RAHMAT KURNIA. Restocking model of kerapu macan (Epinephelus fuscoguttatus) in sea ranching sistem in Semak Daun shallow water, Kepulauan Seribu. Under guidance of KADARWAN SOEWARDI, ISMUDI MUCHSIN and MENNOFATRIA BOER.

The releasing in the ocean is known as sea ranching. In addition to improving the cultivation and improvement of economic levels of society, the main goal of sea farming is restocking. This study estimated the carrying capacity of the Semak Daun water for the KJA and sea ranching. Estimated carrying capacity of the KJA performed with a load close to the waste feed. Meanwhile, the carrying capacity for sea ranching is approached with primary productivity through the content of chlorophyll-a in the waters. This review based on the carrying capacity of the sewage effluent P found that the carrying capacity of KJA water is 12.5 – 21.6 ton. Meanwhile, the carrying capacity for brown grouper fish in the sea ranching systems is between 0.70 – 1.06 tons / year with an average of 0.88 tons / year. Growth parameters of the brown grouper are $K = 0.27$ per year, $L_\infty = 97.48$ cm, and $t_0 = -0.44$. The natural mortality $M = 0.445$ per year, and length-weight relationship: $W = 0.008L^{3.16}$. Restocking model is based on three criteria: the optimal catch corresponding carrying capacity, optimal economic value of yield, and the ability to recover the stock. The study found out that the best alternative policy for sea ranching recruitment type is the A-8, which is 17 cm length seed, stocking density of 2000 fishes, with fishing mortality 0.4. The model produces optimal restocking yield 529.045 kg/year. On the other hand, the best alternative policy for sea ranching harvest type is 17 cm length seed with stocking density 4000 fishes.

Key words: carrying capacity, sea farming, sea ranching, restocking, Epinephelus fuscoguttatus