Restoration of Chesapeake Bay (USA)

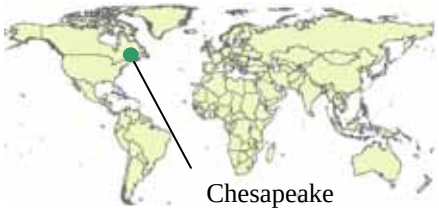
As industries were developed and population increased, the inflow burden on Chesapeake Bay was increased. As a result, the bay, which was closed, became gradually polluted. Aiming at regaining rich natural environment, the federal government and the state government, with cooperation by near-shore waters concerned parties, established "Chesapeake re-program" in 1987. Many of the concerned parties participated in this program, including the federal government's Environmental Protection Agency (EPA), National Oceanic and Atmospheric Administration (NOAA), the universities and research institutes in the relevant four states, and NGOs. This program focused on restoring fish and marine life in the bay, and its activities included: prohibiting phosphorous detergents, improving agricultural management, organic removal of nutrient salts, the sewage system and wastewater regulations, and the penetration of environment education among people. Mitigation works were conveyed, and wetland restoration and seaweed bed creation were also started. After an agreement in 2000, this program has much progressed and has contributed to conserving and recovering the environment in the bay.

◆ Key to Restoration

- Ecosystem recovery measures
- Basin measures
- River inflow measures
- Residents participation

◆ Overview of the Bay

Chesapeake Bay is located in Maryland on the east coast of the States. It is the second largest bay in the world, and the dimension of its catchment basin (the states of New York, Pennsylvania, West Virginia, Delaware, and Maryland) corresponds to forty percent of Japanese national land. Its depth is beyond 30 km, and 15 million people live in the catchment basin. This bay experienced deterioration of its natural ecosystem from 300 years ago when immigration from Europe started and the population in the area expanded, but now various activities for revitalizing the environment have been in operation.



◆ Project Efforts for Restoration

【Ecosystem recovery measures】
Focus has been on restoring fish and marine life in the bay, and its activities included removal of nutrient salts and mitigation works for wetland restoration and for seaweed bed creation.

【Basin measures】
Decreasing pollutants inflow, by sewage system development, was targeted in the basin measures. It is obligated by law for the land owners around the bay to create a 100 meter-wide forest belt (forest buffer) from the shore so as to restore nature.

【River inflow measures】
It is obligated for the farm owners to create a riverside forest (buffer zone) so as to lessen the burden of pollutants in heavy rain. It is a condition for receiving the government subsidy for farming. Wetland restoration has been underway as a river project.

【Residents participation】
It is obligated by state law for the homes near the bay to use non-phosphorous detergents. In urban areas where rain water drainage system is developed, pollutants can easily flow with heavy rain, and people are asked to set a water purifier tank or to lay their gardens with turf.

Source: National Land Technology Policy Research Institute document "Toward human-nature symbiotic basin for urban restoration -- people, water, land, and environment -- " Katsuhide Yoshikawa, p.39
"Research group's report on conserving river and ecosystem in east coast of the States" Foundation for Riverfront Improvement and Restoration. Japan ecosystem society
"Environment in closed sea area in the world and efforts on environment creation" Nippon Foundation Library (http://nippon.zaidan.info/seikabutsu/1996/00646/contents/096.htm)