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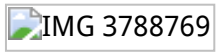
HUMAN ACTIVITIES - PRIMARY CAUSE OF DENGUE AND ZIKA



PENANG, 11 February 2016 – Urbanisation, climate change and changes in vector biology were the main causes behind the rapid rise in the mosquito vector population, especially the infamous Aedes aegypti mosquito (http://www.cdc.gov/dengue/resources/30Jan2012/aegyptifactsheet.pdf)es, which carry the dengue and zika virus.

This was based on the research findings of a group of researchers from the Vector Control Research Unit (VCRU), School of Biological Sciences, Universiti Sains Malaysia (USM).

According to VCRU senior lecturer, Dr. Nur Faeza Abu Kassim, human activities were the primary factor that led to the increase in mosquito breeding sites especially in the urban areas where the felling of trees and clearing of land for housing, industrial and agricultural projects has created a more suitable environment for the spread of vector-borne diseases, especially dengue, zika and even malaria.

"For example, in Penang, many cases were reported in the vicinity of Jelutong which is undergoing rapid urbanisation with several big construction sites and landfills for rubbish disposal," said Nur Faezah who has carried out extensive studies in medical entomology as well as genetic and mosquito vector control.

She added that these conditions created an "ideal environment for mosquito vectors to breed and spread infectious diseases".

Furthermore, she elaborated, "since Aedes mosquitoes breed in open containers (such as tins and plastic containers, flower plates and pots, used tyres, etc.thrown away or left unattended by people) with stagnant water, the public has to change their mentality and attitude by cooperating with the local authorities by keeping their surrounding residential areas as clean as possible and free from these breeding grounds."

Nur Faezah believed that there should be an integrated effort from all parties involved to combat the spread of the virus by the vector in a sustainable manner and not only on a seasonal basis when there are cases.

"Hence ensuring the community participation in an integrated vector management programme in a sustainable manner to help curb the spread of the virus was of primary importance and a social responsibility that needed to be taken seriously," she said in a special media conference held to introduce and promote VCRU that was first set up in 1972.

She added that there should be a continuous concerted research too involving various agencies and local authorities in addressing the issue of dengue and zika.

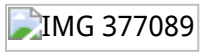
"Zika is not new in this country, in fact it has been reported in Malaysia back in the 1950s but no research has been done on this emerging mosquito-borne virus," said Nur Faeza.

VCRU is the only centre in Malaysia and one of the only three centres in the world appointed by the World Health Organisation (WHO) to conduct research on insecticide resistance; the other two collaborative centres are in India and Florida, United States of America.

"VCRU has been actively involved in research related to mosquitoes and urban pest control, focussing on the study of the effectiveness of insecticide products to be registered for the Malaysian market, monitoring of insecticide resistance worldwide and improvement of 'WHO test kit' for susceptibility resistance studies of pests and also providing expertise to conduct training for industry and students in the field of vector control," explained its coordinator, Dr. Hamdan Ahmad.

He added that VCRU had established long-term collaborations with local and international agencies in various fields related to vector control, and has research and teaching laboratories that are fully equipped with the latest facilities for intensive vector study besides being also involved in policy formulation with the Ministry of Health (MOH).

Meanwhile, a lecturer of the School with over 30 years of service with USM, Professor Dr. Zairi Jaal said, VCRU began as a research unit that conducted studies on mosquitoes and continued with numerous researches using a variety of approaches to study the behaviour of different types of mosquitoes.



When asked about the Zika virus, Zairi said the same vector control for dengue can indirectly be used to control the spread of Zika, of which Malaysia is also at risk and faced the potential threat of the virus, looking at the influx of tourists entering the country.

WHO on February 1, 2016 had declared the mosquito-borne Zika virus an international public health emergency due to its link to thousands of birth defects (microcephaly - underdeveloped brains) to babies born in Brazil, and as a global response to the threat, the Malaysian government is also taking the necessary measures to manage the spread of the disease.

Also present at the media conference were the Dean of School of Biological Sciences Professor Dr. Amirul Al-Ashraf Balakrishnan Abdullah and several VCRU scientists.

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