

Restoration of San Francisco Bay Area (USA)

The San Francisco Bay area consists of nine counties, with the population of 650 million and the dimension of 19400 km². Each county has its own land use plan. Around thirty years ago, the San Francisco Bay Conservation and Development Commission (BCDC) was established by the residents who were concerned about the waterfront reclamation by the rate of 10 km² every year. Based on the annual budget of four billion dollars, BCDC has been granted with the wide-ranging powers of making various political decisions as an agency, including the power to protect the existing port, the power to build recreation facilities for the citizens, and the power on the airport and on the wildlife preserve. With the budget of four billion dollars, various projects have been implemented together with the local government, and the local economy has continuously been vitalized. One example is the waterfront restoration program (Calfed Bay Delta Program) in Calfed Bay Delta area where Sacramento and San Joaquin waters flow into the San Francisco Bay. The program promotes environment restoration over more than thirty years, focusing on the fields of drinking water quality and of ecosystem conservation.

◆ Key to Restoration

- Avoiding reclamation and restoring wetland
- Waterfront restoration program (Calfed Bay Delta Program)

◆ Overview of the Bay

San Francisco Bay ranges north and south by approximately 70 km, and its width is 20 km. The mouth of the bay toward the Pacific is as narrow as less than 2 km by width and is quite closed. It is as shallow as 5 meters on average. The wetland, which used to cover the bay area back in around 1800, was lost by 90 % due to reclamation and drainage for salt fields and farmlands, and it caused serious environmental problems such as water pollution by sewage water, washout crude oil, petroleum refining industry sewage, and chemical fertilizers.



◆ Project Efforts for Restoration

[Avoiding reclamation and restoring wetland]

The wetland along the bay used to cover the bay area back in around 1800, but it was lost by 90 %. The citizens who were concerned about the changing coastlines started in 1960s regulating the bay development, aiming at expanding the wetland for restoring the bay area ecosystem and the wildlife habitats. The wetland restoration is intended to be left, to the maximum, to the rise and fall of the natural tide over a long period of time, and human action is limited only to accelerating the process of sediment deposition. They say this approach is based on people's reflection on the conventional idea of "instant wetland."
In the restored wetland, some of the endangered species have been found.

[Waterfront restoration program]

Waterfront restoration program promotes environment restoration over more than thirty years, focusing on the fields of drinking water quality and of ecosystem conservation. In the drinking water quality field, it has promoted the supply of unique drinking water, that keeps up with the environment, to the whole one thousand drinking water agencies in California, and the local residents have regained a confidence in the water quality. In the ecosystem conservation field, the fund of as much as 400 million yen has been provided to various ecosystem conservation projects.



Transition of San Francisco Bay and wetland distribution (1850 vs. 2000)
<http://www.nrdc.org/greengate/wildlife/wetlands.html>

Source: "The Study of Fisheries Oceanography," Vol.64, No.1, 2000. Published by Japanese Society of Fisheries Oceanography. (http://hiroshima.cool.ne.jp/kan_oitagawa/Pre_Html/NEWS6/Section/kaki/seiki.htm)

Tideland conservation practices in America (<http://www31.ocn.ne.jp/~adachih/sanban-ze/kaigi/hatakeyama.htm>)

JICE Report Vol.4, 2003.11. International Forum "Basin's total management, and partnership and consensus building among residents." (http://www.jice.or.jp/jice_report/pdf04/jice_rpt04_14.pdf)