

JOINT EVENT

5th World Conference on **Climate Change**

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16th Annual Meeting onOctober 04-06, 2018
London, UK**Environmental Toxicology and Biological Systems****Development of sustainable aquaculture on the base of Sato-Umi to anticipate the environment and climate change in the coastal area of Indonesia**

Suhendar I Sachoemar, Tetsuo Yanagi and Ratu Siti Aliah

¹Agency for the Assessment and Application of Technology (BPPT), Indonesia²International EMECS Center, Japan

Indonesia is the largest archipelago in the world. Its coastline is about 95.181 km with a sea area of 5.4 million km². Indonesia has 1.2 million hectares (ha) of brackish water pond area, but only 37.5% of them are used for aquaculture activities. However, marine culture area is only used about 2% from the 4.5 million ha that is available. The low utilization of brackish water pond and marine culture area are generally caused by environmental damage due to the excessive exploitation by intensive aquaculture activities during the period of 1980s and climate change that caused sea level rise in the coastal area. In line with the growth of global paradigm in the face of the environmental and climate change as response to the global warming, it is time for Indonesia to implement the concept of management and utilization of natural resources, taking into account the balance and stability of the natural resources and the environment, such as in the concept of Sato-Umi. The integrated multi thropic aquaculture (IMTA) on the bases of bio-recycle system and Sato-Umi concept should be applied for sustainable aquaculture. An experiment of the IMTA in the brackish water pond as a closed system model (CSIMTA) has shown good performance in the production of multi species fisheries commodities as well as water quality stability. In the onshore area, developing of open system model of IMTA (OSIMTA) by combining seaweed culture and floating cage of multi species fisheries commodities also seem to have a good prospective to improve productivity of coastal area. In the future, developing aquaculture models using the bio-recycle system to reduce and minimize the inorganic and organic waste from the remaining feed, faeces and the other sources will be useful to maintain sustainable aquaculture in the coastal area.

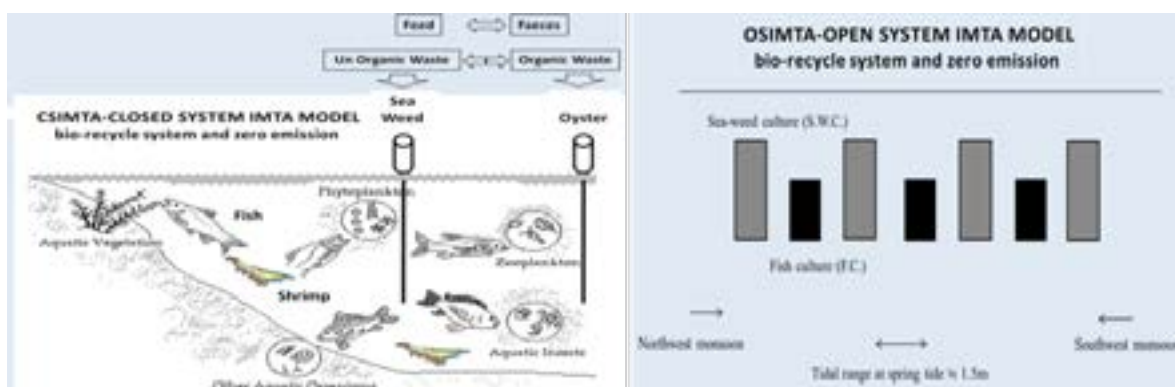


Figure 1: Sustainable Integrated Multi Tropic Aquaculture (IMTA) Model of Close and Open System

Recent Publications

1. Suhendar I Sachoemar, Agung Riyadi and Wage Komarawidjaja (2017) Water productivity and fish abundance variability in the southern coastal area of Kalimantan revealed by satellite data. *Jurnal Hidrosfir Indonesia*. 13(1):55–60.
2. Ratu Siti Aliah and Suhendar I Sachoemar (2016) Water quality at fish farming area of Hurun Bay, Lampung. *Journal Hidrosfir Indonesia* 12(3):125–130.
3. Agung Riyadi and Suhendar I Sachoemar (2015) Coastal water productivity variability within Java region revealed by satellite data. *Jurnal Teknologi Lingkungan* 16(2):65–70.

Environmental Toxicology and Biological Systems

4. Ratu Siti Aliah and Suhendar I Sachoemar (2015) Evaluation the environmental of Batam mariculture area. Jurnal Hidrosfir Indonesia 11(2):85–90.
5. S I Sachoemar, T Yanagi and R S Aliah (2014) Sustainable aquaculture to improve productivity and water quality of marginal brackish water pond. Journal of Coastal Marine Science 37(1):1–8.

Biography

Suhendar I Sachoemar is Professor of Coastal and Fisheries Resources Management at Center of Agriculture Production Technology. Currently, he serves as Director of Center for Development, Education and Training of Agency for the Assessment and Application of Technology (BPPT) in Jakarta, Indonesia. Also, serves as a National Group Leader of Physical Oceanography Group of Japan Society for the Promotion of Science (JSPS), Asian Core Program to establish research and education network on coastal marine science in Southeast Asia and is the Head of Indonesian Research Society of BPPT. His research activities are focused on the assessment of coastal and fisheries resources management using Satellite Oceanography, Field Observation as well as Fisheries Oceanography and Hydro-Oceanography Dynamic study. At the moment, he is doing a research of Sato-Umi concept application for developing sustainable aquaculture model within Indonesian coastal area collaborate with North Pacific Marine Science Organization (PICES). He is also engaged in creating a new strain of fish to support national food security, increasing fisheries productivity of the aquaculture and national fisheries techno park program. He is active in various national and international scientific meeting and dissemination of research result related on the sustainable fisheries resources and coastal management.

suhendarsachoemar@yahoo.com

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