afterward it has decreased up to the recent. Before the 1980s, grain size was constant, but it became coarser gradually after 1980s.
The result from the ostracode analysis reveals that the construction and extension of the Manzeki-seto Strait have influenced the distribution and composition of ostracode assemblages around the inner part of Asou Bay. Before the 1900s, Bicornucythere bisanensis, which lives in oxygen-poor bottoms, was abundant. On the other hand Nipponocythere bicarinata, which cannot tolerate anoxic or oxygen-poor bottoms, was rare. Between the 1900s and 1970s, B. bisanensis decreased although N. bicarinata increased gradually. Since the 1970s, there are no significant changes of the species composition of ostracode assemblages, but the total number of individuals has increased up to the present.
Thus, seasonal hypoxia was developed in the study site before the 1900s. The construction and extension of the Manzeki-seto Strait, however, have promoted the inflow of oxygen-rich waters from open seas and have improved the environment in the inner part of Asou Bay.

Up-to-date technology for treatment watery sediments

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The Project of Environmental Restoration of Enclosed Coastal Seas in Agobay of Mie Prefecture in Japan was carried out by a group of collaborative researchers assigned by Japan Science and Technology Agency for five years since 2003. This project deals with efforts to clean up the deteriorated sediments that are accumulated at the bottom of the sea. Agobay is known as the starting bay on the culture of pearl oysters by Mr. Kokichi Mikimoto and has been contaminated in the continuation of pearl culture spanning 110 years. Attempts are in order to enhance the self-cleaning capability of the natural water in the bay by using the many kinds of artificial restoration technologies, that is, dredging engineering, re-forming artificial tidal lands and seaweed beds. As one of the innovated investigation results, new technologies for dewatering and solidification of the dredged sediments were developed by the original coagulant, named 'AGOCLEAN-P', which was made of paper sludge ashes wastes and/or coal ashes as raw materials. The coagulating mechanism of AGOCLEAN-P is explained that ettringite crystallites are firstly formed in the watery sediments when the powdered coagulant and wet sediments are mixed. The mixture reacts with water to make soil particles by cross-linkages of silicate networks. Soil particles are agglomerated to become diameter several 10 μm and does not disperse into water as silts. The separation between agglomerates and clear water is performed very well and sedimentation of agglomerates is happened very short time. After dewatering by press, treatment dredged mud can reuse for the raw materials of artificial tidal flats, granular micro-habitat beads for microorganism, seaweed beds, and marine blocks. This treatment will improve the turbidity of sea water in order to reach the sun light in the bottom of the sea. This technique will be applied to the environmental cleaning about river catchment and estuary areas in Asia. Wetland restoration actions, in general, for lagoons, lakes, rivers, and reefs grow yearly on a point of view for global environmental problems.

Nutrients transfer between the sea and artificially enclosed waters

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Ago-Bay has several enclosed water bodies surrounded by concrete dykes which were artificially constructed for rice cultivation, and almost of the nutrients from the land flow down to the sea through these enclosed waters. In order to estimate the amount of nutrients discharged into the sea, evaluation of the waters enacting on the nutrients flow is regarded very important. Therefore, the nutrients flowing into the Ishibuchi-pond and Tateishi-pond have investigated in this study.
Area of Ishibuchi-pond is estimated to be ca. 15000 m^2, and the bottom sediments in this area are in extremely anaerobic condition. Tateishi-pond has no river flowing into them, and surrounded by natural forest. The total area of the