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Human Discharge and Phytoplankton Takeup for The Atmospheric Carbon Balance

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ABSTRACT

By the data of the Jiaozhou Bay (Shandong, China) from May 1991 to February 1994 and those of Hawaii from March 1958 to December 2007, with the statistics and differential equations analyzed were the seasonal variations in atmospheric carbon in the Northern Pacific Ocean (NPO), and in phytoplankton primary production in the Jiaozhou Bay, and its relationship in the study regions. The study unveiled that the seasonal change of the atmosphere carbon and primary production has the same period. In a year, the primary production and atmosphere carbon had two balance points: the points of May and October, during which the amount of atmosphere carbon decreased. As phytoplankton absorbed atmosphere carbon, When primary production in spring > 181.60 (mg/m² d) ~ 297.57 (mg/m² d) or 754.74 (mg/m² d) ~ 1160.13 (mg/m² d) in Sept. or 552.94 (mg/m² d) ~ 890.69 (mg/m² d) in Oct, the atmosphere carbon fell. Therefore, it is considered that from May to Oct. every year, phytoplankton growing in bloom controlled the increase of atmosphere carbon. From Dec. to next April, human discharging the carbon controlled its increase. The results supported the viewpoint shown by Yang (2010): the variation in atmospheric carbon was determined by human discharge and phytoplankton growth. The result in this paper showed that the earth ecosystem kept the percentage of the decrease amount of atmospheric carbon to its amount taken up by phytoplankton as 1.60% \sim 0.34% and maintained the dynamic balance of carbon by emitted by human being into the atmosphere and absorption of phytoplankton to atmosphere carbon. Therefore, the ecosystem was considered to be of the great power and accuracy.

KEYWORDS

Natural Asset, Financial Value, Neural Network

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