

## **The Study of Dengue Fever Outbreak in Thailand Using Geospatial Techniques, Satellite Remote Sensing Data and Big Data**

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**Abstract :** The objective of this paper is to present a practical use of Geographic Information System (GIS) to the public health from spatial correlation between multiple factors and dengue fever outbreak. Meteorological factors, demographic factors and environmental factors are compiled using GIS techniques along with the Global Satellite Mapping Remote Sensing (RS) data. We use monthly dengue fever cases, population density, precipitation, Digital Elevation Model (DEM) data. The scope cover study area under climate change of the El Niño-Southern Oscillation (ENSO) indicated by sea surface temperature (SST) and study area in 12 provinces of Thailand as remote sensing (RS) data from January 2007 to December 2014.

**Keywords :** dengue fever, sea surface temperature, Geographic Information System (GIS), remote sensing

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