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New Direction For Water Environmental Management

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Japan experienced severe water pollution throughout the period of high economic growth in the 1960s. With the concentration of population and industries in coastal regions, large quantities of pollutants such as chemicals, organic matters and nutrients flowed into the sea, and these caused health hazard and harmful algae blooms which damage fishery and living environment. To cope with this situation, the Water Pollution Control Law and various other laws and systems for pollutant control were established, and the installation of sewage systems and wastewater treatment facilities has been promoted. Total Pollutant Load Control System (TPLCS) has been implemented in Tokyo bay, Ise bay, and the Seto Inland Sea. TPLCS is designed to reduce the total amount of pollutant loads (target item; chemical oxygen demand, total nitrogen, total phosphorus) flowing into enclosed water area. In the Seto Inland Sea, the largest enclosed coastal sea in Japan, the concentrations of nitrogen and phosphorus came to meet Environmental Quality Standards in almost all areas as a result of 40 year efforts including TPLCS. But it is pointed out that not only the diminishment of seaweed beds and tidal flats brought about by industrialization but also the long-term decrease of dissolved inorganic nitrogen and phosphorus concentrations may have caused the recent decline in biological productivity and fish catches. On the other hand, in the areas affected by the Great East Japan Earthquake on March 11th of 2011, the sea environments were greatly damaged by landform changes of coastal lines and sea bottoms as well as disappearance of seaweed beds and other habitats. Under such circumstances, Central Environment Council submitted a report last October on Desirable Future Vision of the Seto Inland Sea. According to the report, the sea has multifunctional roles/values likened to "Garden", "Farm" and "Seaway". In addition, the report set out a vision of "Bountiful Seto Inland Sea" where these three functions are maximized in harmony with the environmental conservation for the sustainable use of the ecosystem service in the future. In response to the report, we will revise the master plan for the environmental conservation of the sea by FY 2013. While the water quality of some enclosed coastal seas still need to be improved, some, like the Seto Inland Sea, have overcome the severe eutrophication problems. In this regard, we have entered the next phase and are setting a new direction toward a beautiful, bio-diverse, bustling-with-people and bountiful sea.