

Letter to Editor

Mapping of Vector Borne Diseases using GIS and Remote Sensing Techniques

Dear Editor,

Vector-borne diseases accounts for more than 17% of all infectious diseases in the world causing more than 1 million deaths annually. Around 2.5 billion people in over 100 countries are at a risk of contracting dengue alone. Malaria causes more than 4 lakh deaths every year globally and most of in them children of under 5 years. Around 13,000 cases of malaria are being reported annually in Karnataka state for the past few years. Kolar is declared by NVBDCP as one among the 13 malaria endemic districts in Karnataka state.

Geographic information System (GIS) has not only been assisting in updating and mapping the vector borne disease prevalence but also used as a supporting tool for surveillance. This is also used as a decision making tool for controlling vector borne disease. GIS is not frequently being used for VBD control in our country. Hence there is a need for web mapping of GIS for controlling the present situation of chikungunya, malaria, dengue and other vector borne disease epidemics in the country. GIS can also be used to map the geographical distribution of prevalence of disease, the trend of the disease transmission and spatial modeling of environmental aspects of disease occurrence.

The traditional method of vector borne disease control which is based on empirical knowledge and the conventional method is laborious, expensive and time consuming. Whereas by applying the remote sensing and GIS techniques for mapping vector habitats, vector presence, abundance and density, assessing the risk of vector borne diseases, disease transmission and spatial diffusion we can find the root cause of disease infection and source of infection.

Hence, there is need to undertake a detailed epidemiological study to determine the local factors that are responsible for transmission of vector borne diseases in the endemic communities of Kolar and to use the findings of the study for its further prevention and control. Usage of GIS for customized mapping of various determinants of vector borne diseases will help in disease control through a targeted approach.

References

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