

## THE DECADE OF WATER QUALITY AND ITS MANAGEMENT IN FOUR MAJOR RIVERS, THAILAND

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The Pollution Control Department (PCD) has been monitoring the water quality of the four major rivers (Chao Phraya, Thachin, Meklong, and Bangpakong Rivers) for decades. The results indicated that river quality in the lower parts of the Chao Phraya and Thachin Rivers have been degraded and the levels of parameters concerned have been lower than the Surface Water Quality Standard and Classification. The major water quality problems were low dissolved oxygen (DO), high ammonia-nitrogen, high fecal coliform bacteria, high turbidity, and high organic matter (biochemical oxygen demand, BOD, respectively). The major sources of water pollution were communities, industries, and agriculture; however, the proportion each source contributed varies from river to river. For example, communities were the major sources of pollutants discharged in the lower part of the Chao Phraya River, whereas industry was the significant contributor of pollutants in the lower part of the Tha Chin River.

In the past, wastewater problems were managed within political boundary. New approaches, such as basin management and maintaining the carrying capacity of receiving waters, have been adopted for controlling both point and non-point source pollution in the Thachin River Basin as well as in other basins. Future decisions on water quality management should not solely focus on domestic waste management, but should also include measures for controlling other urban and rural sources. Additionally, nutrient loads from agricultural areas must be considered as integral to future planning strategies.