

EMERGY analysis for the sustainability of the oyster aquaculture production in Gamak Bay, Rep. Korea

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The EMERGY concept was used to evaluate the environmental sustainability of the shellfish (oyster) production in Gamak Bay and adapt the decision making policy to environmental management process.

Gamak Bay is the 4th largest oyster aquaculture area in Korea. However, recently oyster farms in Gamak Bay have been slowly devastated by continuous pollutant loading, red tides, typhoons, and dense aquaculture facilities. For a better understanding of environmental factor influencing oyster production and the management of oyster stocks, it is important to understand and assess the real value of environmental sources such as solar energy, river, tide, wave, wind, etc.

In this research, sustainable production analysis of oyster aquaculture in Gamak Bay and adaptation this concept to marine management policy in Gamak Bay is examined using the EMERGY concept and its simulator.