

## Appendix

**Table S1.** Environmental policies and projects related to wastewater management in China

Year	Environmental regulations and projects
-1986	-Establishment of a standard for discharges of industrial wastewater, waste gas, and solid waste (1973) -Environmental Protection Law (trial in 1979) -Pollution levy regulation (1982) -Marine Environment Protection Law (1982, revised in 1999) -Law on the Prevention and Control of Water Pollution (1984, revised in 1996 and 2008)
1986-1990	-The National Environmental Protection Agency was upgraded to an organization that reports directly to the state council (1988) -Implementation of the law on Water Pollution Prevention and Control (1989) -Environmental Protection Law (amended in 1989, revised in 2015)
1991-1995	-The second national conference on the prevention and control of industrial pollution proposed the notion of “Three shifts” (1993) -China’s Agenda 21 (1994)
1996-2000	-The national Ninth Five-Year Plan for Environmental Protection (1996) -NEPA was upgraded to the State Environmental Protection Administration at the ministerial level (1998) -Implementation of the People’s Republic of China’s law on water pollution prevention and control (2000)
2001-2005	-The State Environmental Protection Administration issued interim administrative measures to regulate discharge licenses for key water pollutants in the Huai River and the Tai Lake Basin (2001) -The national Tenth Five-Year Plan for Environmental Protection (2001) -Law on the promotion of cleaner production (2003) -SEPA issued measures for preventing and controlling environmental pollution from unused hazardous chemicals (2005)
2006-2010	-Eleventh Five-Year Plan set the national target for COD emissions reduction (2006) -Eleventh Five-Year Plan for the development of national water resources (2007) -Implementation of a chemical oxygen demand emissions trading system (2007) -Introduction of measures for sharing environmental information (2008) -Circular economy promotion law (2008)
2011-2015	-Twelfth Five-Year Plan set the national target for ammonia nitrogen (NH <sub>3</sub> -N) emissions reduction in wastewater (2011) -Regulation on Urban Drainage and Sewage Treatment (2013) -Water Pollution Prevention and Control Action Plan (Water Ten Plan) (2015) -New environmental protection law was enforced (2015)

Source: The authors revised Table 1 from Fujii et al. [17].



**Figure S1. Map of Mainland China**

Note: Regions are defined as follows.

Eastern region: Beijing, Tianjin, Hebei, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong, Hainan

Northeastern region: Liaoning, Jilin, Heilongjiang

Central region: Shanxi, Anhui, Jiangxi, Henan, Hubei, Hunan

Western region: Inner Mongolia, Guangxi, Chongqing, Sichuan, Guizhou, Yunnan, Tibet, Shaanxi, Gansu, Qinghai, Ningxia, Xinjiang