.
Post-Field Stage: In this stage, master data table made from the surveying questionnaire, drawing maps using QGIS software, Suitable cartograms with interpretation are used for explain the data which collected by field work. For better understanding the work has been done with examples and photographs.And also quantities data analysis method like Location Quotient, Lorenz Curve and Gini-Coefficient, Sopher's Index and Composite Index has been used to explain the study.

LOCATION OF THE STUDY AREA:
The study area is globally located between 23°94'56" N to 23°26'09" N and 88°38'79" E to 88°72'74" E.The area of the study is 976.01 sq km. The geographical boundary of the study area comprises Bangladesh in the east, Karimpur-I C.D.Block and Murshidabad district on the north and north west, Tehatta-I, Nakashipara, Krishnanagar-II and NabadwipC.D.Blocks on the west and Shantipur, Hanskhali and KrishanganjC.D.Blocks towards south and south east.

Fig 1.1

Map No: 1. Location Map of the Study Area

Source: District Statistical Handbook, 2011
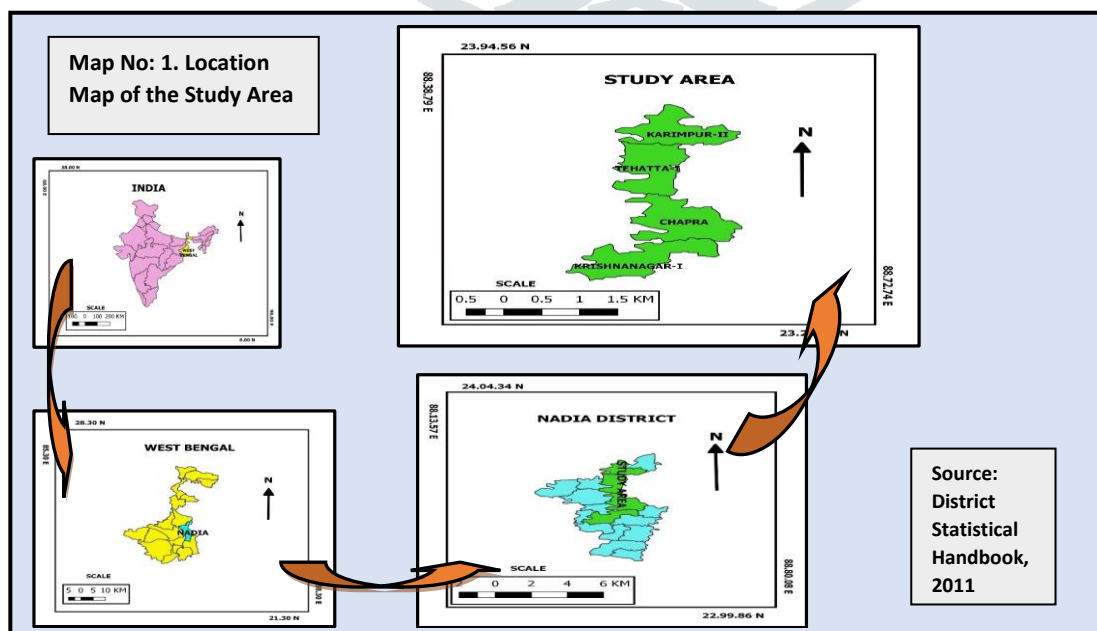
DISCUSSION:

The prevalence of disparities in different socio-eco-demographic components in the selected blocks has been analyzed. With the help of some statistical methods and cartograms, socio- economic disparity in the study area has been attempted to measure. Concentration by Location Quotient has been used to represent the disparity in population density, working population, female population and rural population in the study area. Measurement of inequality by Lorenz Curve and Gini-Coefficient has been formulated to represent the inequality of SC Population and ST Population in the study area. Sopher's Index of disparity has been prepared to show the disparity in literacy among the four selected blocks.Composite Index of infrastructure has also been prepared to show the disparity of transport facility. And variouscartograms have been used to show the disparity of household income, employment opportunity, consumption of electricity,economic status of household etc.

(i) Location Quotient Analysis: Concentration by Location Quotient has been used to represent the disparity of population density, working population, female population and rural population in the study area. Location Quotient is the ratio of the ratio so it has not any unit. Population and other characteristics have been identified by the determination of Location Quotient. If the Location Quotient value is 1 then the population distribution in the whole region balanced. When Location Quotient's value is lower than 1 that indicates dispersed concentration of population and Location Quotient value more than 1 indicates higher concentration of population.

(a) Population Density: The concentration of population density in the study area shows that lowest population density located in Karimpur-II with value of location quotient 0.93, moderate location population density in Tehatta-I with value of location quotient 0.95 and Chapra with value of location quotient 0.98 and highest population density located in Krishnanagar-I with value of location quotient 1.13 among the four C.D.Blocks. It means that in Karimpur-II population density is dispersed, in Tehatta-I and Chapra population density often balanced and in Krishnanagar-I population density is extremely concentrated.

Location Quotient = $Pi/ P(\Sigma Pi) / Ai/A(\Sigma Ai)$Where,Pi = Population in each category, P = Total population of the region, Ai = Area in each category, A = Total area of the region

Example: Location Quotient of Karimpur-II (LQ) = Pi/ P(ΣPi) / Ai/A(ΣAi) , = 0.199 / 0.213 , = 0.93

(b) Female Population: The concentration of female population compared to total population in the study area shows that the lowest female population is located in Karimpur-II with value of location quotient 0.94, moderate location of female population in Tehatta-I with value of location quotient 0.96 and Chapra with value of location quotient 0.98 and highest female population located in Krishnanagar-I with value of location quotient 1 among the four C.D.Blocks. It means that in Karimpur-II female population compared to total population is very dispersed, in Tehatta-I and Chapra female population compared to total population low dispersed and in Krishnanagar-I female population compared to total population is balanced.

(c) Rural Population: The concentration of rural population compared to total population reveals that the lowest rural population is located in Krishnanagarr-I with value of location quotient 0.95, moderate location rural population in Chapra with value of location quotient 0.99 and highest rural population located in Karimpur-II and Tehatta-I with value of location quotient 1.05 among the four C.D.Blocks. It means that in Krishnanagar-I rural population compared to total population is much dispersed, in Chapra rural population compared to total population low often balanced and in Karimpur-II and Tehatta-I rural population compared to total population is higher.

(d) Working Population: The concentration of total workers compared to total population. In the study area shows that lowest total workers located in Chapra with value of location quotient 0.92, moderate total workers located in Tehatta-I with value of location quotient 0.99 and Karimpur-II with value of location quotient 1.03 and highest total workers located in Krishnanagar-I with value of location quotient 1.07 among the four C.D.Blocks. It means that in Krishnanagar-I total workers compared to total population is very higher, in Chapra total workers compared to total population very dispersed and in Karimpur-II total workers compared to total population often higher and in Tehatta-I total workers compared to total population is often balanced.

(ii) Lorenz Curve and Gini-Coefficient Measurement: Measurement of inequality by Lorenz Curve and Gini-Coefficient has been formulated to represent the inequality of S.C Population and S.T Population in the study area. Gini-Coefficien is the mathematical form. Value- of Gini-Coefficient always positive in nature. If its value less than 0 then it indicated dispersed distribution and when its value near 0 then it indicated equal distribution. Further its determination value is 0 then it indicated fully equal distribution.

Gini-Coefficient = $\{Xi. (Yi+1) - \{Yi. (Xi+1)\} / 10000$

(a) Scheduled Caste Population: From the below calculation, the value of Gini-Coefficient is 0.18. From the determination value it indicated that S.C population dispersed than equal line. If the value of Gini-Coefficient is 0 then Gini-Coefficient indicated perfectly uniform distribution. If its value 0.6 then it indicated non-uniformed distribution and when its determination value is 1 then it indicated perfectly non-uniformed distribution or completely clustering distribution. Here the determination value is 0.18, so it indicated uniformed distributed.

Calculation of Gini-Coefficient for S.C Population, = {Xi. (Yi+1) - {Yi. (Xi+1)} / 10000, = (11762.84 – 10007.84) / 10000, = 1755 / 10000, = 0.18

(b) Scheduled Tribe Population: From the above (fig 4.5) calculation, the value of Gini-Coefficient is 0.48. From the determination value it indicated that S.T population dispersed than equal line. If the value of Gini-Coefficient is 0 then Gini-Coefficient indicated perfectly uniform distribution. If its value 0.6 then it indicated non-uniformed distribution and when its determination value is 1 then it indicated perfectly non-uniformed distribution or completely clustering distribution. Here the determination value is 0.48, so it indicated nearly uniformed distributed.

Calculation of Gini-Coefficient for S.T Population, = {Xi. (Yi+1) - {Yi. (Xi+1)} / 10000, = (9013.2 – 4185.97) / 10000, = 4827.23 / 10000, = 0.48

(iii) Sopher's Index: Sopher's Index has been formulated to represent the disparity of literacy in the study area. Sopher's Index was formulated in the year 1974 by the Sopher but this index was further modified by the Kundu and Rao after 1983.Sopher's Index = Log (X2/X1) + Log (100-X1) / (100-X2). But Kundu and Rao further modified the disparity index formula as follows:**Ds = = Log (X2/X1) + Log (200-X1) / (200-X2)**. Here the constant value has changed and convert into 200 from 100.

Example: Sopher's Index of Karimpur-II = Log (X2/X1) + Log (100-X1) / (100-X2), = Log (56.50/48.10) + Log (100-48.10) / (100-56.50), = 0.069 + 0.039, = 0.11

From the above calculation of Sophers index of literacy rate shows that lowest value of literacy rate located in Chapra with value of Sopher's index 0.11 and Karimpur-II with value of Sopher's index 0.11, moderate literacy rate located in Tehatta-I with value of Sopher's index 0.13 and highest literacy rate located in Krishnanagar-I with value of Sopher's index 0.17 among the four C.D.Blocks. It means that in Krishnanagar-I literacy rate is higher, in Chapra and Tehatta-I literacy rate is moderate and in Karimpur-II literacy rate is low compared to others .C.D Blocks in the study area.

(iv) Composite Index: A composite index is a grouping of indexes or other factors combined in a standardized way which providing a useful statistical measure of overall market, transport or sector performance over time and it is also known simply as a composite. Normally a composite index has a large number of factors that are averaged together to form a product representative of an overall market or sector. To calculate the Composite Index of Infrastructure, the following formula has been applied:

$Cij = \Sigma xij.Wij$ Where, Cij = Composite index of the 'i' th function in the j settlement, Xij =Number of I function in the 'j' th settlement, Wij = Weitage of the 'i' th function, N = Total no of settlements, Fi = Number of settlements having 'i' th function

Example: Composite Index of Karimpur-II $(Cij) = \Sigma xij.Wij$,= 13 * 4.75 ,= 61.75

From the above calculation of the composite index of transport infrastructure shows that lowest transport infrastructure located in Karimpur-II with value of composite index 61.75, moderate value of transport infrastructure located in Tehatta-I with value of composite index 77.28 and high value of transport infrastructure located in Chapra with value of composite index 91.08 and Krishnanagar-I with value of of composite index 94.77 among the four C.D.Blocks. It means that Krishnanagar-I and Chapra are well developed in transport infrastructure and infrastructure development in Tehatta-I is moderate and in Karimpur-II transport infrastructure is very weak.

(v) Disparity in Household Income: Household income is the principal indicator of economic disparity at household level. The surveyed households have been categorized according to the monthly income level.
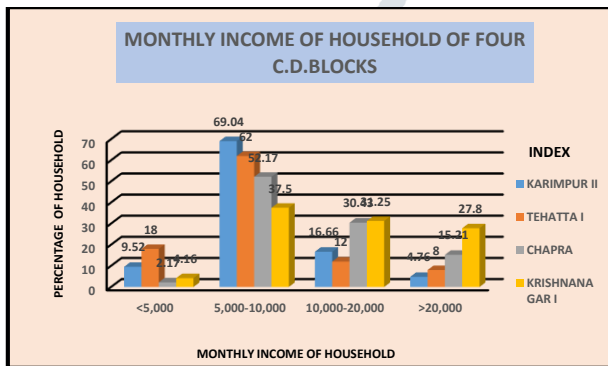

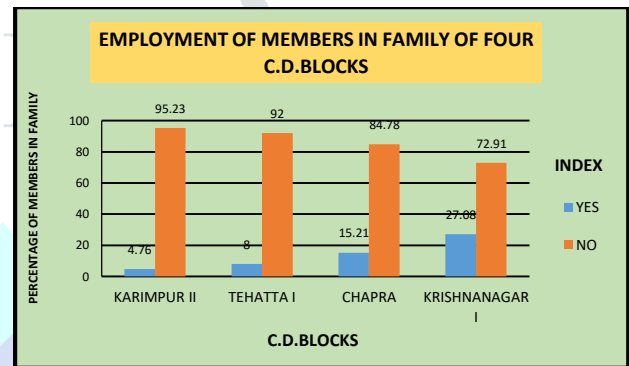Fig no: 1   Source: primary data, 2017   Fig no: 2   Source: primary data, 2017

It has been observed (fig 1) that, 69.04 percent household of Karimpur II belongs to monthly income of rupees 5000-10,000, which totally comes from agricultural sector. It is not adequate for sustaining livelihood in present day. In Tehatta-I, the proportion of this income group (5000/-10,000/) of household is 62 percent. This income group also belongs to agrarian sector generating low income potentials. In Chapra, 52.17 household's monthly income is 5000-10,000 and the rest 45.63% household's monthly income ranges from10,000 to more than 20,000/. The second group of household is dependent on agriculture as well as on transport activities. In Krishnanagar-I, 52.8 percent population have monthly income of more than 20,000 due to high agricultural productivity, well-knit transport facilities as well as good service facilities. Thus, after the observation it is clear that the extreme inequality in the household income has been a resultant of disparities in economic activities with varying production performance.

(vi) Disparity in Employment Opportunity: The availability of employment in the selected four blocks have been attempted to understand from the observation employment status of the family members which is a surrogate variable of employment opportunities. The highest employment of members(fig no: 2) in family in the Krishnanagar-I with percentage 27.08 may be correlated with the presence of employment opportunity in different government as well as Non-Governmental Organization (NGO) activities in that block. In Chapra, the percentage of working members in family is 19.21 which is medium due to the presence of only government services. On the contrary, in Tehatta-I, percentage of working members is 8 and in Karimpur-ii it is 4.76%. This is due to lack of government services and other employment avenues.This differentiation in employment induces increase in the socio-economic disparities among the four C.D.Blocks of the study area.

(vii) Disparity in Consumption of Electricity: Fig no: 3 shows frequency of load shading in a day of four C.D.Blocks. In Krishnanagar-I, 79.16 percent of peoples say that load shading occurred in a day only 1 time with average duration of less than 15 minutes where 60.86 percent of people of Chapra and 90.47 percent of people of Karimpur-ii, says that load shading occurred in a day 2-4 times with average duration of more than 30 minutes. It means that supply of electricity is a major problem of these two C.D.Blocks. in Tehatta-I, 10 percent of population said that load shading occurred in a day only 1 time with average duration of less than 15 minutes, 84 percent of population said that load shading occurred in a day 2-4 times with average duration of more than 30 minutes and others 6 percent of population said that load shading occurred in a day more than 4 times with average duration of more than 1 hours. So, it may be said that in Tehatta-I, load shading is a crucial problem due to lack of electricity supply. So this uneven distribution of load shading increased socio-economic disparities among the four C.D.Blocks of the study area.
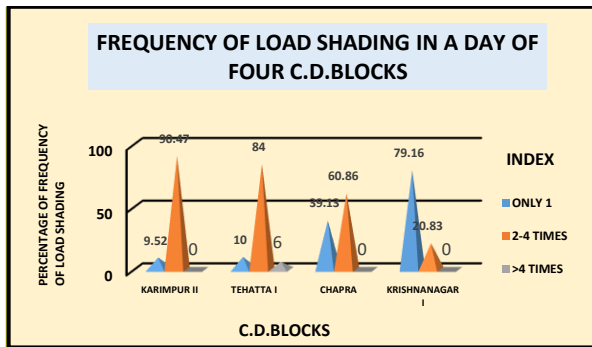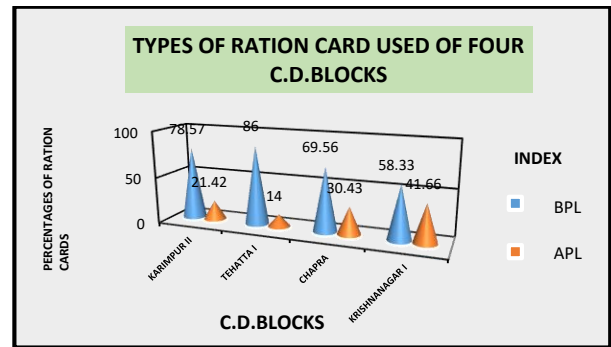
Fig no: 3   Source: primary data, 2017

Fig no: 4   Source: primary data, 2017

(viii) Disparity in Economic Status of Households: The impact of socio-economic disparity may be reflected in the level of economic status at household level. To examine this effect a proxy variable has been used here, i.e., the types of ration card (fig no: 4) availed by the people in the four C.D.Blocks. In Krishnanagar-I, 58.33 percent of people use BPL (Below Poverty Line) card and 41.66 percent of people use APL (Above Poverty Line) card which means that here economic status medium level. But 69.56 percent of people of Chapra and 86 percent of people of Tehatta-I and 78.57 percent of population of Karimpur-ii have BPL cards. This picture certainly indicates that the economic condition of these three CDB, viz., Chapra, Karimpur-ii and Tehatta-I is very poor and most of the population lives below poverty line. Here again the uneven distribution of economic condition has increased socio-economic disparities among the four C.D.Blocks of the study area.

Thus after analyzing the indicators of socio economic disparities in the study area it can be said that unequal distribution of income, education facilities, health conditions, agricultural productivity, transport networks and so on are responsible behind increasing causes of socio economic disparities in the study area.

RESULT:

From the above discussion it has been noticed that the study area comprised several socio as well as economic disparities. Krishnanagar-I has witnessed maximum concentration of population density, female population to total population, working population to total population, literacy rate, transport infrastructure,household monthly income, employment opportunity, consumption of electricity, economic status of household while Chapra and Tehatta-I witnessed medium concentration in case all of this.Karimpur-II has witnessed maximum concentration of rural population and minimum concentration in other aspects.

Disparity in Different Socio-economic Aspects:

levels	socio-economic aspects										
	popolation density	female population	rural population	working population	s.t population	literacy rate	transport infrastructure	household monthly income	employment opportunity	consumption of electricity	economic status of household
low	karimpur-ii	karimpur-ii	krishnanagar-i	chapra	chapra	karimpur-ii	karimpur-ii	tehatta-i, karimpur-ii	karimpur-ii	tehatta-i, karimpur-ii	tehatta-i, karimpur-ii
medium	tehatta-i, chapra	tehatta-i, chapra	tehatta-i, chapra	karimpur-ii, tehatta-i	karimpur-ii, tehatta-i	tehatta-i, chapra	tehatta-i	chapra	chapra, tehatta-i	chapra	chapra
high	krishnanagar-i	krishnanagar-i	karimpur-ii	krishnanagar-i	krishnanagar-i	krishnanagar-i	krishnanagar-i, chapra	krishnanagar-i	krishnanagar-i	krishnanagar-i	krishnanagar-i

Table No: 1.1   **Source: Prepared by author**

Map no: 2. Socio-economic Disparity in Selected C.D.Blocks of Nadia district
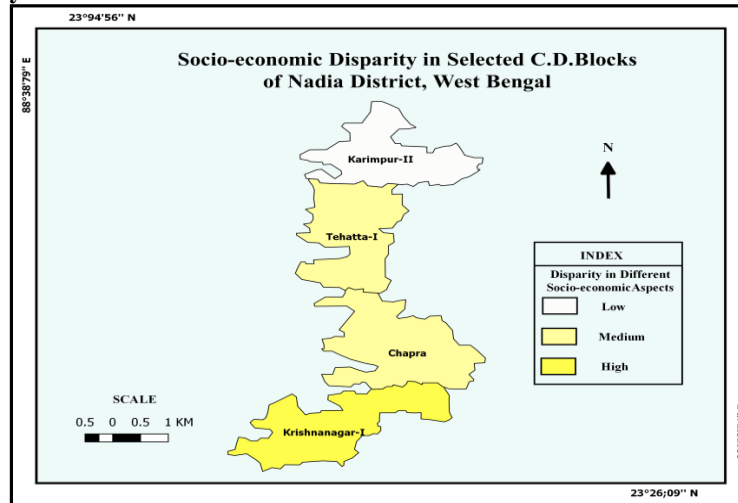
Source: Prepared by the author

MAJOR FINDINGS:

There exist wide disparities in respect of socio-economic characteristics between the four blocks (surveyed). The major findings of the study are as follows:

● Krishnanagar I has witnessed maximum concentration of population density, female population, literate population and transport infrastructure. Again, rural population is mainly concentrated in Karimpur II and Tehatta I blocks. The location quotient analysis has justified this disparity.

● In terms of household income, levels of literacy, educational facility, health facility, transport facility, employment opportunity and economic status the gap has become very prominent between Krishnanagar on the one hand and Karimpur on the other. Chapra and Tehatta fall in the moderate category.

● Lack of transport facilities especially railway has created major problems in daily life of the local people. Krishnanagar city junction is the only railway station in the study area which is situated in Krishnanagar-I community development block. Other community development blocks (Tehatta-I, Karimpur-II and Chapra) have no railway connectivity. Bus transport is available all around the study area.

● Farmers of this study region are not getting the actual value of the crops which has created disturbances among them leading to unwillingness to cultivate. Local farmers' cultivation is mainly dependent on seasonal rainfall which is another main problem of the study area though there are irrigation technologies like tube well, shallow well, pumping etc. Soil fertility rate is low due to the lack of proper maintenance of field. Sometimes it is also seen that production of crops is low due to lack of pumping and other technologies.

● Frequency of load shading is very high mainly in summer season and duration of load shading is moderate to high specially Karimpur-II and Tehatta-I but consciousness of government in case of load shading management is very poor. In Krishnanagar the frequency is comparatively low.

● Educational facilities of the study area are also very low compared to other region of the Nadia district. The lack of security, knowledge, awareness is the major reason. The students are forced to migrate to Krishnanagar city, Kalyani city as well as in Kolkata.

● Medical facilities are very poor such as lack of medical centers, lack of medicine, high rate of medicine, ridiculous behavior of doctors with patients etc. These hindrances in medical services have pushed the people (surveyed) towards low quality of health leading to incidence of higher morbidity and lower standard of living.

SUGGESTIONS:

From the foregoing analysis it could be suggested that:

● The socio economic disparities could be decreased with the introduction of rail transport in Chapra, Tehatta-I and Karimpur-ii of the study area.

● By supplying fertilizers, pesticides, seeds in low prices and providing the agricultural loan to the farmers in the study area the socio economic disparities could be reduced with increasing local farmers' willingness to augment agricultural production.

● Further, the development of more number of educational institutions may help the local population to increase their knowledge as well as awareness about the equal use of resources which could be helpful in reducing the socio economic disparities in the study area.

● At last, it can be said that equal use of social and economic identity in the study area may ensure minimization of disparities.

CONCLUSION:

Hence, in conclusion it may be inferred that the harmful impact of the prevailing socio-economic disparities has to be reduced by solving the obstacles of the factors responsible for such disparities in the study area. The Government has taken some major policies, projects and action plans to reduce these socio economic disparities in the study area. The awareness of the local population in the study area has to be generated for the realization of deprivation of large sections in contrast to the affluence of a small section of populace. All these necessitate the thought of sustainable development in the concerned region which may ultimate lead to **unity in diversity** in the truest sense.

SCOPE FOR FURTHER STUDIES:

Researches may be undertaken on the issues of preparing a sustainable development plans particularly for the neglected regions.Studies may be undertaken for making action plans for decentralization of benefits and services from few developed pockets to vast deprived areas.

REFERENCES:

[1] Ahmed. A, Honours Practical Geography, ABJ Publishers, july, 2012, Behala, kolkata-700009

[2] [2] Alder. N.E, Socioeconomic Disparities in Health: Pathways and Policies, doi: 10. 1377/hlthaff.21.2.60 Health Aff March 2002 vol. 21 no. 260-76

[3] Bhattacharya, N. and Mahalanobis, B. (2012): Regional Disparities in household consumption in India, vol. 62, Issue 317, pp. 143-161

[4] Cherodian. R, & AP Thirlwall. A.P (2015): ' Regional disparities in per capita income in India: convergence or divergence?' Vol. 37, Issue 3, Pp. 384-407

[5] Das. D &Hazra. Y, Practical Geography (Honours), ChhayaPrakashani, November, 2012, 4 College Row, Kolkata-700009

[6] Demurger, S. (2001): Infrastucture Development and Economic Growth: An Explanation for Regional Disparities in China, vol. 29, Issue 1, pp. 95-117

[7] Fleishera. B.M, Chenb. J, (1997): 'The Coast–Noncoast Income Gap, Productivity, and Regional Economic Policy in China`, Vol. 25, Issue 2, Pp. 220-236

[8] Fu, X. (2004): Limited Linkage from Growth Engines and Regional Disparities in China, ElsevienInc, vol. 32(1), pp. 148-164

[9] Jais. P (1996): 'Regional Disparities of Endocardial Atrial Activation in Paroxysmal Atrial Fibrillation', Vol. 19, Issue 11, Pp. 1998–2003

[10] Jian.T, Sachs.J.D&Warner.A.M (1996): T'rends in regional inequality in China', Vol. 7, Issue 1, Pp. 1-21

[11] [1] Kashyap. S.G, Socio-economic disparities, November 30, 2014. Guwahati

[12] Kurian. N.J, (2000): ' Widening Regional Disparities in India: Some Indicators', Economic and Political Weekly, Vol. 35, No. 7, pp. 538-550

[13] Martin. R, (1997): 'Regional unemployment disparities and their dynamics', Vol. 31, Issue 3, pp. 237-252

[14] Meisinger, C & Heier, M & Völzke, H & Löwel, H & Mitusch, R & Hense, H & Lüdemann, J (2006) : Regional disparities of hypertension prevalence and management within Germany, Vol. 24, Issue 2, pp. 293–299

[15] Mutlu. S. (1991): ' Regional Disparities, Industry and Government Policy in Japan', Vol. 22, Issue 3, pp. 547–586

[16] Pose-Rodriguez, A. and Ezcurra, R. (2009): 'Does Decentralization Matter for Regional Disparities? Across-Country Analysis, oxford university press, vol. 10, issue 5, pp. 619-644

[17] Reaza. J.S & Rodríguez-Pose.A (2002): 'The Impact of Trade Liberalization on Regional Disparities in Mexico', Vol. 33, Issue 1, Pp. 72–90

[18] Singh, K. G. &Kogan, D. M. and Van Dyck, C. P. (2008) : A Multilevel Analysis of State and Regional Disparities in Childhood and Adolescent obesity in the United States, vol. 33, Issue 2, PP. 90-102