

**UNIVERSITI TEKNOLOGI MARA**

**EFFECT OF WEATHER VARIABLES ON  
THE DENSITY OF *Aedes* MOSQUITOES IN  
JOHOR BAHRU TENGAH :  
A RETROSPECTIVE STUDY  
FROM 2014 - 2016**

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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 2018

## DECLARATION BY STUDENT

I hereby declare that this project report is based on my original work except for citations and quotations which have been duly acknowledged. I also declare that it has not been previously and concurrently submitted for any other degree or award at UITM or other institutions.

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## **ACKNOWLEDGEMENT**

In the name of Allah, The Most Gracious, The Most Merciful.

Assalamualaikum and Alhamdulillah, all praise to Allah S.W.T. the Supreme of Lord of the Universe. Peace and blessing to Nabi Muhammad S.A.W., all the prophets and their families. I praise Allah S.A.W. for the strength and His blessing in completing my study.

I would like to express my deepest appreciation to all those who provided me the possibility to complete this report. A special gratitude I give to our final year project supervisor, Dr Nazri Che Dom, whose contribution in stimulating suggestions and encouragement, helped me to coordinate my project especially in writing this report.

Furthermore I would also like to acknowledge with much appreciation the crucial role of the staff of Meteorology Department and Health Office of Johor Bahru District, who gave the permission to use all required data and the necessary material to complete the task. I have to appreciate the guidance given by other supervisor as well as the panels especially in our project presentation that has improved our presentation skills thanks to their comment and advices.

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## ABSTRACT

Dengue fever is one of the common diseases in Malaysia. Dengue fever is a communicable disease that known as vector borne disease. The vector of dengue fever is *Aedes* mosquitoes. The objective of this study to assess the effect of weather variables on the density of *Aedes* mosquitoes in Johor Bahru Tengah. This study using a retrospective cross study from 2014 to 2016. The data of *Aedes* indices and weather variables was collected by epid week for the three year. The *Aedes* indices data are represent by using cumulative percentage curve with the dengue fever cases. The Pearson's correlation coefficient is calculated for each year by weekly cumulative percentage of *Aedes* index, breteau index and dengue cases. The weather pattern characteristics with *Aedes* indices are represent in the histogram and the line graph. While for each weather variables is present in the scatter plot graph. The relationship between *Aedes* indices and weather variables is measured using the Pearson's correlation coefficient. The result showed no significant and low correlation between the *Aedes* indices and weather variables. Even the result showed low correlation, this study data collection can be used as the predicted outbreak of dengue fever. In addition, this study can identify the issue in the outbreak localities with the high *Aedes* index and breteau index.

*Keywords* : *Aedes* index, breteau index, temperature, rainfall, relative humidity.