

ABSTRAK

STUDI KOMPARATIF HUBUNGAN FAKTOR LINGKUNGAN DAN METODE PENGENDALIAN TERHADAP KEBERADAAN JENTIK *Aedes aegypti* DI PELABUHAN BAKAUHENI DAN BANDARA RADIN INTEN II

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Pelabuhan dan bandara merupakan titik strategis dengan mobilitas tinggi sehingga berpotensi menjadi lokasi penting dalam penyebaran Demam Berdarah Dengue (DBD). Keberadaan jentik *Aedes aegypti* sebagai vektor utama DBD dipengaruhi oleh kondisi lingkungan dan efektivitas metode pengendalian vektor. Penelitian ini bertujuan untuk menganalisis hubungan faktor lingkungan dan metode pengendalian vektor terhadap keberadaan jentik *Aedes aegypti*, serta membandingkannya antara Pelabuhan Bakauheni dan Bandara Radin Inten II. Penelitian ini menggunakan desain observasional analitik dengan pendekatan *cross sectional*. Seluruh lokasi pengamatan dijadikan sampel sebanyak 201 bangunan. Data diperoleh melalui survei jentik, pengukuran suhu dan kelembapan, serta observasi penerapan metode pengendalian vektor. Analisis data meliputi analisis univariat, bivariat menggunakan uji chi square, multivariat dengan regresi logistik, dan analisis komparatif antar lokasi. Hasil penelitian menunjukkan hanya kelembapan yang berhubungan signifikan dengan keberadaan jentik *Aedes aegypti* di Pelabuhan Bakauheni. Metode pengendalian vektor secara fisik/mekanik dan kimiawi memiliki hubungan signifikan dengan keberadaan jentik di kedua lokasi. Analisis multivariat menunjukkan kelembapan dan pengendalian kimiawi determinan utama keberadaan jentik di Pelabuhan Bakauheni, sedangkan di Bandara Radin Inten II hanya pengendalian fisik yang berpengaruh dengan keberadaan jentik. Selain itu, analisis komparatif mengindikasikan hanya kelembapan yang memiliki perbedaan signifikan antara Pelabuhan Bakauheni dan Bandara Radin Inten II. Kesimpulannya, pengendalian jentik *Aedes aegypti* di kawasan pintu masuk transportasi memerlukan pendekatan berbasis karakteristik lingkungan dan sistem pengelolaan lokasi guna mendukung pencegahan DBD secara efektif dan berkelanjutan.

Kata kunci: *Aedes aegypti*, jentik, faktor lingkungan, pengendalian vektor, pelabuhan, bandara.

ABSTRACT

A COMPARATIVE STUDY OF THE ASSOCIATION BETWEEN ENVIRONMENTAL DETERMINANTS AND VECTOR CONTROL METHODS WITH *Aedes aegypti* LARVAL PRESENCE AT BAKAUHANI PORT AND RADIN INTEN II AIRPORT

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Ports and airports are strategic locations characterized by high levels of mobility, thereby serving as potentially important sites for the dissemination of Dengue Hemorrhagic Fever (DHF). The larval presence of *Aedes aegypti*, the primary vector of DHF, is influenced by environmental determinants and the effectiveness of vector control methods. This study aimed to analyze the association between environmental determinants and vector control methods with *Aedes aegypti* larval presence, as well as to compare these associations between Bakauheni Port and Radin Inten II Airport. This study employed an analytic observational design with a cross-sectional approach. All observation sites, comprising a total of 201 buildings, were included as the study sample. Data were collected through larval surveys, measurements of temperature and humidity, and observations of the implementation of vector control methods. Data analysis included univariate analysis, bivariate analysis using the chi-square test, multivariate analysis using logistic regression, and comparative analysis between locations. The results indicated that humidity was the only environmental determinant significantly associated with *Aedes aegypti* larval presence at Bakauheni Port. Both physical/mechanical and chemical vector control methods showed significant associations with larval presence at both study locations. Multivariate analysis further demonstrated that humidity and chemical vector control were the primary determinants of larval presence at Bakauheni Port, whereas at Radin Inten II Airport, only physical vector control was significantly associated with larval presence. Moreover, comparative analysis indicated that humidity was the only variable that differed significantly between Bakauheni Port and Radin Inten II Airport. Consequently, *Aedes aegypti* larval control in transportation entry-point areas requires an approach tailored to local environmental characteristics and site management systems to support effective and sustainable dengue prevention.

Keywords : *Aedes aegypti*; larvae; environmental determinants; vector control; ports; airports.