

Rhythms in Biocomplexity: A Lesson from in-situ Monitoring at Gokasho Bay, Ise.

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Man, the servant and interpreter of Nature, only does and understand so much as he shall have observed, in fact or in thought, of the course of Nature; more than this neither knows nor can do. Francis Bacon

The coastal ecosystem is strongly interrelating the dynamics of natural and anthropogenic systems when interact of many components of physical, chemical, biological and human dimension. To understand these complexities, so called Biocomplexity, simultaneous and in-situ monitoring of physical, chemical and biological parameters are essentially important. During last decades, we have developed some continuous monitoring instruments for measuring the underway pCO₂, dissolved silicate, nitrate, phosphate and ammonia automatically in every one hour cycle, as well as the continuous monitoring of the Chlorophyll and the bacteria. We carried out over one year operation of these systems on the floating platform called “Mighty Whale” located at the mouse of Gokasho Bay in Mie Prefecture. We found remarkable dial and seasonal variations through this observation. We will introduce some details of our results and our future perspectives on the coastal environmental monitoring.