



डॉ विश्व मोहन कटोच

एम डी, एम एन ए एससी, एफ ए एम एस, एफ ए एससी, एफ एन ए

सचिव, भारत सरकार

(स्वास्थ्य अनुसंधान विभाग)

स्वास्थ्य एवं परिवार कल्याण मंत्रालय एवं

महानिदेशक, आई सी एम आर

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(स्वास्थ्य अनुसंधान विभाग)

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Foreword

Threats to the health of human population from vector-borne diseases continue to be global health problems both in terms of increasing morbidity and mortality, and in causing economic burden. India especially is faced with recurrent outbreaks of vector-borne diseases. Major vector-borne diseases prevalent in India are malaria, filariasis, dengue, and Japanese encephalitis (JE) and visceral leishmaniasis. Recent frequent occurrence of epidemics of JE and dengue; and severe forms of dengue like dengue shock syndrome (DSS) and dengue hemorrhagic fever (DHF); and newly emerging chandipura and nipah viruses have become great concern to disease control personnel, programme planners and also to the public. Occasionally, other insect borne epidemics, namely plague, scrub typhus, kysanur forest disease, etc. have been occurring in India. After 35 years of gap, in 2006 chikungunya transmission occurred in large numbers in different states especially in southern states of India. GIS mapping would make it easy to update the information instantly and to identify the trouble spots at the village-level and the information can reach instantly to the District, State and National level authorities and to the policy makers to formulate focused and cost-effective control strategy. Remote sensing technology can help correlate land use features, water bodies, vegetation, forest cover, human habitation, etc. with disease prevalence and to develop a road map to prevent the transmission.

The Indian Council of Medical Research carried out Task Force studies on vector-borne diseases using Remote Sensing (RS) and Geographical Information System (GIS). The studies carried out by the ICMR Institutes at NIMR, Delhi, VCRC, Puducherry and RMRIMS, Patna have highlighted the application of RS and GIS for management of vector-borne diseases by predicting the high risk areas and the vulnerable periods of disease outbreaks. The editors of this document on "*Application of GIS and RS Technologies in Epidemiology and Control of Vector-borne Diseases*" have brought together the information reported in the final reports of these projects and from their publications in the area of malaria, filariasis and visceral leishmaniasis for wider circulation. I appreciate Dr. Sarala K. Subbarao and Dr. Rashmi Arora for this endeavour. I congratulate all the members of the Task Force on 'Geographical Information System and Remote Sensing' for their excellent guidance and the Investigators for undertaking the projects.

I hope this information will stimulate the professionals and academia to take up more studies in this important area, and the stakeholders for applications of RS and GIS technologies to public health care strategies for all emerging and reemerging vector-borne diseases.

(V. M. Katoch)