

ABSTRACT

THE WATER QUALITY PROFILE IN THE SHRIMP PONDS WATERS AT WAY URANG VILLAGE, SOUTH LAMPUNG DURING THE RAINY SEASON

By

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Climate change is suspected to be the main factor obstacles arise when shrimp farming activities take place. The study was to identify dan analyze the water quality profile whether on the physical, chemical, and biological when the rainy season at the waters around shrimp ponds at Way Urang, South Lampung and the study was carried out in Desember 2022 – February 2023. The research design used was an exploratory survey method with purposive sampling. Sampling was carried out in 3 stations with 3 times sampling to measured the parameter such as total common bacteria, total *Vibrio* count, the abundance, diversity, uniformity, and dominance of plankton as well as, the water quality. The results obtained showed that total value of common bacteria and *Vibrio* still under the safe range to shrimp culture. The uniformity index, diversity index, and dominance index of plankton were high, moderate, and low repeatedly. The water quality profile like a temperature, DO, salinity, pH, nitrite, and alkalinity were at the optimal threshold to shrimp culture, while the value of ammonia, nitrate, and phosphate excess the optimal threshold. Although the study was done during the rainy season, some of the parameters of this research are still below the safe range so that it is good for shrimp farming activity. The control and manage quality of water with to giving treatment regularly must will be done to maintain the quality of water value.

Keywords: plankton, *Vibrio*, rainy season, water quality, Way Urang.

ABSTRAK

PROFIL KUALITAS AIR DI PERAIRAN SEKITAR TAMBAK UDANG KELURAHAN WAY URANG, LAMPUNG SELATAN SAAT MUSIM HUJAN

Oleh

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Perubahan iklim diduga menjadi faktor utama timbulnya kendala saat kegiatan budi daya udang berlangsung. Tujuan dari penelitian ini adalah untuk mengidentifikasi dan menganalisis profil kualitas air, baik secara fisik, kimia, dan biologi saat musim hujan pada perairan sekitar tambak udang Way Urang, Lampung Selatan dan penelitian ini dilaksanakan pada bulan Desember 2022–Februari 2023. Rancangan penelitian yang digunakan yaitu metode survei eksploratif dengan *purposive sampling*. Pengambilan sampel dilakukan di 3 stasiun dengan 3 kali pengambilan sampel untuk mengukur parameter, seperti total bakteri umum, *Vibrio*, kelimpahan, keragaman, keseragaman, dan dominasi plankton serta kualitas air. Hasil penelitian menunjukkan bahwa nilai total bakteri umum dan *Vibrio* masih berada di bawah kisaran aman untuk budi daya udang. Indeks keseragaman, indeks keanekaragaman, dan indeks dominansi plankton memiliki nilai berturut-turut tinggi, sedang, dan rendah. Profil kualitas air seperti suhu, DO, salinitas, pH, nitrit, dan alkalinitas berada pada ambang batas optimal untuk budi daya udang, sedangkan nilai amonia, nitrat, dan fosfat melebihi ambang batas optimal. Meskipun selama penelitian berlangsung dilakukan saat musim hujan, beberapa parameter penelitian ini masih berada di bawah kisaran aman sehingga baik untuk kegiatan budi daya udang. Namun demikian, kontrol dan pengelolaan kualitas air serta pemberian perlakuan secara teratur harus tetap dilakukan untuk menjaga nilai kualitas air.

Kata kunci: plankton, *Vibrio*, musim hujan, kualitas air, Way Urang