

# FLEHID



## GUIDEBOOK ON CONTROL AND PREVENTION OF MOSQUITO BREEDING



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HEALTH



# Foreword

The publication of this booklet comes at an important time for dengue prevention and control. Over the last two decades, dengue has emerged as a serious public health problem in the regions of Southeast Asia and the Western Pacific. The disease has spread to new geographical areas and the frequency of outbreaks has increased. This recent emergence of dengue is a consequence of increased population mobility and travel, unplanned urbanization and development and the possible effects of climate change.

Dengue is transmitted primarily by *Aedes aegypti* and, to a lesser extent, by *Aedes albopictus*. *Ae. aegypti* breeds in close association with humans, predominantly in water storage containers, whereas *Ae. albopictus* tends to breed in smaller natural outdoor water pools including tree hollows, ornamental rock gardens, discarded containers, and cut bamboo ends, often in public parks and other similar areas. *Ae. albopictus* is the only dengue vector species found in Hong Kong and their abundance is seasonally influenced. Controlling these vectors is, in the current absence of an effective dengue vaccine, the only method of dengue prevention and control.

It is known that dengue has not yet established as an endemic disease in Hong Kong. However, low numbers of imported cases, particularly from highly endemic Southeast Asian countries, are frequently reported. The Hong Kong SAR has a tropical and subtropical climate and environmental factors are conducive to the propagation of the mosquito vectors. A stringent vector surveillance programme and control activities are therefore required to prevent the potential for dengue transmission from any imported case. In recent years, the Hong Kong government has been intensifying the dengue surveillance system and implementing control strategies including vector surveillance using oviposition traps that provide proxy indicators for initiation of control action.

Dengue control is everyone's concern. The publication of this booklet is intended to update the level of knowledge of dengue vectors in Hong Kong and provide some practical solutions to prevent vector breeding. The booklet also provides clear control strategies for specific population target groups and information on how they can get involved in vector control. It is hoped that this publication will increase community participation and social mobilization in source reduction of vector breeding sites. It represents an evidence-based and practical public health tool to prevent dengue vector breeding in key target areas including indoors, outdoors, on construction sites, around schools and on housing estates.

The Food and Environmental Hygiene Department of the Hong Kong SAR Government should be applauded for taking this pro-active and informed action for dengue control. We believe it will contribute to dengue prevention and control in the Hong Kong SAR, and the wider region.

Dr Chang Moh-Seng  
Vector Control Scientist  
World Health Organization

FEHD



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# Introduction



Mosquitoes cause great nuisance to man. Some species even pose threats to public health as vectors of diseases like dengue fever - a severe mosquito-borne disease characterized by high fever, headache, rash, joint and muscular pain. *Aedes albopictus*, the local dengue fever vector, is prevalent in Hong Kong. It breeds both in rural and urban areas and its breeding places can be grouped into two categories: artificial receptacles like containers, discarded tyres, lunch boxes and cans; and natural habitats such as tree holes, bamboo stumps and leaf axils.

