

**ANALISIS INDIKATOR ENTOMOLOGI  
SERTA DETEKSI VIRUS *DENGUE* PADA NYAMUK *AEDES SPP*  
DI DAERAH ENDEMIS DAN NON ENDEMIS  
KABUPATEN MIMIKA PROVINSI PAPUA**

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**INTISARI**

**Latar belakang:** Penyakit demam berdarah *dengue* di Papua mengalami peningkatan kasus 3 tahun terakhir. Surveilans vektor merupakan aspek penting dalam pengendalian vektor. Kegiatan pemberantasan perindukan nyamuk dapat dilihat dari angka kepadatan larva dan pupa. Ukuran yang biasa dipakai adalah indikator entomologi seperti *House Index* (HI), *Container Index* (CI), *Breteau Index* (BI), *Ovitrap Index* (OI), *Pupae Index* (PI), dan *Maya index*. Surveilans virologi pada vektor sebagai sistem kewaspadaan dini dalam mencegah wabah.

**Metode:** Penelitian observasional deskriptif dan pendekatan keruangan. Subyek penelitian adalah telur, larva, pupa dan imago. Mimika Baru sebagai wilayah endemis dan Kuala Kencana sebagai wilayah non endemis. Teknik pengambilan sampel menggunakan Simple Random pada 100 rumah masing-masing area. Deteksi virus pada nyamuk menggunakan metode RT-PCR.

**Hasil:** Perbandingan indikator entomologi berdasarkan genus menunjukkan bahwa daerah endemis lebih tinggi daripada daerah non endemis dan keduanya memiliki kategori resiko tinggi penularan DBD. Namun hasilnya sangat berbeda apabila dibandingkan berdasarkan spesies, kepadatan nyamuk *Aedes aegypti* di daerah non endemis lebih rendah daripada daerah endemis dan termasuk kategori resiko rendah penularan DBD. Daerah non endemis didominasi nyamuk *Aedes albopictus*. Virus *dengue* pada *Aedes aegypti* dan *Aedes albopictus* yaitu DENV-1 di daerah endemis sedangkan daerah non endemis tidak ditemukan. Sebaran kasus, vektor dan virus *dengue* di daerah endemis lebih mengelompok sedangkan daerah non endemis menyebar.

**Kesimpulan:** Risiko tinggi penularan pada kedua distrik ditandai indikator entomologi yang tinggi dan faktor lingkungan fisik dan biologi yang sangat optimal. Deteksi virus *dengue* pada *Aedes spp* di daerah endemis membuktikan transmisi transovarial yaitu DENV-1 sedangkan daerah non endemis tidak ditemukan.

**Kata kunci:** *Aedes spp*, indikator entomologi, deteksi virus *dengue*.

**ANALYSIS OF ENTOMOLOGICAL INDICATOR AND VIRAL  
DETECTION ON AEDES SPP IN ENDEMIC AND NON ENDEMIC AREA  
MIMIKA REGION PAPUA PROVINCE**

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**ABSTRACT**

**Background:** *Dengue* hemorrhagic fever in Papua has increased in the last 3 years as well as in Mimika Regency. Vector surveillance is an important aspect of vector control. The eradication activities of the mosquitoes seen from the number of larvae and pupae density. Commonly used entomological indicators are House Index (HI), Container Index (CI), Breteau Index (BI), Ovitrap Index (OI), Pupae Index (PI), and Maya index. Virology surveillance on vectors used as early warning systems to prevent an outbreak.

**Method:** Descriptive observational and used spatial approach. Research subjects were eggs, larvae, pupae, and imago. Mimika Baru as an endemic area and Kuala Kencana as non endemic area. Simple Random Sampling was conducted from each strata, 100 houses in each areas. RT-PCR was applied for virus detection.

**Results:** Comparison of density figure based on genus indicates the larvae density in endemic area is higher than non endemic area and it shows that both areas have high risk transmission. The result was very different when compare based on species, non endemic area have a low risk transmission. DENV-1 was found on *Aedes aegypti* and *Aedes albopictus* in endemic area whereas none was found in non endemic area. Distribution of cases, vectors and virus in endemic areas was clumped whereas non endemic area was spreads.

**Conclusion:** Comparing entomological indicators based on genus is insufficient. It is recommended to compare entomological indicators based on species. *Aedes albopictus* in endemic area has been proven transovarial and potentially transmitted DENV-1 while non-endemic area is not proven.

**Keywords:** *Aedes spp*, Entomological Indicators, *Dengue* Virus Detection