RESULTS OF OBSERVATION IN HABITAT OF THE SANBANNSE LAGOON AT TOKYO BAY

KUNIHIRO OGIHARA [1] and ATUKO MATUZAWA [2]

[1] Professor, Department of Civil & Environmental Engineering,
Toyo University, 2100 Kujirai, Kawagoe, Saitama, 350-8585, Japan
(Tel: +81-49-329-1395, Fax: +81-49-329-1395, e-mail: ogihara@eng.toyo.ac.jp)
[2] Master course student, Environmental Hydraulics Engineering Laboratory,
Toyo University, 2100 Kujirai, Kawagoe, Saitama, 350-8585, Japan

Abstract

The sea water and the soil of surface zone in lagoon have many physical relations between each other by both physical phenomena such as tidal motion and wave action, and activity of a creature which lives in soil zone. The soil zone has an activity of filtering the sea water at lowering tide and also the organic materials in sea water are supplied into the soil. And small creatures such as small crab eat organic materials. Usually the surface zone of lagoon becomes under the sea water in two times of a day and also is coming in two times under the sunshine and it becomes dries up conditions. Authors made the field observation at Sanbannse lagoon in Tokyo bay in several times between 2002 to2004. The observation has been done in a half period of tide in October and November 2002 and also full tide observation is made in July 2, 2003 in summer and November 26, 2003 in autumn. In 2004, three times observations of full tide has been made in three times as June 22, July 20 and December 14. This report is the summary of results on these observations focusing on the soil surface zone and sea water at under ground and wave breaking zone.

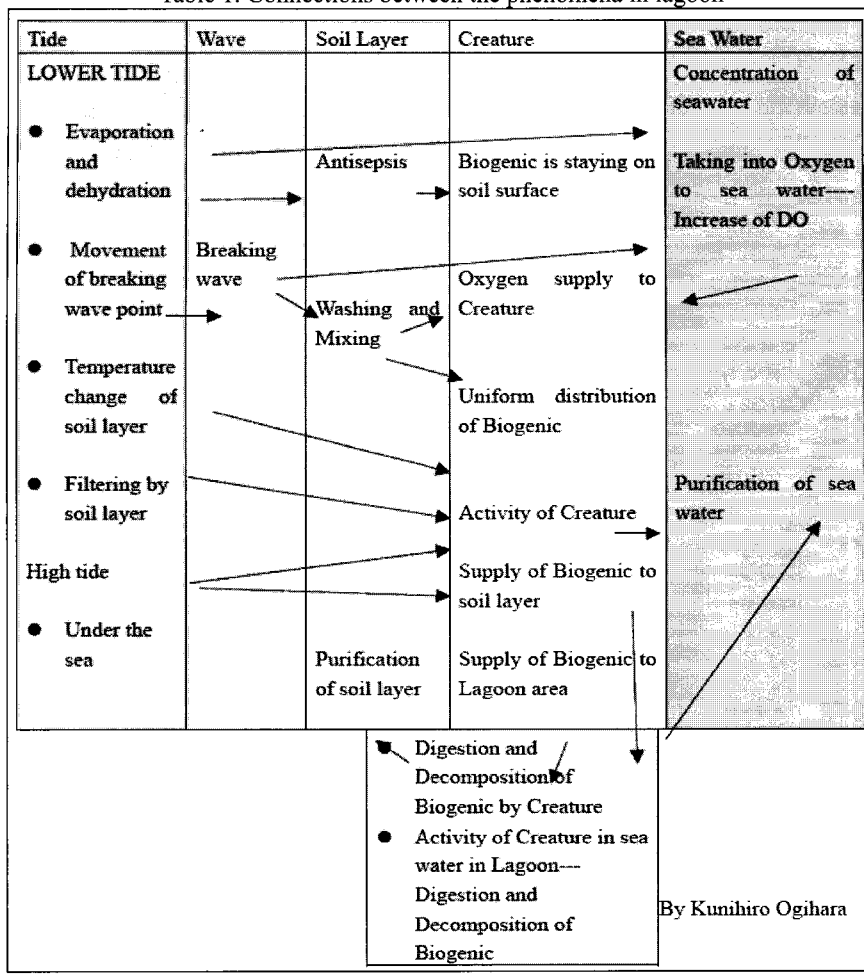
Keywords: Lagoon, sea water purification, small crab, shell, breaking wave

1. INTRODUCTION

There are so many physical motions on lagoon surface zone those are tidal motion and wave actions, water currents by tide and sediments movement by tide and wave actions. And the activities in lagoon are focused on the creature's activity; biogenic, planktons, fishes and birds. These motions and activity are related each other and the results of these related actions make the lagoon in the good conditions for habitat of creature, birds and etc.

Here the authors have made a table as shown Table 1 for understanding these complicated actions on lagoon surface. The related factors on lagoon are as follows the sea water, soil layer, creature, wave action tidal motions and sunshine. The main physical phenomena are water movement in shore line and wave action by the tidal motion. And the rain fall and the wind blowing have also some effects on the lagoon, but the former two motions are occurred continuously at two times in a day and are important to compare the later two. Therefore only the former two actions are considered in this table.

Table 1. Connections between the phenomena in lagoon



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