UNIVERSITI TEKNOLOGI MARA

STUDY OF ENVIRONMENTAL CONDITION AND THE LEVEL OF *AEDES* INFESTATION IN PUNCAK ALAM

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Project submitted in fulfillment of the requirements
for the degree of
Bachelor in Environmental Health and Safety (Hons.)

Faculty of Health Sciences

July 2017

DECLARATION BY STUDENT

The project entitled "**Study of Environmental Condition and the Level of Aedes Infestation in Puncak Alam**" is a presentation of my original final project in partial fulfilment of the requirement for the Bachelor in Environmental Health and Safety (Hons). I hereby declare that this project is fully written by me and also is my own effort. I'm sure that it is no part has been plagiarised without citations. Wherever contribution of others are involved, every effort is made due reference to the staff, lecturers, literature, discussions and was done under the guidance of **Dr Nazri Che Dom** as a project supervisor.

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ACKNOWLEDGEMENT

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ABSTRACT

Environmental Condition and the Infestation Level of the *Aedes* Vector at Residential Area in Puncak Alam

by

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Introduction: The potential influence of high dengue vector density may have a relation to the environmental condition where people exposed to the dengue disease transmission. In depth study is needed in order to understand this transmission by implement the effective technique that influenced human vulnerability to this vector-borne disease. **Objective:** The objective of the study was to assess the Environmental Condition Index (ECI) as an indicator for *Aedes* mosquito infestation in dengue risk area. **Methodology:** In this study, a minimum hundred houses in each nine zones were selected using systematic technique to determine ECI score as well as to placed 30 ovitraps container. Four paramaters of premise condition evaluated are house condition, front/yard condition, degree of shade and drainage facilities. **Result:** To assess the size and direction of the linear relationship between environmental condition index (ECI) and mean eggs per trap (MET) of *Aedes albopictus,* a bivariate Person's correlation coefficient (r) was calculated. The bivariate correlation between these two variables was positive at F_A r=0.115; p=0.765 and Y_A r=0.32; p=0.935 which clearly showed the usefulness of this method. **Conclusion:** This preliminary analysis helps in conducting rapid technique to identify and detecting the existence of *Aedes* eggs with a minimal number of manpower. It can conclude that this study found the environmental condition influences the level of *Aedes* infestation.

Keywords: *Aedes species, breeding site, premise condition index, ovitrap surveillance*