

原 著

化学物質底泥蓄積モデルの伊勢・三河湾への適用

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Abstract

An accumulation model was used to analyze the TBT concentrations in seawater and sediments in Ise Bay and Mikawa Bay. Embedding a decomposition process, which considered aerobic and anaerobic conditions in sediments as well as the re-suspension process with current velocity above sediments, into the existing model more precisely predicted the observed phenomena. The calculated results of the TBT concentrations in water and sediments were compared to field data, which consequently validated the model. The TBT concentration in port of Yokkaichi was reduced during the period of 1992-2008 by 99.5 % in seawater and by 28.5 % in sediment. Hence, the model revealed a much longer persistence of TBT in sediments than that in water.

Keywords : Tributyltin, Chemical Accumulation Model, Ise Bay, Mikawa Bay, Hydrodynamic Model, Ecological Model, Chemical Fate Model