

ABSTRAK

SAHARIN SIDOGU. 05161411028. Analisis Kualitas Air di Aliran Sungai Mandaong Sebagai Pengembangan Budidaya Ikan Air Tawar. Dibimbing oleh **INAYAH** dan **M. ABJAN FABANYO**

Sungai Mandaong adalah aliran sungai yang bersumber pada mata air Gunung Sibela yang sampai saat ini belum diketahui secara pasti titik hulu dari Sungai Mandaong tersebut. Aliran sungai ini melintasi 3 (tiga) desa, yaitu Desa Mandaong yang merupakan daerah hilir, Desa Kampung Makean dan Desa Papaloang yang merupakan daerah badan Sungai Mandaong. Memperhatikan posisi Sungai Mandaong yang mengalir mulai dari pegunungan melewati daerah perkebunan, pemukiman dan berbagai macam aktifitas masyarakat setempat, diperkirakan akan mendapat beberapa input baik dari proses alami maupun dari kegiatan masyarakat di sekitarnya, Dampak yang mungkin terjadi adalah penurunan mutu air sungai berupa aspek fisik, kimia dan biologi. Penelitian ini bertujuan untuk mengetahui kualitas air sungai Mandaong berdasarkan parameter fisika, kimia dan biologi dan mengetahui status mutu air sungai mandaong untuk pengembangan budidaya air tawar. Metode pengambilan data kualitas air parameter fisika kimia dilakukan pengukuran secara langsung di lapangan dan pengambilan sampel air untuk pengujian lanjutan di laboratorium. Untuk Pengambilan sampel makroinvertebrata dengan menggunakan jaring/ *hand ne*, Peletakan jaring di lakukan secara sistematis di bagian tepi kiri, tengah dan tepi kanan sungai pada setiap stasiun yang telah ditentukan. Berdasarkan pengukuran suhu perairan di sungai Mandaong berkisar antara 25°C–27°C, Kecepatan Arus berkisar antara 1,02–2,06, Kedalaman sungai berkisar antara 45–97 cm. dan pH perairan berkisar antara 6,76-7,31, kandungan DO berkisar antara 6,31–6,78, kandungan BOD berkisar antara 0,10–5,63, kandungan nitrat berkisar antara 0,361-2,068, kandungan fosfat berkisar antara 4,506–6,753, kandungan ammonia dengan kisaran 0,002, kandungan deterjen dengan kisaran 50. Nilai *Family Biotic Indeks* (FBI) berkisar antara 3,36-4,16. Nilai indeks FBI menunjukkan bahwa kualitas air sungai Mandaong dalam kategori masih sangat baik sekali dengan tingkat pencemaran tidak tercemar bahan organik pada stasiun 1 dan 2, sedangkan pada stasiun 3 dalam kategori sangat baik dengan tingkat pencemaran sedikit tercemar bahan organik.

Kata Kunci: Kualitas Air, Sungai Mandaong, Pengembangan, Budidaya

ABSTRACT

SAHARIN SIDOGU. 05161411028. Analysis of Water Quality in the Mandaong River for Development of Freshwater Fish Cultivation. Supervised by **INAYAH** and **M. ABJAN FABANYO**

The Mandaong River is a river flow that originates from the springs of Mount Sibela which until now has not been known with certainty the upstream point of the Mandaong River. This river flows through 3 (three) villages, namely Mandaong Village which is a downstream area, Makean Village and Papaloang Village which is an area of the Mandaong River body. Taking into account the position of the Mandaong River which flows from the mountains through plantations and settlements, it is estimated that it will receive some input from both natural processes and from the activities of the surrounding community such as bathing, washing, excavating sand, agriculture and settlements. disposal of domestic waste, organic and inorganic waste so that there will be a decrease in the quality of river water in the form of physical, chemical and biological aspects. This study aims to determine the water quality of the Mandaong river based on physical, chemical and biological parameters and to determine the status of the water quality of the Mandaong river for the development of freshwater fish farming. The method of collecting water quality data on physical and chemical parameters was measured directly in the field and water samples were taken for further testing in the laboratory. For macroinvertebrate sampling by using nets /nets *hand, the* laying of nets is carried out systematically on the left, middle and right bank of the river at each predetermined station. Based on the results of measurements of the water temperature in the Mandaong river, it ranges from 25°C–27°C, Flow Speed ranges from 1.02–2.06, River depth ranges from 45–97 cm. and water pH ranged from 6.76-7.31, DO content ranged from 6.31-6.78, BOD content ranged from 0.10-5.63, nitrate content ranged from 0.361-2.068, phosphate content ranged from 4.506 – 6.753, ammonia content in the range of 0.002, detergent content in the range of 50. *Family Biotic Index* (FBI) values ranged from 3.36-4.16. The FBI index value shows that the water quality of the Mandaong River is in the very good category with the level of pollution not polluted by organic matter at stations 1 and 2, while at station 3 it is in the very good category with a slightly polluted level of organic matter. Based on the results of research and discussion, it can be concluded from this study that the testing of physical, chemical and biological parameters in research on the Mandaong river shows that the level of river water pollution is included in the very good category. Therefore, the water quality of the Mandaong River can be developed for freshwater fish farming activities.

Keywords: Water Quality, Mandaong River, Development, Aquaculture