

# Anaemia - A Geoenvironmental Crisis in Shekhawati Region, Rajasthan

Dr. Manoj Kumar

Head, P.G. Department of Geography  
Shri Radheshyam R. Morarka Govt. PG College, Jhunjhunu

**Abstract:** The author has collected several News Articles from News Papers (Rajasthan Patrika, Dainik Bhaskar) which published from time to time during last few years about the crisis of Anaemia disease patients in different places/ areas of Shekhawati Region - by this all, one can visualize very well the significance of the research problem from public or community health status/ environment point of view.

In comparison to the other districts of the state, in most of the areas of Shekhawati Region, a thorough distribution of Anaemia Patients was observed in the public or society, respectively.

## 1. INTRODUCTION

In 1975, WHO, Geneva published a documentary report on *Surveillance of Drinking Water Quality*, and by adopting more or less all these issues - ICMR New Delhi published a volume on *Recommended Dietary Intakes for Indians* in 1981.

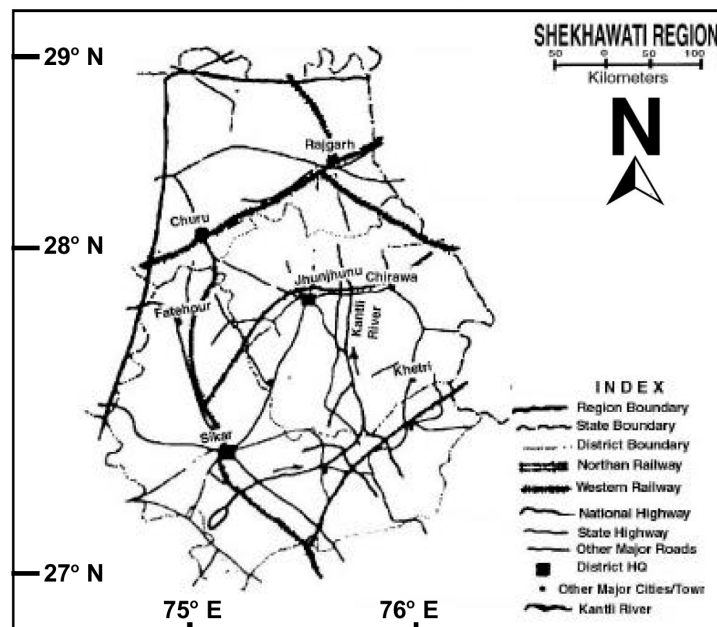
Further in this regard, besides these all above mentioned work studies, the author is including some outstanding references of the work done by some researchers and workers viz; Mishra wrote a book in 1969 on *The Medical Geography of India* in which he gave emphasis on community health environment and status of drinking water, and Rajni Raghav in 1986 on *Geogenic Aspects of Water-borne Diseases in Marusthali Region of Rajasthan*. Park in 1995 illustrated the problem of water born diseases at global level.

## 2. INTRODUCTION OF THE RESEARCH AREA

The area under study i.e. Shekhawati Region is located in the north-eastern part of Rajasthan state. The Region has

geographical extension from 27°7' to 28°53' N latitude and 75°41' to 76°05' E longitude on the map of Rajasthan. The area under study covers three districts, namely Churu, Jhunjhunu and Sikar. Churu district covers 7 tehsils fall under Shekhawati Region (Churu, Rajgarh and Taranagar) whereas Jhunjhunu district as a whole with its six tehsils (Buhana, Chirawa, Khetri, Jhunjhunu, Nawalgarh and Udaipurwati) in which Buhana tehsil emerged out as a new tehsil on the map of Jhunjhunu district (2001), it was no existence in the year of 1991. Sikar district also covered fully with its six tehsils (Data Ramgarh, Fatehpur, Laxmangarh, Neem ka Thana, Sikar and Sri Madhopur). Thus, the Region under study has 19 tehsils in total with its total 15343 sq. km. geographical area which makes 5.6% of the state's total. At the part of district-wise contribution by area point of view in Shekhawati Region it is observed that part and portion of Churu district contributes 29%, Jhunjhunu district contributes 31% and Sikar by 40%, respectively.

## Location Map



### 3. METHODOLOGY :

Anaemia disease is not mentioned separately in the available records of lists of incidences obtained from C.M.H.O. office of the each district headquarter, deptt. of health, govt. of Rajasthan. Further in this context, it is observed that the incidences of Anaemia disease are covered indirectly. The study covers three years observations at the part collection of data of number of incidences of particular disease i.e. from 2010 to 2012.

Further in this context, at the part of presentation of subject matter under the above mentioned topic of study, on the basis of analytic aspect of district-wise observations of number of incidences of Anaemia disease in Shekhawati Region, the paper deals three aspects obviously are as mentioned below :

1. District-wise contribution (in percentage) in total number of incidences of Anaemia disease which will naturally show a comparative account of distribution of patients of Anaemia disease in Shekhawati Region at the part of district-level study, These above mentioned aspects of the study are presented of incidences of Anaemia disease for the area under study. One can visualize very well by going through the datas of above mentioned aspects of the study of distribution of Anaemia Patients in Shekhawati Region, Rajasthan.

### 4. OBSERVATIONS :

The research paper deals of observations regarding the spatial distribution of Anaemia disease incidences for the area under study.

#### 4.1. ENVIRONMENTAL CONDITIONS :

Anaemia is defined as quantitative and qualitative deficiency of haemoglobin, characterised by reduced oxygen carrying capacity of blood cells resulting in tissue anoxia producing various symptoms. Anaemia is a symptom which can be the result of various causative factors. This is very common blood disorder which occurs when the haemoglobin concentration in blood falls below the lower limit of normal. The Causing factors of Iron deficiency anaemia are : Increased demand of iron. Inadequate Iron intake Inadequate absorption of Iron. Anaemia due to vitamin B-12 and Folic acid deficiency.

Due to inadequate intake- The Folic acid deficiency is very common in the elderly poor persons consuming alcohol. Due to inadequate absorption -Vitamin B-12 can not be absorbed from the terminal ileum. Unless the intrinsic factor produced by the stomach is also present in pernicious anaemia there is failure to produce intrinsic factor.

Inability to utilize folic acid- This occurs with the folic acid antagonists methotrexate and pyrimethamine and also in patient receiving antiepileptic treatment and using. Timethaprim which prevents the conversion of folic acid into active derivative folic acid. Acute infection of Anaemia, Tuberculosis, Leukaemia etc. also causes anaemia as well as enlargement of spleen. It may overact and destroy red cells in variety of diseases which again causes anaemia.

Vitamins are organic substances present in small quantities in food and which are necessary for the normal nutrition of the body. These are divided into two groups- those which are water soluble and those which are fat soluble. Deficiency of the vitamin and hence of the coenzyme interferes with the enzymatic process involved, leading to impaired synthesis of some metabolite or to the accumulation of excessive amounts

of the precursors of the reaction which themselves may be toxic.

### 4.2. SPATIAL DISTRIBUTION :

It is also one of the most important water born disease in the developing countries of the world, the occurrence of Anaemia disease among incidences of Rajasthan is also supported by the deficiency of certain kind of minerals of Nutritional aspect among the peoples of residing population for the area under study. Anaemias disease shows it's an absolute 100 percent frequency from the annual prevalence point of view during the course of last three years for the area under study.

Among the total prevailing water born diseases of Rajasthan, it contributes the highest percentage in outdoor patients aspect i.e. 56.3 percent and thus, ranks at first place in total number of out door patients where as at the part of indoor patients it is placed second by contributing 30.0 percent in all.

Among the total number of patients of the group of all water born diseases in Rajasthan, the disease of Anaemia contributes 18 percent out door patients and 10 percent in door patients total at the part of all communicable diseases of Rajasthan.

### REFERENCES

- [1] Boume, G.H. ed 1971. World Review of Nutrition and Dietetics, Vol 13, pp 106-164, Karger Basel
- [2] Dieterich, B.H. and Henderson, J.M. 1963. Urban Water Supply - Conditions and Needs in Seventy-five Developing countries. Public Health Paper No.-23, WHO, Geneva.
- [3] ICMR. 1975. Manual of Standards of Quality for Drinking Water Spl, Rpt, Ser, 44.
- [4] ICMR 1980. Nutritive Value of Indian Foods, National Institute of Nutrition, Hyderabad.
- [5] ICMR. 1981. Recommended Dietary Intakes for Indians, New Delhi.
- [6] Jelliffe, D.B.1966. The Assessment of the Nutritional Status of the Community, WHO Monograph Sr. No.53.
- [7] Mohan M and I Gopalan 1981. Nutritional Disabilities, ICMR, National Institution of Nutrition, Hyderabad.
- [8] Manoj Kumar 1992. Environmental Appraisal and Health Problems of Khetri Nagar and Environs Unpublished Thesis, University of Rajasthan.
- [9] Mathur, H.S. ,(1969), Geographical Factors of Smallpox in Rajasthan. Ph.D. Thesis; University of Rajasthan, Jaipur (unpublished).
- [10] Park, K.1995. Park's Text book of Preventive and Social Medicine. M/s Banar-sidas Bhanot Publishers, Jaipur.
- [11] Pandit, C.G. et al 1960. Nutrition in India, New Delhi, ICMR.
- [12] Rajni Raghav. 1986. Geogenic Aspects of Water-borne Diseases in Marusthali Region of Rajasthan (unpublished Ph.D.Thesis). Deptt. Of Geography, University of Rajasthan, Jaipur.
- [13] Snehlata and Sharma, M.K. 2012. Medical Geography in Hindi, M.B. Publishers and Distributors, Jaipur
- [14] Sharma, M.K. 2012. Disease Ecology, M.B. Publishers and Distributors, Jaipur