

## **DENGUE OUTBREAKS IN VAVUNIYA DISTRICT, SRI LANKA**

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In Sri Lanka, *Aedes aegypti* and *Aedes albopictus* are reported to be the vectors transmitting dengue fever to human. Socio-economic conditions of the community contribute to mosquito breeding either directly or indirectly. The objective of this study was to assess the influence of social and climatic factors on dengue incidence in Vavuniya District. Data on monthly rainfall, temperature and the dengue incidence were used over the period from 2010 to 2017. Data were statistically analysed using Minitab 17. The result revealed that about 6% of the dengue cases reported in the country was in Vavuniya district in 2017 and the highest number of dengue cases in the study area was 1075 in 2017. Out of them 80% were recorded in Vavuniya Medical Officer of Health (MOH) area. Some pockets in the study area were identified as dengue prone areas and 50% of the dengue incidences were recorded in those pockets namely Tekkawatha, Katkuli, Thonikkal, Vavuniya town, Vairavapuliankulam, Kurumankadu, Rambaikulam and Soosaipillaiyarkulam. The dengue affected people were mainly males (95%) with the age group of 19 to 37 years. The peak months of positive premises and positive containers were observed in January, February, May and November coincided with high rainfall while no influence of temperature observed. Positive premises and positive containers were co-existed with *Aedes aegypti* and *Aedes albopictus*. The larval indices such as House index (HI), Container index (CI) and Breteau index (BI) were found to be 5.8%, 6.8% and 5.7% respectively. Specifically the positive containers of flower pots and toilet fitting had the container index of 9.0% and 8.6% respectively. Based on the Breteau index, the study area was categorized as risky. Hence, the continuous monitoring on mosquito breeding sites and appropriate management and the community based awareness programs are recommended to secure the public health.

**Keywords:** Dengue fever, Entomological indices, Positive containers, Positive premises, Rainfall.