

**ANALISIS FAKTOR LINGKUNGAN YANG MEMPENGARUHI
PERTUMBUHAN DAN KELANGSUNGAN HIDUP IKAN KAKAP PUTIH
(*Lates calcarifer*) DALAM SISTEM KERAMBA JARING APUNG (KJA) DI
DESA PATAS KECAMATAN GEROKGAK, BULELENG**

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ABSTRAK

Ikan kakap putih (*Lates calcarifer*) merupakan komoditas perikanan bernilai ekonomi tinggi yang keberhasilan budidayanya sangat bergantung pada stabilitas kondisi lingkungan perairan. Penelitian ini bertujuan menganalisis pengaruh faktor lingkungan, dalam hal ini kualitas air terhadap laju pertumbuhan dan kelangsungan hidup ikan kakap putih pada sistem Keramba Jaring Apung (KJA) di perairan Desa Patas, Kecamatan Gerokgak. Penelitian dilaksanakan selama periode 3 Maret hingga 2 April 2026 dengan metode observasi partisipatif dan desain deskriptif kuantitatif. Pemantauan dilakukan selama 30 hari terhadap populasi 2.920 ekor ikan pada dua unit keramba uji, dengan pengambilan sampel sebanyak 25 ekor ikan setiap keramba yang diukur secara berkala pada awal penebaran, hari ke-15, dan hari ke-30. Variabel lingkungan (suhu, salinitas, pH, oksigen terlarut/DO, amonia, kecerahan) beserta performa biologis ikan dianalisis menggunakan statistik deskriptif dan uji korelasi Pearson. Hasil penelitian menunjukkan seluruh parameter kualitas air berada pada rentang optimal sesuai dengan SNI 7677:2018, yakni suhu 28,8, 30,2, 28,8 °C salinitas 33‰, DO 7,3 mg/L, pH 8,1–8,3, kecerahan 5 m, dan amonia 0 mg/L. Pada keramba A, Pertumbuhan mutlak sebesar 63,08 g; ADG 2,10 g/hari; SGR 2,63%/hari, dan pada Keramba B pertumbuhan mutlak 56,96 g; ADG 1,90 g/hari; SGR 2,51%/hari. Tingkat kelangsungan hidup tergolong tinggi, masing-masing mencapai 92,3% dan 90,7%. Uji korelasi menunjukkan pada Keramba A suhu memiliki korelasi positif terhadap berat ($r = 0,0355$), panjang ($r = 0,2647$), dan kelulushidupan ($r = 0,0225$), sedangkan pH berkorelasi negatif terhadap berat ($r = -0,4690$) dan negatif terhadap panjang ($r = -0,2529$). Sementara itu, pada Keramba B suhu menunjukkan korelasi positif terhadap berat ($r = 0,5810$) dan panjang ($r = 0,4136$), namun berkorelasi negatif terhadap kelulushidupan ($r = -0,7038$). Parameter pH di Keramba B memiliki korelasi negatif terhadap pertumbuhan berat ($r = -0,9956$) dan panjang ($r = -0,9590$), tetapi berkorelasi positif terhadap kelulushidupan ($r = 0,9978$). Penelitian ini menyimpulkan KJA di Desa Patas sangat representatif untuk mendukung efisiensi metabolisme dan kelangsungan hidup ikan kakap putih.

Kata Kunci: KJA, Kualitas Air, *Lates calcarifer*, Pertumbuhan

**ENVIRONMENTAL FACTOR ANALYSIS AFFECTING THE GROWTH
AND SURVIVAL RATE OF ASIAN SEABASS (*Lates calcarifer*) IN
FLOATING NET CAGE SYSTEMS IN PATAS VILLAGE, GEROKGAK
DISTRICT, BULELENG**

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ABSTRACT

Asian seabass (*Lates calcarifer*) is a high-economic-value aquaculture commodity whose cultivation success is highly dependent on the stability of aquatic environmental conditions. This study aimed to analyze the influence of environmental factors, particularly water quality, on the growth rate and survival of Asian seabass cultured in Floating Net Cage (KJA) systems in the waters of Patas Village, Gerokgak District. The study was conducted from March 3 to April 2, 2026, using a participatory observation method with a quantitative descriptive design. Monitoring was carried out for 30 days on a population of 2,920 fish distributed in two experimental cage units, with 25 fish sampled from each cage and measured periodically at stocking, day 15, and day 30. Environmental variables (temperature, salinity, pH, dissolved oxygen/DO, ammonia, and water transparency) together with fish biological performance were analyzed using descriptive statistics and Pearson correlation tests. The results showed that all water quality parameters were within the optimal range according to SNI 7677:2018, namely temperature of 28.5–28.8°C, salinity of 33‰, DO of 7.3–7.4 mg/L, pH of 8.1–8.3, water transparency of 5 m, and ammonia of 0 mg/L. In Cage A, the absolute growth reached 63.08 g with an ADG of 2.10 g/day and an SGR of 2.63%/day, while Cage B showed an absolute growth of 56.96 g with an ADG of 1.90 g/day and an SGR of 2.51%/day. Survival rates were categorized as high, reaching 92.3% and 90.7%, respectively. Correlation analysis indicated that in Cage A, temperature had a positive correlation with body weight ($r = 0.0355$), body length ($r = 0.2647$), and survival rate ($r = 0.0225$), whereas pH showed a negative correlation with body weight ($r = -0.4690$) and body length ($r = -0.2529$). Meanwhile, in Cage B, temperature exhibited a positive correlation with body weight ($r = 0.5810$) and body length ($r = 0.4136$), but a negative correlation with survival rate ($r = -0.7038$). The pH parameter in Cage B showed a negative correlation with weight growth ($r = -0.9956$) and length growth ($r = -0.9590$), but a positive correlation with survival rate ($r = 0.9978$). This study concludes that the Floating Net Cage (KJA) system in Patas Village is highly representative in supporting metabolic efficiency and the survival of Asian seabass.

Keywords: Floating Net Cage, Growth, *Lates calcarifer*, Water Quality