# ANALYSES OF MOSQUITO LARVAE PREVALENCE AND THEIR BREEDING SITES IN THAILAND

USING GLOBE MOSQUITO HABITAT MAPPER (MHM)

ABSTRACT

The Global Learning and Observations to Benefit the Environment (GLOBE) Program has been providing students and the public worldwide with the opportunity to meaningfully contribute to their understanding of the Earth system and global environment. The objective is to use Mosquitoes Habitat Mapper (MHM) to investigate mosquito information and analyzed it to data collected from the Globe Program in Advanced Data by collecting and analyzing data from the Globe Program over the previous 4 years for the benefit to "prevent" and "warn" more events, leading to a forecast or prediction, which is a picture of what might happen in the future, such as health risk assessment, which is used as a tool for predicting potential risks and as a tool to assist management in developing plans and strategies to avoid further consequences. According to the results of the research, we discovered that the majority of recorders can collect larval data in Mosquito Habitat Mapper (32.3 %) and adult data in Mosquito Habitat Mapper (32.3 %). The physical features and surrounding the environment of each water source impact the liquid in that water source, which is a mosquito breeding habitat. Because of the differences in the nature of each water source, the number of mosquitoes in each water source varies.
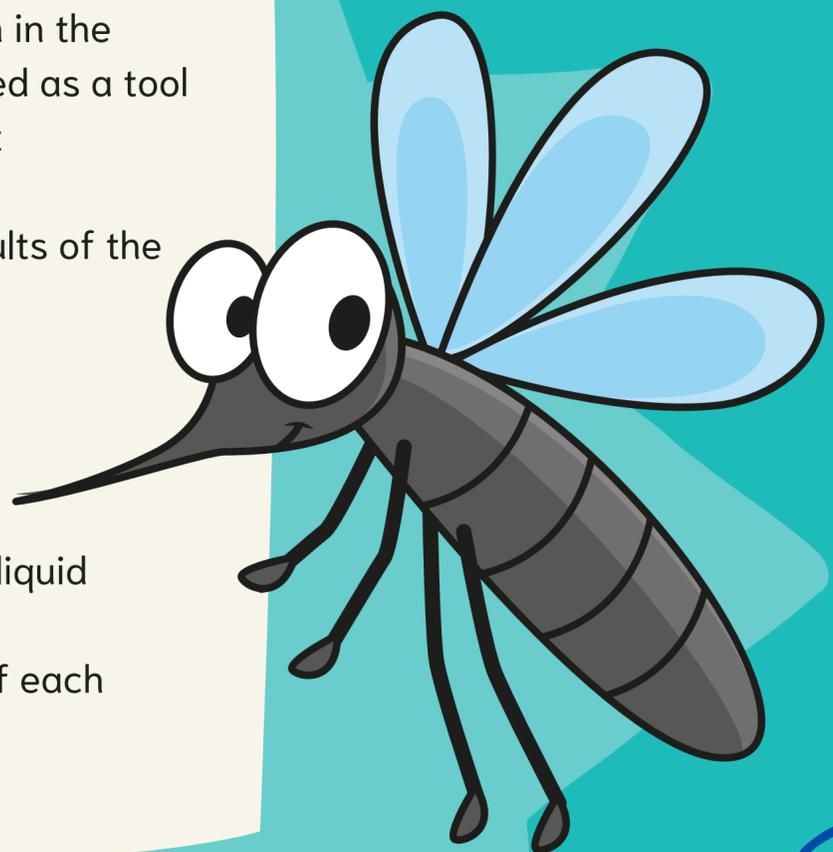
Objectives

1. To study the type and popularity of larvae that report through mosquito habitat mapper in Thailand.
2. To study relations between types of larvae and types of breeding sites.
3. To study citizens scientists' behavior that eliminate larvae breeding sites through mosquito habitat mapper.

Research Hypothesises

1. In Thailand, there are many reports about larvae by using the GLOBE observer application in mosquito habitat mapper application.
2. Water resources type will affect the species and genus of larvae because water is the most factor that caused larvae so it will affect directly.
3. Trend of breeding sites elimination by citizens scientist percent may increase year by year.
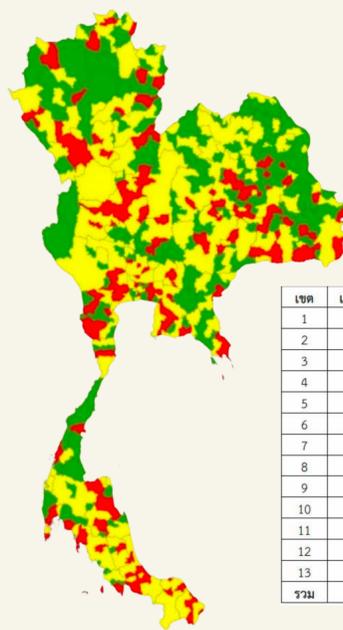
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Materials & Methods

1.1 Study Site

เขต	เสี่ยงสูง (อำเภอ)
1	10
2	9
3	18
4	10
5	15
6	19
7	19
8	1
9	17
10	9
11	19
12	17
13	7
รวม	170

1.2 Data collections

1. Collected data from the GLOBE Program in Retrieve Data (ADAT) choose Mosquito Habitat Mapper
2. Protocol in 1–year range and count data 0 to 1000 in Thailand and apply it.
3. Upload the data which we had applied filter already in form of excel.
4. Categorize data to make it easy to collect the information.
5. Bring the data from excel into SPSS Software for analyzing and making tables or graphs.

2. Materials

– Source of Data from the GLOBE Program in Advanced Data Access Tool that apply three filters which are Mosquito Habitat Mapper Protocol, have 0–1000 Data range and collected in Thailand for five years are 2017, 2018, 2019, 2020, and 2021.

– Statistical Package for the Social Sciences (SPSS Software) is used for analyzing and categorizing data from GLOBE Program in the spreadsheet.