

## **RESULTS OF ENVIRONMENTAL MONITORING OF ARIAKE SEA BY MINISTRY OF ENVIRONMENT**

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Ariake Sea is one of the best-known semi-enclosed coastal seas in Japan, ranking with Tokyo Bay or Ise Bay. It contains some unique and valuable natural environments, such as very large tidelands formed by its tidal range that is said to be the biggest in Japan. Also, Ariake Sea has a natural disposition to be eutrophicated easily. Water exchange is inactive because of its shape, and many rivers including Chikugo River flow into it. Actually, number of red tide outbreaks has been increasing for recent years, therefore, there is great anxiety that eutrophication of Ariake Sea has been getting more severe.

On the other hand, a large amount of fishery products is produced in Ariake Sea, consequently, it is quite important also for fisheries industry of the region around it. However, the fishery production has decreased gradually, from the peak of 257 thousand tons in 1978 to some 180 thousand tons in recent years. Additionally, we have had an unprecedented poor harvest of cultured "Nori"(i.e. laver, a kind of seaweed) in the last season (2000/2001 season).

In order to tackle these problems, a framework to investigate the causes and the countermeasures was established under the initiative taken by Ministry of Agriculture, Forestry and Fisheries. Within this framework, Ministry of Environment, to complement the water quality monitoring that has been implemented by the relevant prefectures, carried out environmental monitoring including macrobenthos and bottom sediment conditions in Ariake Sea in February (winter) and August (summer), 2001. As a result, in summer, anoxic waters were observed in lower layer of stations in the west innermost part of the Sea and the mouth and the central part of Isahaya Bay, and in such stations, observed macrobenthos were very few. Besides, there were some stations where macrobenthos were not plenty both in summer and in winter. However, It remains to be accounted for whether these phenomena are unique to this year or not.