

## ABSTRAK

### **PROFIL KELIMPAHAN PLANKTON, BAKTERI, PREVALENSI IMNV DAN KUALITAS AIR PADA PERIODE DESEMBER 2022-FEBRUARI 2023 DI PERAIRAN SEKITAR TAMBAK UDANG, KECAMATAN PADANG CERMIN, KABUPATEN PESAWARAN**

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Perubahan iklim dapat memengaruhi kondisi suatu perairan, baik fisik, biologi, maupun kimia yang berdampak terhadap keberhasilan budi daya udang vanamei. Salah satu fenomena perubahan cuaca terjadi pada periode Desember 2022 hingga Februari 2023 yang diprediksi akan sering terjadi hujan lebat di Provinsi Lampung. Penelitian ini bertujuan untuk mengkaji profil kelimpahan plankton, bakteri, prevalensi IMNV dan kualitas air pada periode Desember 2022-Februari 2023 di perairan sekitar tambak udang vanamei di Kecamatan Padang Cermin, Kabupaten Pesawaran. Penelitian dilakukan secara eksploratif dengan mengambil sampel sebulan sekali di 3 stasiun masing-masing 3 kali ulangan. Hasil penelitian menunjukkan bahwa kelimpahan plankton dan indeks keanekaragaman masuk dalam kategori sedang, indeks keseragaman kategori tinggi dan indeks dominasi kategori rendah. Total bakteri umum dan total *Vibrio* masih dalam batas normal, prevalensi IMNV negatif, serta nilai suhu, pH, salinitas, DO, nitrit, fosfat dan alkalinitas masih dalam batas optimal, sedangkan nilai amonia dan nitrat melebihi batas baku mutu perairan. Berdasarkan penelitian ini, dapat disimpulkan bahwa perubahan iklim pada periode penghujan berpengaruh terhadap kelimpahan plankton, bakteri dan kualitas air di perairan sekitar tambak udang di Kecamatan Padang Cermin, Kabupaten Pesawaran, namun masih dalam rentang optimum.

**Kata Kunci:** Perubahan iklim, kualitas air, IMNV, plankton, *Vibrio*

## **ABSTRACT**

### **THE PROFILE OF PLANKTON AND BACTERIA ABUNDANCE, IMNV PREVALENCE, AND WATER QUALITY IN DECEMBER 2022 UNTIL FEBRUARY 2023 PERIOD AT THE SHRIMP PONDS WATERS, IN PADANG CERMIN DISTRICT, PESAWARAN REGENCY**

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Climate change can affect the condition of a waters, both physically, biologically and chemically which has an impact on the success of vanamei shrimp cultivation. One of the weather change phenomena occurred in the period from December 2022 to February 2023 which was predicted to often experience heavy rain in Lampung Province. This study aimed to examine the profile of plankton and bacteria abundance, IMNV prevalence and water quality in the period December 2022-February 2023 in the waters around shrimp ponds in Padang Cermin District, Pesawaran Regency. The research was conducted exploratory by taking samples once a month at 3 stations with 3 replications each. The results showed that at the period, the plankton abundance and diversity index were in the moderate category, the uniformity index was high and the dominance index was low. Total bacteria and total *Vibrio* were still within normal limits to shrimp pond, there was no shrimp to be infected by IMNV, and the water quality profile such as temperature, pH, salinity, DO, nitrite, phosphate and alkalinity were still within optimal limits to shrimp culture. Based on this study, it can be concluded that climate change during the rainy period affected the abundance of plankton, bacteria and water quality at the shrimp ponds waters in Padang Cermin District, Pesawaran Regency, but still in the optimum range.

**Keywords:** Climate change, water quality, IMNV, plankton, *Vibrio*