Journal of Advances and Scholarly Researches in Allied Education
Vol. 16, Issue No. 2, February-2019, ISSN 2230-7540

Spatial Distribution of Availability to Drinking Water and Sanitation Facilities: A District Level Analysis, Haryana (2011)

Miss. Deepika*

M.Phil., Research Scholar, Department of Geography, Maharshi Dayanand University, Rohtak

Abstract – Drinking water and sanitation is the basic necessity of a community. It plays a vital role in improving health and quality of life. Adequate water is basic need of our life. Sanitation is the hygienic mean of promoting health through prevention of human contact with the hazard of wastes. Hazards can be physical, microbiological and chemical agents of diseases. Hygienic means of prevention can be by using engineering solution, simple technologies or even by personal hygiene practices. Without proper hygiene and contaminated water cause diarrhoea, cholera and other human killer diseases. According to the Census of India 2011, 833 million people (69.84%) are still living in the villages and data also shows that still around 70% of India's rural or slum population are exposed to water-borne and vector -borne diseases due to lack of basic sanitation facility, unsafe water and unhygienic condition. The condition of drinking water and sanitation facilities in Haryana is good comparatively other states. The study reveals that in urban Haryana districts Gurugram (2.13) and Rohtak (2.12) have better drinking water and sanitation facilities it may be possible because the development of these districts are due to near of Country Capital along with eastern part and two districts locate along with State capital from northern part of the state. But the situation is still disappointing in case of Mewat and Mahendergarh districts because despite of development, these are more deprived are more deprived. It is also noted that these districts locate in southern part of the state. In urban Haryana, Ambala (4.33) and Punchkula (3.40) have good condition whereas Mewat (-5.33) is in bottom. It may be caused by dominance of sandy soil and less development industrial development in south western and western part as compare to other districts.

----------X----------

INTRODUCTION

Access to safe drinking water and sanitation is not only an important measure of the socio-economic status of the household but also fundamental to the health. Globally the world is on track to meet the MDG on safe drinking water. India too is on track with 82.7 percent rural and 91.4 percent urban populations having sustainable access to safe drinking water (Census of India, 2011). Between 1990 and 2004, South Asia and India more than doubled their coverage in improved sanitation. Yet in 2004, an estimated 700 million people in India were not using improved sanitation facilities. Progress in sanitation and improved hygiene has gently impact on health but many people still have no adequate means of disposing of their waste (Khan, Ahmed and Shamsher, 2013)

Our country is a country of villages. According to Census 2011, 833 million people (69.84%) are still living in the villages. Facts and figures of census of India, 2011 shows that still around 70% of India's rural and slum population (650 million) are exposed to water-borne and vector-borne diseases due to lack of basic sanitation facility, unsafe water and unhygienic conditions. In June 2012 Minister of Rural Development Jairam Ramesh stated India is the world"s largest "open air toilet" and remarked that Pakistan, Bangladesh and Afghanistan have better sanitation records. Water and Sanitaion is the basic necessity of a any community. It plays a very important role in improving health and quality of life. Adequate water is also a basic need of our life. Sanitation is the hygienic mean of promoting health through prevention of human contact with the hazard of wastes. And these Hazards can be physical, microbiological and chemical agents of diseases. Hygienic means that prevention can be by using engineering solution, simple technologies or even by personal hygiene practices. Contaminated water cause many deseases like diarrhoea, cholera and other human killer diseases. It is estimated that every 10th death in country in villages is linked to poor water and sanitation. According to the census2011, 834 million people (69.86%) are still living in the villages and data also shows that still around 70% of india's rural or slum

population are exposed to water-borne and vector - borne diseases due to lack of basic sanitation facility, unsafe water and unhygienic condition. There is need of health promoting factors Such as housing condition, availability of drinking water facilities, sanitary facilities Etc. are much more required for health improvement (Nayar, 1997).

The availability of drinking water and sanitation facilities in Haryana is good comparatively other states. Availability of these facilities reflects the quality of life of the people. So the present study will focus on the district wise analysis of these facilities. The present study reveals status of such amenities such as main drinking water source, type of drainage, bathroom facility and latrine facilities in Haryana State in 2011. For study of better condition we take only good household amenities like drinking water within premises, bathroom with roof, closed drainage and flush latrine availability. The paper examines the urban- rural district wise variation in availability of drinking water and sanitation facilities in Haryana.

OBJECTIVES:

- To examine the spatial distribution (by rural and urban) of availability of drinking water and sanitation facilities.
- To classify districts in the categories of low, medium, high and very high with reference to the availability of drinking water and sanitation facilities by using Composite Index.

DATABASE AND METHODOLOGY:

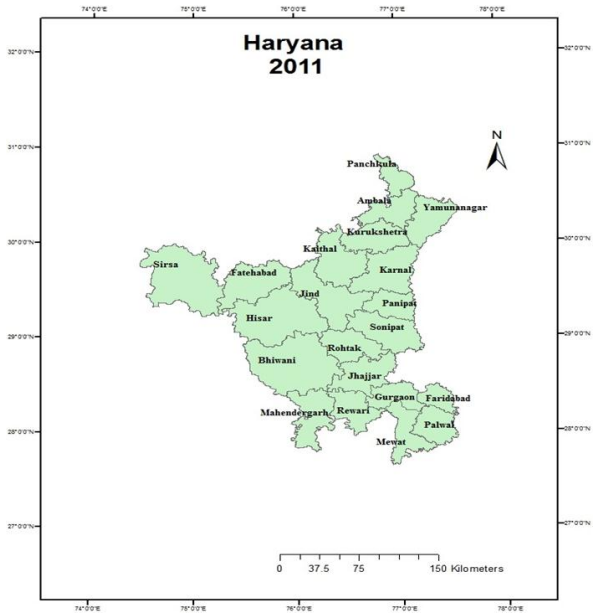
The study is based data obtained from Households-Series Tables, Census of India 2011. In the study, bar diagrams are used to show the accessibility in district wise facilities of drinking water, bathroom, drainage and toilets. The study is based on secondary data. Data has been collected from various sources such as District Census Handbook (2011). The present paper endeavours to examine the salient feature of drinking water and sanitation facilities In the paper, Z-score method has been used. The data has been processed, tabulated, analyzed and mapped using suitable statistical and cartographic techniques.

Selected indicators

- Drinking Water facility = Within premises.
- Bathroom facility = Bathroom with roof.
- Drainage facility = Closed drainage.
- Toilet facility = flush toilet.

STUDY AREA:

Haryana is a the developed state of India. The state has been selected as area of study to find out regional pattern of availability of drinking water andsanitation facilities. Situated in North-Western part of India, the study area covers an area of 44,412 sq. kms with a population of 25,351,462 extending between latitudes 27° 29' N and 30° 55' N and longitude 74° 27.8' to 77° 36.5' E. Concentrating the physical features, Haryana is bordered by the Shiwalik Hills in the northeast. In the east, the perennial river Yamuna makes boundary between Haryana and Uttar Pradesh and in the north, the seasonal river Ghaggar forms part of the boundary between Punjab and Haryana. The dry semi-arid region in the southwest and the west is penetrated by the Aravalli ranges, which finds extension in parts of Gurugram, Mahendergarh, Rewari, Bhiwani and Jhajjar Districts.



RESULTS AND DISCUSSION:

Therefore, the present section endeavors to study the levels of availability of drinking water and sanitation facilities in Haryana. The foregoing discussion was based on four variables that are already discussed above. In order to arrive to a composite position of districts of the Haryana has been examined with reference in terms of the aggregated composite index. Table no. 1 gives some notable characteristics.

The districts have been divided into four categories:

1. Districts with High Availability of Drinking Water and Sanitation Facilities
2. Districts with Medium Availability of Drinking Water and Sanitation Facilities

3. Districts with Low Availability of Drinking Water and Sanitation Facilities

4. Districts with Very Low Availability of Drinking Water and Sanitation Facilities

Table: 1 Availability of Water and Sanitation in Haryana, 2011

Districts	Urban	Rural
Punchkula	-1.91	3.40
Ambala	0.03	4.33
Yamunanagar	-0.35	1.68
Kurukshetra	1.51	1.98
Kaithal	0.00	-1.74
Karnal	1.24	0.74
Panipat	-1.15	0.21
Sonipat	1.29	-0.16
Jind	0.39	-1.8
Fatehabad	0.60	-1.38
Sirsa	1.11	-0.51
Hisar	0.93	-0.80
Bhiwani	0.11	-0.70
Rohtak	2.12	-0.68
Jhajjar	-0.29	0.24
Mahendergarh	-2.33	-1.61
Riwari	0.47	0.18
Gurgram	2.13	2.80
Mewat	-3.27	-5.33
Faridabad	-0.98	0.53
Palwal	-1.60	-2.22

Source: Computed by researcher

AVAILABILITY OF DRINKING WATER AND SANITATION FACILITIES IN RURAL HARYANA:

In rural area, People use toilets inside house, defecate in open fields or use community toilets and all these three utmost care must be taken. In our Indian tradition, it is mentioned that a small ditch should be used for defecation and covered it the nearby soil after the use. In ancient time, anyone could freely do so without fear of being seen by others. Because at that time, population was very less. But in today's context, increasing population has put huge pressure on land. And as a result of which land holding size has become very small. So, now the days it is almost not possible to use such ditch concept for everyone in today's world. So, people just defecate in open and move on. It is the human behaviour which is remained unchanged since last hundreds of years. After so many efforts of many Civil Society Organisations (CSOs), Government agencies and other Educational institutions, people began to adopt practise of using toilets. But only using toilets, is not so simple that it can solve the problem of poor sanitation. We will closely examine these under the points below. As we know, Women and children is the most susceptible section of the society due to poor sanitation. In our Indian tradition, women have to go in the open to defecate and where they are vulnerable to various infections and diseases. In rural areas, Children are often caught by diarrhea and insects carry harmful diseases with them. So, unfortunately they become victim and carrier of the disease. In Indian villages, women going in open are forced to stand up when someone passes by. Women always have to go either before sun rise or after sunset. Though this will be unfair to say that only women and children carry the contaminants or diseases but men are likewise contributing to same by in-hygienic practises. Figure1 that is a total composite score based map of all four selected indicators that is drinking water within premises, bathroom with roof, closed drainage and flush toilet facility. It is categories in four categories. Table 1 shows the composite score of four variables. This varies from 4.33 to -5.33. Figure 1 exhibits that Punchkula, Ambala and Gurugram has good condition in all four selected indicators. In these districts Ambala (4.33) is on the top in Haryana whearas Mewat (-5.33) is on the bottom. All these districts with high availability in drinking water and sanitation facilities lie in north and north- eastern part of the state whereas Kurukshetra, Yamunanaga, Karnal, Panipat, Sonipat, Jhajjar, Rewari and Faridabad lie in medium category. Out of total districts, There are five districts like Sirsa, Rohtak,Kaithal, Hisar and Bhiwani have not good condition in these facilities because these lie in low category

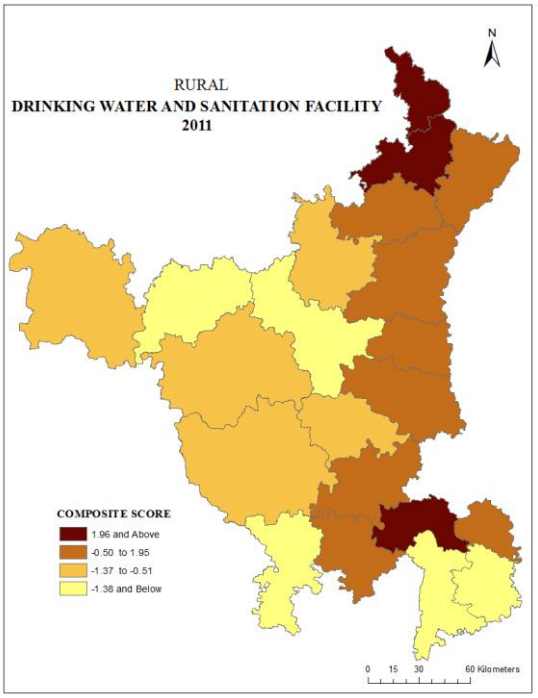
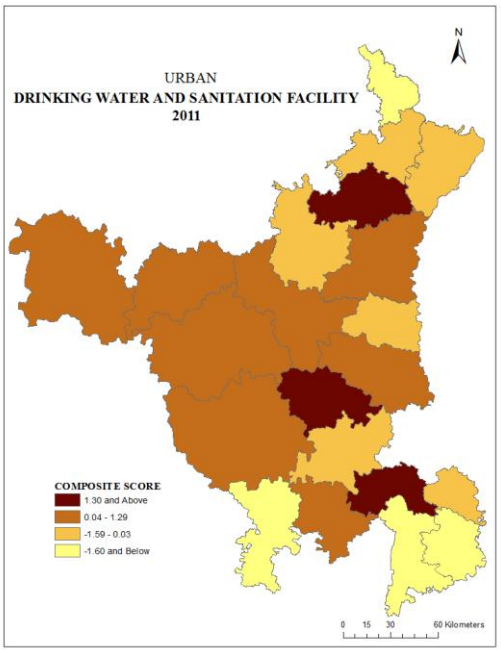


Figure 1

And from the western and southern part of state, there is five districts namely Fatehabad, Jind, Mahendergarh and Mewat and Palwal shows very worst condition.

AVAILABILITY OF DRINKING WATER AND SANITATION FACILITIES IN URBAN HARYANA:

Availability of drinking water and sanitation facilities is the most important aspect of the quality of urbanization. The amenities like, water, sanitation and clean fuel are the critical determinants of living conditions and health of the urban people. Although, it is not always clear whether more urbanized states have better availability of drinking water and sanitation facilities or vice versa. Similarly it is also not clear whether the bigger cities are better off than small cities and towns. However, bigger cities are known for air pollution, slum and crowding, it would be interesting to know how cities and towns differ in terms of the provision of clean water, sanitation, electricity and clean fuel etc.. The Z-score value varies between 2.13 to -3.27. In urban Haryana, Gurugram (2.13) have first rank whereas Mewat(-3.27) is on bottom in these facilities. Out of twenty one districts, only three districts lie in high category. These districts are Kurukshetra, Rohtak, Gurugram show the best condition of accessibility to water and sanitation in Haryana because these are industrial district and economically developed. Most of the districts of western and central Haryana come in medium category. These distrits are namely Sonipat, Karnal, Jajjar and Sirsa, Fatehabad, Hisar, Bhiwani, Jind and Rewari show the average condition in drinking water and sanitation facilities. While Didtricts Kaithal, Panipat, Jhajjar,Ambala and Yamunanagar ie in lower category districts of Haryana. And Mahendergarh, Mewat, Palwal and Punchkula are very deprived districts of the state because most of the population in these district specially in southern part are not educated and a large part of population are in agriculture and so they have no proper knowledge about water and sanitation facilities.



CONCLUSION:

Overall availability of drinking water and sanitation facilities is completly good in all districts of Haryana state. The analysis further reveals that urban Haryana there are four districts which are more deprived. These are like Mewat, Mahendragarh, Palwal and Punchkula . It does not mean that their drinking water and sanitation facilities have been decreased but they have slow pace of development as compared to the other districts. Rohtak district enjoyed the first rank. In rural Haryana, districts Panchkula and Ambala have better drinking water and sanitation facilities it may be possible because the development of these districts are due to near of Country Capital along with eastern part and two districts locate along with State capital from northern part of the state. But the situation is still disappointing in case of Mewat and Mahendergarh districts because despite of development, these are more deprived are more deprived. It is also noted that these districts locate in southern part of the state. It may be caused by dominance of sandy soil and less development industrial development in south western and western part as compare to other districts. Overall picture reveals that Eastern Haryana is better than the western and southern Haryana in availability in these facilities.

REFERENCES:

Gupta, V. and Pal, M. (2008) “Community Sanitation Campaign: A Study in Haryana”, *Economic and Political Weekly*, pp. 20-23.

Khan, J.H., Ahmed, N., & Shamshed (2013) “A geographical analysis of availability of amenities in scheduled caste households in India”, American International Journal of research in Humanities Arts and Social Sciences, pp. 56-65.

Census of India 2011, House, Household Amenities and Assets. Office of the Registrar General and Census Commissioner, New Delhi.

Nayar, K.R. (1997). “Housing amenities and health improvement: some findings. Economic and Political Weekly, 32 (22), pp. 1275-1279.

Corresponding Author

Miss. Deepika*

M.Phil., Research Scholar, Department of Geography, Maharshi Dayanand University, Rohtak

ddhakwal@yahoo.com