

ABSTRACT

The existence of a puddle of water in an area can affect human health. Because the stagnant water is the main mosquito breeding places. Aedes Aegypti lay their eggs on the surface of clean stagnant water. In this study will be designed detection system stagnant water. To be able to detect a region which contained a pool of water, then made photo aerial imagery for remote sensing. Aerial image obtained by using drone's camera that will capture directly from the air. This aerial image processing through several phases: pre-processing, processing and post processing.

At the stage of pre-processing the image is converted into a grayscale image, binary image, auto cropping and resize. Furthermore, at this stage of processing performed by the texture feature extraction stage using methods (Gray Level Co-occurrence Matrix) GLCM. Of the 20 feature extraction parameters obtained GLCM 5 parameters that affect the image of the test pattern, there are Contrasts, Correlation, dissimilarity, homogeneity, and Sum Of Variance best with 92.5% accuracy and computation time 15.713 seconds. To increase accuracy and reduce computational time then re-do the selection of parameters, which produces patterned three parameters namely Contrasts, Correlation, and homogeneity. These parameters generate 97.5% accuracy with computation time 14.596 seconds.

The analysis showed the intensity range of 50-74 average number of pixels on the condition there are no puddles potential mosquito breeding reached 4737.5 pixels and 4333.83 pixels on the conditions of a puddle of turbid water. This condition is much more than the existing condition of potential mosquito breeding puddles which only reached 100.17 pixels. In the intensity range 75-99 average number of pixels in a puddle of turbid water conditions reach 11409.83 pixels, on condition there are no puddles reached 6267.17 pixels and the condition of clean water puddles 1183.83 pixels. However, in the range of 125-149 intensity of the average number of pixels on the conditions there were puddles of clean water reaching 18204.33 pixels much more when compared to the condition of no puddles reached 9502.83 pixels, and puddles of turbid water conditions reached 8270.33 pixels. In the range of 175-199 and 200-224 average number of pixels in all three conditions are relatively similar

Keywords: Stagnant water, Aedes Aegypti, Breeding place of Aedes Aegypti, Aerial Photographs, GLCM, JST.