

## ABSTRAK

Kegiatan budidaya ikan dengan KJA merupakan usaha peningkatan produksi perikanan dengan memanfaatkan sumber daya waduk. Namun KJA dilarang di perairan Waduk Jatigede menurut Peda Kab. Sumedang No. 4 Tahun 2018. Walaupun dilarang, KJA masih ditemukan di perairan Waduk Jatigede. Berdasarkan perbedaan pandangan tersebut, maka perlu dilakukan kajian untuk mengetahui apakah masih memungkinkan jika dikembangkan KJA di Waduk Jatigede. Tujuan utama penelitian adalah untuk menganalisis daya dukung perairan, status trofik serta strategi pengendalian pencemaran di Waduk Jatigede. Penentuan daya dukung budidaya ikan di Waduk Jatigede dilakukan menggunakan metode Beveridge dengan menghitung sisa fosfor yang masih tersedia dalam Waduk Jatigede. Status trofik di Waduk dievaluasi menggunakan trophic state index (TSI) berdasarkan biomassa algae berdasarkan tiga parameter yaitu transparansi, total fosfor dan klorofil-a. Penentuan strategi pengendalian pencemaran dengan analisis SWOT. Penentuan lokasi penelitian menggunakan metode purposive sampling. Terdapat 6 stasiun penelitian yang dibagi berdasarkan zonasi waduk yaitu riverine, transisi serta lacustrine. Nilai Trophic State Index (TSI) hasil perhitungan yaitu 66-71, menunjukkan perairan dengan status kesuburan eutrofik hingga hipertrofik. Penentuan strategi pengendalian pencemaran dilakukan dengan menggunakan analisis SWOT. Strategi alternatif yang direkomendasikan untuk mengendalikan pencemaran di Waduk Jatigede, yaitu (a) Strategi S-O: Meningkatkan koordinasi antar pihak yang berkepentingan dalam pemantauan dan pengendalian pencemaran dan membuat papan informasi di sekitar waduk tujuan utama pembangunannya (b) Strategi S-T: Penanganan sampah serta reduksi beban pencemaran yang masuk ke Waduk Jatigede dan Pengendalian pencemaran dengan partisipasi masyarakat (c) Strategi W-O: Pihak yang berkepentingan bekerjasama dalam melakukan pengendalian pencemar dan pemantauan lingkungan, penetapan kebijakan pengelolaan dan pengendalian pencemaran di lingkungan waduk, serta penetapan daya tampung, daya dukung serta baku mutu air oleh pengelola bendungan (d) Strategi W-T: Penegakan hukum dan pemberian sanksi kepada yang melanggar, memberikan atau membangun fasilitas penanganan sampah seperti tempat sampah dan IPAL di lingkungan Waduk Jatigede, dan memberikan penyuluhan dan pelatihan untuk mengelola limbah dan sampah.

**Kata Kunci:** Daya Dukung, KJA, TSI, Waduk Jatigede.

## ABSTRACT

Fish farming activities with cage aquaculture are efforts to increase fisheries production by utilizing reservoir resources. However, cage aquaculture is prohibited in Jatigede Reservoir waters according to Sumedang Regency Regional Regulation No. 4/2018. Although prohibited, cage aquaculture is still found in the waters of Jatigede Reservoir. Based on these differences in views, it is necessary to conduct a study to determine whether it is still possible if cage aquaculture to be developed in Jatigede Reservoir. The study's main objective was to analyze the carrying capacity of waters, trophic status and pollution control strategies in Jatigede Reservoir. Determination of the carrying capacity of fish farming in Jatigede Reservoir was carried out using the Beveridge method by calculating the remaining phosphorus still available in Jatigede Reservoir. Trophic status in the reservoir was evaluated using the trophic state index (TSI) based on algae biomass based on three parameters: transparency, total phosphorus and chlorophyll-a. Determination of pollution control strategy using SWOT analysis. Determination of the research location using a purposive sampling method. Six research stations were divided based on reservoir zoning: riverine, transition and lacustrine. The calculated Trophic State Index (TSI) value is 66-71, indicating waters with eutrophic to hypertrophic fertility status. Determination of pollution control strategies is carried out using SWOT analysis. Alternative strategies recommended to control pollution in Jatigede Reservoir, namely (a) S-O strategy: Improve coordination between interested parties in monitoring and controlling pollution and making information boards around the reservoir the main purpose of its construction (b) S-T Strategy: Handling waste and reducing the pollution load entering the Jatigede Reservoir and controlling pollution with community participation (c) W-O Strategy: Interested parties cooperate in conducting pollution control and environmental monitoring, establishing policies for managing and controlling pollution in the reservoir environment, as well as determining the capacity, carrying capacity and water quality standards by the dam manager (d) W-T Strategy: Law enforcement and sanctioning violators, providing or building waste handling facilities such as trash bins and WWTPs in the Jatigede Reservoir environment, and providing counselling and training to manage waste and garbage.

**Keywords :** Cage Aquaculture, Carrying Capacity, Jatigede Reservoir, TS

