

## **Abstract**

We developed the National Institute of Advanced Industrial Science and Technology (AIST) Risk Assessment Model for Tokyo Bay version 2.0 (AIST-RAMTB ver.2.0). This model allows users to estimate the concentrations of chemical substances in Tokyo Bay, assess the risks of those chemical substances, and display the results of the estimation and assessment on Windows-equipped personal computers. When used with the AIST-Standardized Hydrology-based Assessment Tool for Chemical Exposure Load (AIST-SHANEL), AIST-RAMTB ver.2.0 can set the riverine inputs of chemical substances. AIST-RAMTB ver. 2.0 outputs the results of visualization (a horizontal distribution map) as a KMZ file, so the results can be displayed on Google Earth. In this study, use AIST-RAMTB ver. 2.0 to estimate the environmental concentration of linear alkylbenzene sulfonate (LAS) and to assess the ecological risk of LAS in Tokyo Bay. The ecological risk was estimated by the no observed effect concentration (NOEC: 210  $\mu\text{g/L}$ ; Growth Reduction of diatom) and uncertainty factor 50. The results show that risk from LAS was found at river mouths, but no risk was evident in other sea areas.