

Interaction between Changjinag River and East China Sea

**Masataka Watanabe, Shogo Murakami, Seiji
Hayashi, Quan Wang, Kai-Qin Xu and Ji-Yuan Liu**

Laboratory of Marine Environment, National Institute for Environmental Studies, 16-2 Onogawa, Tsukuba, 305-0053, Japan

Tel +81-298-50 2338 Fax +81-258-50 2576 e-mail: masawata@nies.go.jp

Abstract

In June ~ August 1998, second biggest flood occurred in history of Changjiang river. NOAA AVHRR data was used to evaluate the flood damage by using vegetation index, NDVI, together with the visible reflectance R and the value of Band 3. The inundated area and volume of flooded water were estimated to be 1.83 million-hectare and 179.4 billion m³, respectively. Large amount of flooded water was discharged from Changjiang River into East China Sea. NOAA AVHRR data was used to estimate the distribution of turbid water discharged from Changjiang river into East China Sea by calculating the ratio of the reflectance values of Band 2 and 1, $C_{21} = R_2 / R_1$. It was clearly shown that high turbidity water crossed East China Sea and reached to Sea of Japan and the coast of Japan. This indicated that ecosystem in East China Sea and Sea of Japan has been strongly influenced by Changjiang River.