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Water Pollution Control and Treatment in China

Yun Zhou, Beidou Xi, and Jing Su
Chinese Research Academy of Environmental Sciences, Beijng China (zhouyun@craes.org.cn/+86-10-84913887)

China has made remarkable achievements in social and economic development since adopting economic reform and open-up policy in the late 1970s. During the past 30 years, the average annual GDP growth rate was around 10 percent. The rapid economic growth has accompanied by significant increase in pollution discharge and has come at a high price to resources, the environment and people's health. Environmental pollution is having a serious impact on public health and well-being as well as on the ecosystems of China. China is now facing enormous environmental challenges, especially in the area of water environment. China is under dual pressure of water shortage and water pollution, with per capita water resource only 1/4 of the world average and increasing pollution load in rivers, serious lake eutrophication, declining estuary environmental quality and worsening drinking water quality. Water resource and water environmental quality has become the bottleneck restricting China's economic development.

In order to reconcile continued rapid economic development with environmental protection, many actions have been taken in China in terms of establishing legal frameworks and reducing emissions. In the area of water environment, a number of policies and regulations have been issued. Since the 6^{th} Five Year Plan (1980-1985), China has carried out a series of research programs in the areas of watershed pollution control, lake eutrophication control and ecological restoration, integrated urban water environmental management, as well as drinking water safety. During the 10^{th} Five Year Plan, China launched key basic research (973) programs, such as *Research on Eutrophic Process of Lakes and on Mechanism of Blue Algae Bloom*, as well as special research into the hi-tech field (863), such as *Development of Ecological Restoration and Environmental Dredging Technologies of Heavily Polluted Sections in Lake Taihu and Lake Dianchi*. These programs have led to better water pollution control and water environmental quality. However, China is still facing a very serious water pollution problem. In 2008, China's State Council approved a National Key Scientific Programme – Water Pollution Control and Treatment Programme aiming at providing scientific support to water pollution control and treatment and to meet the target of cutting down the total discharge of COD by 10% during the 11^{th} Five Year Plan. This programme will last 13 years, from 2008 to 2020 with six main research areas including lakes, watershed, drinking water, urban water, monitoring and early warning system, and water environmental strategies and policies. The main focus of this programe is on drinking water safety, integrated watershed management and urban water pollution control and treatment. Under this research framework, there are many areas that could be explored for future collaboration between China and EU.