











Parameter	Quality Standard	STATION VI						Score
		Min.	Max.	Average	Min.	Max.	Average	
Fisika:								
Suhu (°C)	26 - 32	29	30	29	0	0	0	0
Kimia:								
pH (mg/l)	7 - 8.5	7	8	7	0	0	0	0
DO	> 5	3.4	4.8	4	-2	-2	-6	-10
Total P (mg/l)	0.015	0.36	0.73	0.526	-2	-2	-6	-10
<b>Total Score</b>								<b>-18</b>

Centralized of fish farming around the settlement like FCN location on Station 4, 5 and 6, contributed to the high concentration of total P due to the household activities that generally produce household waste water that flows into FCN location which is a combination of accumulated total P concentration of each the station, while for stations 1, 2 and 3 are rather far from the residential and cultivation that use fish feed. This is in accordance with the opinion of Yosmaniar (2010) that the fish feed is the main ingredient that affects the water environment. Excess of feed in puts in the production process will flow into the water and decay into organic matter.

#### Carrying Capacity of Mantang Sub District Waters, Bintan for Aquaculture Development In Floating Net Cages

By using storet method according to the suitability of water quality classification of the station, it was known that the more suitable station for the development of cages were carried out at Station 1, Station 2 and Station 3 because the value of the score at the third station is still considered in good condition and lightly polluted. Based on the water quality categories according to the status of quality standards which include oxygen and ammonia levels, and the speed of the flow was still quite good for the whole station, water transparency and nitrate values are in moderate good category and bad percentage classified was phosphate.

The total area of Mantang sub district waters, Bintan district that feasible to FCN aquaculture development for grouper is 5855,45m<sup>2</sup>, equivalent to 0,5 ha, based on the feasibility of biotech which determines the physical carrying capacity of water are the temperature, pH, dissolved oxygen and the total of P carrying capacity of the marine environment for development grouper in FCN is 1301,21 tons/year or 650 units for 2 times/year production, the number of cages that are operating in the waters is 155 units, the number of cages that can still be developed further is 495 units of cages with productivity assumption @0,69 tons/cage/season nurture with volume of cages @27m<sup>3</sup> (3x3x3 m). Within cropping pattern 2

times in 1 year, the total production of fish can be generated was equal to 683,1 tons of grouper.

Mantang sub district waters are still tolerable for FCN activity compared with Noor's observation results (2009) The feasible wide of Tamiang Gulf waters for aquaculture development in FCN is 2,340 m<sup>2</sup> or 0,2 ha of the total waters area of 380 ha with a total carrying capacity ranged from 18,8 to 62,5 tons of fish cages and the development of number ranges 80-260 FCN, this number is lower compared with the number of cages in the Mantang sub district waters as by the abundance of plankton can be seen that the waters has an abundant natural feed (plankton organisms) and has not in pressure of pollution.

#### Socio-Economic Conditions of MantangSub District Society

##### Population

The fisheries sector is the dominant livelihood for people who living in Mantang sub district coastal areas. Specifically in the Mantang besar village fishing is a livelihood main occupation for the majority of the population. The number of people who work as fishermen as much as 86% and for the aquaculture as much as 13,87% of the number of fishing households in this district.

#### Economic Impact Estimation Development of FCN in Mantang Sub district

The results of the fish nurture in the Mantang Sub district waters obtained level of productivity is 25.61 kg per cage with a stocking density 11 fish per m<sup>3</sup> in size of fish stocking as much as 200g per fish or 300 fish per cage in which the survival rate can reach 100% by the period of nurture for 6 month

In the economic development of floating net cage culture of grouper is promising profits assuming a marketable size of 500g/fish with the level of prices between Rp. 70.000-Rp.120.000 per kg and the total cost between Rp. 90.000 per kg fish then the benefits to be gained Rp. 4.650.527, - cage/month. The assumption of profits are not much different from Noor (2009) who gained Rp.53,379,000,- in FCN aquaculture of Tamiang Gulf waters.

#### 4. Conclusion

The number of active cages as much as 155 units is still in line with the carrying capacity of the waters environment for the development of fish farming in FCN with a total production of 310 tons/year. Waters carrying capacity for the FCN development in Mantang sub district obtained 1.301,21 tonnes of fish/year or about 650 units FCN so that further could be developed as much as 495 units of cages.

The results of the calculation of the Storet index values, water conditions at Station 1, 2 and 3 include of classification class B (fair), lightly polluted criteria with a value of -10, while Stations 4, 5 and 6 in classification of

class C (medium), criteria of medium polluted the value of 18-20. Development of Cages can be performed at stations 1, 2 and 3 that is expected to improve the welfare of fishermen through increased business and employment in Mantang sub district.

In terms of social, people livelihood is still dominated by the fisheries sector in general is fisherman (99.87%). In the economic development of floating net cage culture of grouper quite promising with the assumption that the benefits to be obtained Rp. 4,650,527, - cage/month.

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