

Water Environment in Oofunato Bay along the Sanriku Rias-Type Coast Line

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The Oofunato Bay faces the Pacific Ocean and is a typical V-shaped Rias-type coast. The bay is known for its varied scenic beauty. On the flatland at the depths of the bay is an alluvial fan. The periphery of the bay is lined with hills and mountains facing the ocean. A township had developed along the flatland and the coast line; in the pre-war years, 20,000 were involved in fisheries and agriculture. Since port facilities were built in 1952, the town has grown into a coastal industrial city. In addition, some of the local industries, including the processing of marine products, have grown. The population at present is about 40,000.

Historically, the Sanriku coast has been constantly assaulted by earthquakes and tsunamis, bringing considerable damage to the area. In 1960, Oofunato City had the highest death toll in the country when it was hit by tsunami waves that originated off the coast of Chile, South America. To try and protect against future tsunamis a breakwater extending to a depth of 38 meters, the deepest in Japan, was constructed at the mouth of the bay in March 1967. Because of this breakwater, the Oofunato Bay has become an artificially closed marine zone; this is one reason the area has poor exchange of sea water. At about the same time, our nation's economy began to grow at a rapid rate, and the population of the city doubled. One consequence of this rapid growth is that waste water from offices, factories and homes has increased sizeably and flows directly into the bay. During summer, the area is frequently plagued by oxygen-poor water masses and red tide, and is believed to cause damage to marine farming operations.

At present, the city is conducting a publicity campaign to educate citizens about ways for improving the health of local waters. One project aims at improving its sewerage system and is assisting in the installation of a purification tank. Boats are deployed to collect debris floating in the waters. In waters where the depth reaches 20 meters, an aeration experiment is under way, the first of its kind in Japan, to exchange the top and bottom layers of water.

For the future, the city is contemplating dredging the sludge in the sea bottom with the cooperation of the prefecture and the central government and using the sludge as land fill for areas within the port. However, the city is currently experiencing some difficulty adjusting its land-fill plan due to opposition from local fishermen.

Citizens are demanding that Oofunato Bay be used for multiple purposes, and that any project in the bay should be based on compromises between the needs of the marine industry and protection of the region's scenic beauty.