

## **Interaction between Changjinag river and East China Sea**

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

*National Institute for Environmental Studies  
16-2 Onogawa, Tsukuba, 305-0053, Japan*

### **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  $m^3$ , 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.