KARAKTERISTIK HABITAT DAN DETEKSI VIRUS DENGUE PADA *Aedes* spp. DI PELABUHAN MUNTOK & TANJUNGKALIAN BANGKA BELITUNG

INTISARI

Latar belakang: Perjalanan laut berkontribusi pada peningkatan dan penyebaran vektor penyakit serta patogen. Aktivitas di pelabuhan memfasilitasi penyebaran virus dengue melalui kapal dan pelaku perjalanan yang viremik. Pemetaan habitat nyamuk *Aedes* spp. dapat mempermudah penilaian dampak risiko keberadaan vektor dan kemampuannya dalam menyebarkan virus dengue.
Tujuan: Mengidentifikasi karakteristik habitat *Aedes* spp. dan mendeteksi virus dengue pada *Aedes* spp. di wilayah Pelabuhan Muntok (-2.070956ºS, 105.160912ºE) dan Tanjungkalian (-2.08389ºS, 105.13260ºE) Kabupaten Bangka Barat Provinsi Kepulauan Bangka Belitung.
Metode: Penelitian observasional, design studi *cross sectional*. Sebanyak 217 sampel dipilih secara *cluster purposive sampling* dan 691 kontainer diobservasi. Larva, pupa, & nyamuk dikumpulkan, diidentifikasi, dihitung kepadatannya dan diperiksa keberadaan virus dengue. Data dianalisis secara univariat dan spasial.
Hasil: Kontainer paling banyak positif larva di Pelabuhan Muntok adalah *Controllable site* seperti drum dan bak mandi, sedangkan pada Pelabuhan Tanjungkalian adalah *disposable site* seperti sisa rumah tangga dan ember bekas. Suhu udara dan kelembaban berkisar antara 27 – 36,5ºC, 46,6 – 85%RH. Suhu air 25 – 34,2ºC, pH 4,1 – 11, salinitas 0,00 – 2,56 ppm. *Maya Index* sebagian besar kategori sedang. Kepadatan *Aedes* spp. di Pelabuhan Muntok (OI 58,6% HI 46%, CI 28,3%, BI 77,9%, DF 7, pupa/rumah 2,19, pupa/kontainer 0,8) lebih tinggi dari Pelabuhan Tanjungkalian. Nyamuk *Aedes aegypti* banyak ditemukan di Pelabuhan Muntok dan *Aedes albopictus* di Pelabuhan Tanjungkalian. Pola sebaran kepadatan *Aedes* spp. terjadi secara mengelompok dan acak. Virus dengue tidak ditemukan pada *Aedes* spp. pada kedua pelabuhan.
Kesimpulan: Drum, bak mandi, sisa rumah tangga dan ember bekas merupakan kontainer yang paling disukai larva. Kondisi lingkungan di kedua pelabuhan mendukung perkembangan nyamuk *Aedes* spp. dari telur hingga dewasa. Pelabuhan Muntok lebih berisiko terjadi penularan DBD meskipun kepadatan *Aedes* spp. di kedua pelabuhan melebihi standar baku Kemenkes RI dan WHO. Pola spasial distribusi *Aedes* spp. adalah acak dan mengelompok. Masyarakat harus rutin memeriksa dan membersihkan kontainer secara berkala, menutup kontainer, mengubur barang bekas dan menabur ikan pemakan larva untuk mengurangi kepadatan *Aedes* spp.

Kata Kunci: Karakteristik Habitat, *Aedes* spp, Virus Dengue, Pelabuhan laut

CHARACTERISTICS OF HABITAT AND DETECTION OF DENGUE VIRUS IN *Aedes* spp. AT MUNTOK & TANJUNGKALIAN PORTS, BANGKA BELITUNG

ABSTRACT

Background: Maritime travel contributes to the increase and spread of disease vectors and pathogens. Activities at ports facilitate the transmission of dengue virus through vessels and viremic travelers. Mapping the habitat of *Aedes* spp. mosquitoes can aid in assessing the risk impact of vector presence and their potential to disseminate dengue virus.
Objective: To identify the habitat characteristics of *Aedes* spp. and to detect the dengue virus in *Aedes* spp. within the areas of Muntok Port (-2.070956ºS, 105.160912ºE) and Tanjungkalian Port (-2.08389ºS, 105.13260ºE) in West Bangka Regency, Bangka Belitung Islands Province.
Methods: This was an observational study with a cross-sectional design. A total of 217 samples were selected using cluster purposive sampling, and 691 containers were observed. Larvae, pupae, and mosquitoes were collected, identified by species, their density was calculated, and the presence of the dengue virus was examined. The data were analyzed using univariate and spatial methods.
Results: In Pelabuhan Muntok, the highest frequency of positive larvae was observed in controllable sites such as drums and bathtubs. Conversely, in Pelabuhan Tanjungkalian, disposable sites such as household waste and used buckets exhibited the highest frequency of positive larvae. Environmental conditions included air temperatures ranging from 27 to 36.5°C, relative humidity between 46.6% and 85%, water temperatures from 25 to 34.2°C, pH levels between 4.1 and 11, and salinity from 0.00 to 2.56 ppm. The larval indices predominantly fell into the moderate category. The density of *Aedes* spp. in Pelabuhan Muntok (OI 58.6%, HI 46%, CI 28.3%, BI 77.9%, DF 7, pupae/house 2.19, pupae/container 0.8) was higher than that in Pelabuhan Tanjungkalian. *Aedes aegypti* was commonly found in Pelabuhan Muntok, while *Aedes albopictus* was predominant in Pelabuhan Tanjungkalian. The distribution pattern of *Aedes* spp. density was both clustered and random. Dengue virus was not detected in *Aedes* spp. at either port.
Conclusion: Water drums, bathtubs, household waste, and discarded buckets are the most favored containers for *Aedes* larvae. The environmental conditions at both ports support the development of *Aedes* spp. mosquitoes from egg to adulthood. Although *Aedes* spp. density exceeds the standard thresholds set by the Ministry of Health (Kemenkes RI) and WHO at both ports, Muntok Port presents a higher risk for dengue transmission. The spatial distribution patterns of *Aedes* spp. are both random and clustered. Regular inspection and cleaning of containers, covering them, burying unused items, and introducing larva-eating fish are essential measures to reduce *Aedes* spp. density.

Keywords: Habitat Characteristics, *Aedes* spp., Dengue Virus, Seaports