Reversal of surface ocean acidification and recovery potential of calcification: ecology of proton concentration control

*Kazuhiko Ichikawa[1]

1. (post) Graduate School of Environmental Earth Science, Hokkaido University

Surface ocean ecology is open system under anthropogenic effect on atmosphere. Coral reefs and individual coral polyps are interacting with surrounding watersheds. They are influenced strongly and often negatively by human activities. All the coordinates pointed out by atmospheric PCO2 and surface ocean pH were irregularly scattered at PCO2 > 290ppm under anthropogenic effect on surface ocean. The calcifying organism habitats of surface ocean are controlled by the proton dynamics and chemical physics of comprehensive global-environment. The surface oceans of calcifying organism habitats showed the proper base of ~8.0 < pH < ~8.3 at ~200ppm < P_{CO2} < ~290ppm under no anthropogenic effect on P_{CO2}. The calcifying organism habitats of surface ocean are controlled by the proton dynamics and chemical physics of comprehensive global-environment.Surface ocean ecology is open system under anthropogenic effect on atmosphere. Coral reefs and individual coral polyps are interacting with surrounding watersheds. They are influenced strongly and often negatively by human activities. All the coordinates pointed out by atmospheric PCO2 and surface ocean pH were irregularly scattered at PCO2 > 290ppm under anthropogenic effect on surface ocean. The calcifying organism habitats of surface ocean are controlled by the proton dynamics and chemical physics of comprehensive global-environment. The surface oceans of calcifying organism habitats showed the proper base of ~8.0 < pH < ~8.3 at ~200ppm < P_{CO2} < ~290ppm under no anthropogenic effect on P_{CO2}. The calcifying organism habitats of surface ocean are controlled by the proton dynamics and chemical physics of comprehensive global-environment.

