CARRYING CAPACITY OF TELUK LAKE, JAMBI CITY FOR COMMUNITY-BASED RED TILAPIA (*Oreochromis sp*.) CULTURE IN FLOATING NET CAGE[1)]

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ABSTRACK

Lake is one of ecosytem form than occupies a relative small area on the surface of the earth as compared to sea and land habitats. For humans, utilization is more important than the expanse of lands. Since 1985, Teluk Lake began to be used as the location of fish cultivation with floating net cage culture (FNCC). The number of FNCC in 2012 reached ± 878 unit of 64 fish farmers and it will increase related to determination of Jambi Province as one of Minapolitan fishery cultivation in order to increase fish production. Utilization of Teluk Lake as media for fish cultivation on floating cage is necessary to encourage the management of common resources is to be kept sustainable. Studies on carrying capacity and utilization of Teluk Lake Jambi City for community-based fish cultivation in FNCC aims to know how the use of this lake that have been implemented by the local community and to find out how the carrying capacity Teluk lake that used to fish farming activities in floating cage. Carrying capacity is determined by calculating water polution load capacity of lake for fish farming activities in floating cage. Data that used are primary and secondary data. Methods used in this study is qualitative and quantitative methods with a descriptive approach.

Tabel 1. LCWP analysis for Teluk Lake for Red Tilapia Aquaculture activities in cage 2012

Lake Characteristics	Symbol	Value	
D. Carrying amount FNC Aquaculture for Red Tilapia in Teluk Lake			
➢ *FCR* Red Tilapia	FCR	1,8	ton feed/ton fish
➢ Total P content in the feed	P_{pakan}	13	Kg P/ ton feed
➢ Levels of P-total in the Red Tilapia	P_{ikan}	3,4	Kg P/ ton fish
➢ Total P coming from fish waste	P_{LP}= FCR*P_{pakan}-P_{ikan}	20	Kg P/ ton fish
➢ FNC Fish production	LI = La_{ikan}/P_{LP}	517,617	Ton fish/years
➢ The amount of fish feed in FNC	LP = LI * FCR	931,710	Ton feed/years
➢ The mean estimate of Harvest Fish in FNC	-	0,6	Ton fish/years/units
➢ Ideal number FNC	La_{ikan}/Estimasi Rerata panen Ikan KJA	862,695	unit

Description :[1)] BLH Kota Jambi, 2012,
[2)] Analisa Laboratorium Kesehatan Ikan dan LingkunganBBAT Jambi, 2013

Result showed that carrying capacity of Teluk lake for fish farming in FNCC is equal 517,617 tons of fish per year with estimate amount of feed given to fish in floating cage is as many as 931,710 ton per year assuming total P were entered into the lake through fish waste as much 20 k P/ton of fish. Ideal number of floating cage based on lake carrying capacity accounting should be 862,695 unit ~ 863 unit. Operating floating cage currently is 878 unit so that it is necessary reduction in the amount of 15 unit and if they want to add a new one, it should be an improvement or replacement of existing floating cage at lake. Utilization of Teluk Lake for fish farming is done simple by local communities and number of existing floating cage already slightly exceed the carrying capacity of lake if related from existing concentration of total P in water.