

## Pengelolaan sumber daya ikan bilih (*mystacoleucus padangensis* blkr) yang berkelanjutan di danau Singkarak, Sumatera Barat = Sustainable management of bilih fish resources (*mystacoleucus padangensis* blkr) in Singkarak, lake West Sumatera

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### Abstrak

[<b>ABSTRAK</b><br>

Ikan Bilih (*Mystacoleucus padangensis* Blkr) adalah jenis ikan endemik yang hidup dominan di Danau Singkarak, Sumatera Barat. Kegiatan penangkapan yang intensif dan tidak ramah lingkungan serta perubahan kualitas perairan danau menyebabkan terjadinya penurunan produksi dan ukuran ikan Bilih setiap tahunnya. Penelitian ini bertujuan untuk menganalisis mutu perairan danau Singkarak, alat tangkap yang ramah lingkungan sesuai dengan ketentuan Code of Conduct for Responsible Fisheries (CCRF) serta pemahaman stakeholders yang terdiri dari nelayan, konsumen, pedagang, dan pengambil kebijakan terhadap sumber daya ikan Bilih. Analisis ini dilakukan secara holistik dalam kerangka konsep Social-Ecological System. Hasil penelitian menunjukkan bahwa nilai BOD, COD, total fosfat, dan TSS di perairan danau berada di atas baku mutu perairan Kelas II yang disyaratkan oleh Peraturan Pemerintah No. 82 Tahun 2001. Selain itu penggunaan alat tangkap yang tidak selektif menyebabkan 57,83% ikan Bilih yang tertangkap berada dalam kondisi belum matang gonad dan 42,19% berada pada kondisi sedang matang gonad. Sesuai dengan sembilan kriteria yang ditetapkan FAO melalui CCRF diketahui bahwa jaring langli dengan mata jaring besar dari ¾ inci sebagai alat tangkap ramah lingkungan. Hasil penelitian juga menunjukkan bahwa sebagian besar stakeholders tidak memahami kondisi ikan Bilih dan sistem pemijahannya. Oleh karena itu perlu dilakukan pengelolaan ikan Bilih secara holistik melalui pengaturan mata jaring yang digunakan nelayan yaitu besar dari ¾ inci dan pembatasan jumlah alat tangkap sesuai dengan kondisi lestari (MSY) serta koordinasi lintas sektor pemerintahan untuk meningkatkan mutu perairan Danau Singkarak. Pengaturan ini akan meningkatkan penerimaan nelayan optimal mencapai Rp 1.375.637.000 dalam jangka panjang.

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<b>ABSTRACT</b><br>

Bilih fish (*Mystacoleucus padangensis* Blkr) is endemic fish species that live dominantly in Lake Singkarak, West Sumatra. The intensive activities and environmentally unfriendly fishing gear and changes in the water quality of the lake cause the declining Bilih fish production and decreased size of Bilih fish per year. This study is aimed at analyzing the quality of Lake Singkarak waters, environmentally friendly fishing gear in accordance with the provisions of the

Code of Conduct for Responsible Fisheries (CCRF) and the understanding of stakeholders that consists of fishermen, consumers, merchants, and policy makers on Bilih fish resource. This analysis is conducted holistically within the framework of the concept of Social-Ecological Systems. The results of research shows that the value of BOD, COD, total phosphate, and TSS in the lake waters is above the water quality standard Class II required by the Government Regulation Number 82 of 2001. In addition, the unselective use of fishing gear causes 57.83% of Bilih fish caught in immature gonads conditions and 42.19% at moderate mature gonad conditions. As per the criteria established by the FAO CCRF, it is known that langli net with size larger than  $\frac{3}{4}$  inch is environmentally friendly fishing gear. The results of the study also indicate that the majority of stakeholders do not understand the conditions and spawning system of Bilih fish. Therefore, it is necessary to manage Bilih fish in a holistic manner by setting the mesh used by the fishermen namely greater than  $\frac{3}{4}$  inch and limiting the number of fishing gear in accordance with the maximum sustainable yield (MSY) and cross-sector coordination of government to increase the quality of the waters of Lake Singkarak. This setting will increase the optimal fishermen revenues up to IDR 1.375.637.000 in the long term.; Bilih fish (*Mystacoleucus padangensis* Blkr) is endemic fish species that live dominantly in Lake Singkarak, West Sumatra. The intensive activities and environmentally unfriendly fishing gear and changes in the water quality of the lake cause the declining Bilih fish production and decreased size of Bilih fish per year. This study is aimed at analyzing the quality of Lake Singkarak waters, environmentally friendly fishing gear in accordance with the provisions of the Code of Conduct for Responsible Fisheries (CCRF) and the understanding of stakeholders that consists of fishermen, consumers, merchants, and policy makers on Bilih fish resource. This analysis is conducted holistically within the framework of the concept of Social-Ecological Systems. The results of research shows that the value of BOD, COD, total phosphate, and TSS in the lake waters is above the water quality standard Class II required by the Government Regulation Number 82 of 2001. In addition, the unselective use of fishing gear causes 57.83% of Bilih fish caught in immature gonads conditions and 42.19% at moderate mature gonad conditions. As per the criteria established by the FAO CCRF, it is known that langli net with size larger than  $\frac{3}{4}$  inch is environmentally friendly fishing gear. The results of the study also indicate that the majority of stakeholders do not understand the conditions and spawning system of Bilih fish. Therefore, it is necessary to manage Bilih fish in a holistic manner by setting the mesh used by the fishermen namely greater than  $\frac{3}{4}$  inch and limiting the number of fishing gear in accordance with the maximum sustainable yield (MSY) and cross-sector coordination of government to increase the quality of the waters of Lake Singkarak. This setting will increase the optimal fishermen revenues up to IDR 1.375.637.000 in the long term., Bilih fish (*Mystacoleucus padangensis* Blkr) is endemic fish species

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