

## CHINA'S POLLUTANT DISCHARGE PERMIT SYSTEM EVOLVES BEHIND ITS ECONOMIC EXPANSION

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### I. INTRODUCTION

Due to the policy of reform and opening-up to the world, China's economy has developed swiftly and powerfully, but environmental pollution controls remain largely ineffective.<sup>1</sup> China's air, water, and noise pollution have increased as the pollutant discharge permit system undergoes additional revisions. The rather grim situation is as follows.

Water quality is deteriorating gravely and rapidly. In 2005, samples were taken from 411 monitoring sections for surface water in seven water systems throughout the country including the Changjiang River and the Yellow River. The section ratios in levels I-III, levels IV-V, and inferior level V are forty-one percent, thirty-two percent, and twenty-seven percent, respectively.<sup>2</sup> The water quality in the Liao River, the Huai River, the Yellow River, and the Songhua River is worse, and the pollution in the Hai River is considered serious.<sup>3</sup> The main pollution indexes are Ammonia Nitrogen, Bio-Chemical Oxygen Demand (BOD), permanganate, and oil

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1. See The Information Office of China's State Council, *Environmental Protection in China (1996-2005)*, [http://news.xinhuanet.com/english/2006-06/05/content\\_4647221.htm](http://news.xinhuanet.com/english/2006-06/05/content_4647221.htm) (last visited Apr. 9, 2007) (noting lack of adequate control over pollution in the environment).

2. See State Environmental Protection Administration, *2005 China Environment Status Gazette: Fresh Water Environment*, [http://www.zhb.gov.cn/plan/zkgb/05hjgb/200607/t20060727\\_91443.htm](http://www.zhb.gov.cn/plan/zkgb/05hjgb/200607/t20060727_91443.htm) (last visited Apr. 9, 2007) (discussing statistics on water pollution in various rivers).

3. See *id.* (discussing statistics on water pollution in various rivers).

pollution.<sup>4</sup> It is common for enterprises to discharge waste water illegally into these rivers.

China's air quality also has suffered. Sulfur dioxide emissions continue to increase significantly.<sup>5</sup> In 522 cities that monitored air quality in 2005, twenty-two cities (4.2%) fell into standard I, two hundred and ninety-three cities (56.1%) belonged in standard II, and one hundred and fifty-two cities (29.1%) fit in standard III.<sup>6</sup> The main sources of air pollution are particles with an aerodynamic diameter of less than 10 $\mu$ m (PM10).<sup>7</sup>

Noise pollution has become the third largest source of pollution, just behind water and air pollution.<sup>8</sup> Among 351 cities all over the country, one hundred and eighteen (33.6%) are in light noise pollution areas, six (1.7%) are in areas with medium levels, and three (0.9%) have heavy noise pollution levels.<sup>9</sup> Presently, the largest source of noise pollutions results from transportation noise, followed by construction noise, and living noise.

Additionally, solid waste pollution is severe. The improvement of industrial solid waste handling is progressing slowly, while the quantity of waste produced in China has increased consistently. In 2005, China produced 1.34 billion tons of industrial solid waste, a rise of twelve percent from 2004, and the total quantity of industrial waste discharged was 16,547,000 tons.<sup>10</sup> The harmless disposal rate of living garbage is also rather low.

4. See *id.* (observing specific forms of pollution in rivers).

5. See Guo Aidi, *The Standing Committee of the National People's Congress Pointed Out that Two Environmental Protection Indexes Kept Rising Instead of Decreasing During the Period of the Tenth Five-Year Plan*, [http://www.china.com.cn/news/txt/2006-08/27/content\\_7109126.htm](http://www.china.com.cn/news/txt/2006-08/27/content_7109126.htm) (last visited Apr. 9, 2007) (title translation by author) (examining how Standing Committee of National People's Congress observed two environmental protection indexes kept rising instead of decreasing during period of tenth five-year plan).

6. See State Environmental Protection Administration, *2005 China Environment Status Gazette: Atmosphere Environment*, [http://www.zhb.gov.cn/plan/zkgb/05hjgb/200607/t20060727\\_91439.htm](http://www.zhb.gov.cn/plan/zkgb/05hjgb/200607/t20060727_91439.htm) (last visited Apr. 9, 2007) (categorizing number of cities where air quality is in first, second, and third level standards).

7. See *id.* (naming particles with aerodynamic diameter of less than 10 $\mu$ m as primary air quality pollutant).

8. See Zhang Lihua, *Discussion on the Establishment of Ecological City*, 3 *ACAD. J. NANJING ADMIN. INST.* 42, 44 (2007) (determining that noise pollution is third largest pollutant in China).

9. See State Environmental Protection Administration, *2005 China Environment Status Gazette: Sound Environment*, [http://www.zhb.gov.cn/plan/zkgb/05hjgb/200607/t20060727\\_91438.htm](http://www.zhb.gov.cn/plan/zkgb/05hjgb/200607/t20060727_91438.htm) (last visited Apr. 9, 2007) (describing pollution levels of cities all over China).

10. See State Environmental Protection Administration, *2005 China Environment Status Gazette: Solid Waste*, [http://www.zhb.gov.cn/plan/zkgb/05hjgb/200607/t20060727\\_91437.htm](http://www.zhb.gov.cn/plan/zkgb/05hjgb/200607/t20060727_91437.htm) (last visited Apr. 9, 2007) (showing quantity of discharged industrial solid waste).



Due to China's rapidly developing economy, some officials pointed out that pollution levels are generally under control, the total environmental quality remains stable, and the total discharge quantities of main pollutants are effectively managed.<sup>11</sup> The report from the State Environmental Protection Administration of China, however, states that China's environmental quality is distressing because partial pollution is severe, and main pollutant discharge is still increasing.<sup>12</sup> Drinking water is facing a grave safety threat primarily because of water pollution.<sup>13</sup> The increasing trend of solid waste pollution is also aggravating the problem.<sup>14</sup>

In response to the increasingly severe crisis of environmental pollution, the Central Government has enacted and implemented a series of laws, administrative regulations, and rules concerning the prevention and control of pollution.<sup>15</sup> Article 26 of the Constitution (P.R.C.) provides the constitutional basis for the Central Government's environmental authority, specifying: "[t]he state protects and improves the living environment and the ecological environment, and prevents and controls pollution and other public hazards."<sup>16</sup> The Environmental Protection Law (P.R.C.) is a comprehensive law in the field of environmental protection in China.<sup>17</sup>

In addition to the above laws, the Standing Committee of the National People's Congress instituted specific laws regarding marine, water, air, noise, and solid waste pollution. These laws in-

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11. See Xie Zhenhua, *The Deteriorating Trend of Pollution in China Has Preliminarily Been Under Control and the Environmental Quality is Stable*, Feb. 28, 2007, <http://www.chinagateway.com.cn/chinese/huanjing/38678.htm> (describing how some officials have commented that aggravating pollution has been controlled).

12. See Zhao Shenyu, *China Is Partially Polluted: Serious Main Pollutant Discharge Still Assumed the Trend of Escalation*, Nov. 21, 2006, <http://www.cnhubei.com/200611/ca1211332.htm> (stating that environmental quality remains in danger because partial pollution is still rising).

13. See Yao Runfeng, *Water Quality of the Seven Major Rivers in China is Poor and the Water Pollution Presents Four Major Tendencies*, Mar. 22, 2005, <http://tech.qq.com/a/20050322/000103.htm> (discussing water pollution and safety of drinking water).

14. See China5e.com, *The Chinese Solid Waste Pollution has Aggravated the Tendency of Trash Besieged City Condition to be Serious*, Mar. 31, 2005, <http://www.china5e.com/news/huanbao/200503/200503310194.html> (explaining effects of solid waste pollution in China).

15. For a further discussion of the recently enacted laws, see *supra* notes 2-14; see also *infra* notes 16-30.

16. XIAN FA art. 26, § 1 (1982) (P.R.C.), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=1457> (establishing constitutional basis for environmental protection).

17. Environmental Protection Law (P.R.C.) (promulgated by the Standing Comm. Nat'l People's Cong., Dec. 26, 1989, effective Dec. 26, 1989), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=4544> (noting comprehensive law for environmental protection).

clude the following: (1) the Marine Environmental Protection Law (P.R.C.) (adopted on August 23, 1982 and revised on December 25, 1999);<sup>18</sup> (2) the Law on Prevention and Control of Water Pollution (P.R.C.) (adopted on May 11, 1984 and revised on May 15, 1996);<sup>19</sup> (3) the Law on Prevention and Control of Air Pollution (P.R.C.) (adopted on September 5, 1987 and revised on August 29, 1995 and April 29, 2000);<sup>20</sup> (4) the Law on Prevention and Control of Solid Waste Pollution (P.R.C.) (adopted on October 30, 1995, and revised on December 29, 2004);<sup>21</sup> (5) the Law on Prevention and Control of Environmental Noise Pollution (P.R.C.) (adopted on October 29, 1996);<sup>22</sup> and (6) the Law on Prevention and Control of Radioactive Pollution (P.R.C.) (adopted on June 28, 2003).<sup>23</sup>

The State Council also implemented administrative regulations concerning the prevention and control of pollution such as: (1) the Regulations on the Administration of Marine Dumping Waste

18. Marine Environmental Protection Law (P.R.C.) (promulgated by the Standing Comm. Nat'l People's Cong., Aug. 23, 1982, effective Mar. 1, 1983) (revised and promulgated by the Standing Comm. Nat'l People's Cong., Dec. 25, 1999, effective Apr. 1, 2000), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=24094> (protecting marine environment and balance).

19. Law on the Prevention and Control of Water Pollution (P.R.C.) (promulgated by the Standing Comm. Nat'l People's Cong., May 11, 1984, effective Nov. 1, 1984) (revised and promulgated by the Standing Comm. Nat'l People's Cong., May 15, 1996, effective May 15, 1996), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=14405> (ensuring control over water pollution as well as property utilization of water resources).

20. Law on the Prevention and Control of Air Pollution (P.R.C.) (promulgated by the Standing Comm. Nat'l People's Cong., Sept. 5, 1987, effective June 1, 1988) (revised and promulgated by the Standing Comm. Nat'l People's Cong., Aug. 29, 1995, effective Aug. 29, 1995) (revised and promulgated by the Standing Comm. Nat'l People's Cong., Apr. 29, 2000, effective Sept. 1, 2000), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=27171> (protecting air quality and living conditions).

21. Law on the Prevention and Control of Environmental Pollution by Solid Wastes (P.R.C.) (promulgated by the Standing Comm. Nat'l People's Cong., Oct. 30, 1995, effective Apr. 1, 1996) (revised and promulgated by the Standing Comm. Nat'l People's Cong., Dec. 29, 2004, effective Apr. 1, 2005), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=56444> (preventing solid waste pollution and safeguarding human body health).

22. Law on the Prevention and Control of Environmental Noise Pollution (P.R.C.) (promulgated by the Standing Comm. Nat'l People's Cong., Oct. 29, 1996, effective March 1, 1997), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=15411> (controlling ambient noise pollution).

23. Law on Prevention and Control of Radioactive Pollution (P.R.C.) (promulgated by the Standing Comm. Nat'l People's Cong., June 28, 2003, effective Oct. 1, 2003), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=47118> (preventing and controlling radioactive contamination).



(P.R.C.) (1985);<sup>24</sup> (2) the Provisional Regulations Concerning the Prevention and Control of Water Pollution in the Huai River Basin (1985);<sup>25</sup> and (3) the Rules for the Implementation of the Law on Prevention and Control of Water Pollution (P.R.C.) (2000).<sup>26</sup> Moreover, the Environmental Protection Competent Authority of the State Council created administrative rules including: (1) the Provisional Measures for the Administration of the Water Pollutant Discharge Permit (1988);<sup>27</sup> and (2) the Measures for the Administration of Key Water Pollutant Discharge Permit for the Huai River and Tai Lake Basins (Trial) (2001).<sup>28</sup> Some local governments have implemented local rules and regulations such as the Beijing Provisional Regulation on the Administration of Pollutant Discharge Permit (1997),<sup>29</sup> and the Guangdong Province Measures for the Administration of Pollutant Discharge Permit (2001).<sup>30</sup>

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24. Regulation on the Control over Dumping Wastes into Sea Waters (P.R.C.) (promulgated by the State Council, March 6, 1985, effective Apr. 1, 1985), *available at* <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=2318> (implementing environmental protection methods for sea waters).

25. Provisional Regulation Concerning the Prevention and Control of Water Pollution in the Huai River Basin (promulgated by the State Council, Aug. 8, 1995, effective Aug. 8, 1995), *available at* <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=12672> (discussing regulation made by State Council on water pollution prevention and control in Huai River Basin).

26. Rules for the Implementation of the Law on Prevention and Control of Water Pollution of P.R.C. (promulgated by the State Council, March 20, 2000, effective March 20, 2000), *available at* <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=27161> (stating administrative regulation to implement Law on Prevention and Control of Water Pollution in 2000).

27. Provisional Measures for the Administration of the Water Pollutant Discharge Permit (promulgated by National Environmental Protection Agency, March 22, 1988, effective March 22, 1988), *available at* <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=7420> (discussing measures made by State Environmental Protection Agency on Administration of Water Pollutant Discharge Permit).

28. Measures for the Administration of Key Water Pollutant Discharge Permit for the Huai River and the Tai Lake Basins (promulgated by the State Environmental Protection Administration, July 2, 2001, effective Oct. 1, 2001), *available at* <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=36280> (stating trial measures made by State Environmental Protection Administration on Administration of Key Water Pollutant Discharge Permit for Huai River and Tai Lake Basins).

29. Beijing Provisional Rules on the Administration of Pollutant Discharge Permit (1997) (promulgated by the Beijing Environmental Protection Bureau, June 9, 1997, effective June 9, 1997), *available at* <http://www.fsps.gov.cn/web/policy/PolicyInfo.aspx?lngItem=760> (establishing local rules for pollutant discharge permit in Beijing Municipality).

30. Guangdong Province Measures for the Administration of Pollutant Discharge Permit, (promulgated by the Guangdong Province Environmental Protection Bureau, July 4, 2001, effective July 4, 2001), *available at* <http://hzeppb.haizhu.gov.cn/printpage.asp?ArticleID=303> (establishing local rules for pollutant discharge permit in Guangdong Province).

Presently, China has established an entire set of legal systems concerning prevention and control of pollution, including: environmental planning, environmental impact assessment, land utilization planning, the "three simultaneity" system, pollutant discharge permits, and pollution discharge fees.<sup>31</sup> The following discussion will focus on the pollutant discharge permit system.

## II. THE ROLE AND STATUS OF THE POLLUTANT DISCHARGE PERMIT SYSTEM

China based some of its systems for preventing and controlling pollution on foreign designs, such as its environmental impact assessment system and its pollutant discharge permit system. Other systems, such as the "three simultaneity" system are the progeny of China's environmental administration.<sup>32</sup> Each system plays a positive role in the prevention and control of pollution.

As shown by the increasingly complicated and grave situation of environmental pollution in China, these systems suffer from various defects. Both the environmental planning system and the environmental impact assessment system are preventive measures and yet they fail to continuously carry out "administration and control in the whole course" of pollution after preventative measures have failed.<sup>33</sup> Furthermore, while the pollutant discharge fees system presents economic incentives and has resulted in some businesses actually reducing their pollutant discharges, many of the largest polluters in China are state-owned enterprises and industry monopolies that can easily absorb pollutant discharge fees into their production costs and pass that expense on to consumers. Not only does this hinder the prevention and control of pollution, but it en-

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31. See Wen Tongai & Li Can, *Some Thoughts on the "Three Simultaneity" System*, 2 LEGAL SYS. & SOC'Y 675, 675 (2007) (discussing "three simultaneity" system). According to Article 26 of the Environmental Protection Law of the P.R.C., facilities for the prevention and control of pollution at a construction project must be designed, built and commissioned together with the principal part of the project. See *id.* See also Environmental Protection Law (P.R.C.) (promulgated by the Standing Comm. Nat'l People's Cong., Dec. 26, 1989, effective Dec. 26, 1989), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=4544> (noting three simultaneity system stipulated by article 26 of Environmental Protection Law).

32. See *id.* (describing "three simultaneity" system).

33. He Yan, *On the Defects and Perfection of the Legal System for Environmental Impact Assessment in China*, 1 ACAD. J. HUNAN C. ECON. & MGMT. 68, 68 (2002) (discussing defects on China's system for environmental impact assessment).



courages businesses to form the misguided belief that they can pollute as long as they pay for it.<sup>34</sup>

Despite criticism, the pollutant discharge permit system is one of the principal methods of controlling pollution in China. Qu Geping, a famous expert in the field of environmental protection said, “[t]he pollutant discharge permit system is the third largest magic weapon behind [the] other two ‘magic weapons’ of the ‘three simultaneity’ system and the pollution discharge fees system. This is an important administrative measure, and more powerful than the former two systems.”<sup>35</sup>

Qu Geping accords the pollutant discharge permit system such a high status for several reasons. First, the permit system applies from the time prior to the pollutant discharge to the time after the discharge. Therefore, it applies not only to pollution prevention, but also to the processing and monitoring of pollution as well as to the administration of post-pollution remedies.<sup>36</sup> This difference distinguishes it from other legal systems and makes it possibly the most effective legal system for these objectives.

Second, the pollutant discharge permit system applies individually and collectively with other pollution control laws to enhance the effectiveness of pollution regulation. The pollutant discharge permit system is not as passive as the “three simultaneity” system and environmental impact assessment laws, which fail to monitor pollution discharge after implementation. The pollutant discharge permit system integrates state laws, regulations, standards, policies, and administrative measures concerning pollution control to promote effective operations, and to harmonize with environmental, economic, and social goals.<sup>37</sup> The most effective method of controlling pollution might be the combination of the pollutant discharge permit system with the pollutant discharge fees system, because each system can offset the other’s weaknesses.

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34. See Cui Rubo, *On the Environmental Problems Caused by Economic Growth and the Corresponding Counter-Measures*, [http://iqte.cass.cn/iqteweb\\_old/hjzx/lt01026.htm](http://iqte.cass.cn/iqteweb_old/hjzx/lt01026.htm) (last visited Sept. 6, 2007) (describing effect of economics on environmental protection).

35. Zhu Xingxiang, *China's Pollutant Discharge Permit System*, P.R.C. ENVTL. SCI. PUBLISHING HOUSE, 41 (1991) (discussing importance of pollution discharge permits).

36. See Li Qijia & Cai Wencan, *Discussions on the Consolidation and Expansion of Pollutant Discharge Permit in China*, 6 ENVTL. & RESOURCES. L. REV. 171, 173 (March 2006) (detailing administration of pollution discharge permits).

37. See Xiao Ai, *Research on the Pollutant Discharge Permit*, HUNAN NORMAL U. 1, 19 (2004) (on file with author) (master degree paper) (noting effects of integrating pollution discharge permits).

Third, the pollutant discharge permit system drafts forceful administrative regulations by ensuring that its procedures have clear criteria, and that the system conforms to the modern spirit of the law. The Administrative Permit Law (P.R.C.), implemented as of July 1, 2004, provides a strong and systematic legal basis for improving the pollutant discharge permit system.<sup>38</sup>

Fourth, the strict procedures implemented by the pollutant discharge permit system are necessary to ensure that the environmental authorities supervise an enterprise's pollution discharge and constrain the environmental authorities' discretion. This lowers administrative costs and enhances the efficiency of environmental authorities by curbing abuses of power while accelerating the administrative process.<sup>39</sup>

Finally, the pollutant discharge permit system is more effective than the other systems that attempt to prevent and control pollution. In 1996, Chinese cities that implemented the water pollutant discharge permit system issued 41,720 pollutant discharge permits to 42,412 enterprises; in 2000, 71,027 enterprises obtained 80,899 water pollutant discharge permits, and the number of enterprises that obtained pollutant discharge permits had risen to over 80,000 by the end of 2002.<sup>40</sup> This system has generally been successful. For example, in Changzhou City, Jiangsu Province, from 1987 to 1990, economic development increased by twenty-four percent, while Chemical Oxygen Demand (COD) decreased by ten percent, and hydroxybenzene decreased by forty percent.<sup>41</sup> The black and odorous pollutant rate in the canal area dropped from six percent in 1986 to two percent in 1988.<sup>42</sup>

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38. See The Administrative Permit Law (P.R.C.) (promulgated by the Standing Comm. Nat'l People's Cong., Aug. 27, 2003, effective July 1, 2004), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=49280> (noting that Administrative Permit Law is legal basis for improving pollutant discharge permit system).

39. See Xiao Ai, *supra* note 37, at 20 (discussing procedures implemented by pollutant discharge permit system help save administrative costs and enhance efficiency of environmental authorities).

40. See *id.* at 21 (showing that pollutant discharge permit system is more effective than other pollution prevention control systems).

41. See Zhu Xingxiang, *supra* note 35, at 60-1 (discussing that results of pollutant discharge permit system have generally been successful).

42. See *id.* (discussing results of pollutant discharge permit system resulted in decrease in black and odorous pollutant in canal area of Changzhou City).



### III. THE HISTORIC EVOLUTION AND VARIANCE CHANNEL OF THE POLLUTANT DISCHARGE PERMIT SYSTEM IN CHINA

China's pollutant discharge permit system establishes the goal of improving environmental quality by focusing on the total quantity control of the pollutant.<sup>43</sup> It consists of the following four main components: (1) polluter registration; (2) planning and distribution of pollution discharge indexes; (3) application, approval, and issuance of pollutant discharge permits; and (4) supervision and inspection of the implementation of pollutant discharge permits.<sup>44</sup> This system originated from the Symposium on the Implementation of Declaration and Registration for Pollution Discharge and the Pollutant Discharge Permit System, convened by the National Environmental Protection Agency of China in Yantai, Shandong in 1987.<sup>45</sup> In 1988, the Working Meeting for Water Pollutant Discharge Permits in trial cities opened.<sup>46</sup> After the meeting, a pilot program for developing a water pollutant discharge permit system was carried out in seventeen cities, including Shanghai, Beijing, Xiangan, and the Xiaoqing River Basin in Shandong; this work was completed in 1991.<sup>47</sup>

In 1988, China's National Environmental Protection Agency issued the Provisional Measures for the Administration of the Water Pollutant Discharge Permit.<sup>48</sup> In 1989, the State Council issued the Rules for the Implementation of the Law on Prevention and Control of Water Pollution (P.R.C.), which set out the requirements for obtaining a pollutant discharge permit or a provisional pollutant

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43. See *id.* at 23 (stating China's pollutant discharge permit system is based on total quantity control).

44. See *id.* (discussing four main components of China's pollutant discharge permit system); see also Li Zhiping, *The Challenges of China's Discharge Permit System and Effective Solutions*, 24 TEMP. J. SCI. TECH. & ENVTL. L. 375, 378 (2005) (discussing four steps in pollutant discharge permit system).

45. See Zhu Xingxiang, *supra* note 25, at 23 (describing symposium convened by National Environmental Protection Agency of China in 1987).

46. See *id.* (noting that Working Meeting for Water Pollutant Discharge Permits in trial cities opened in 1988).

47. See *id.* (describing trial period for developing water pollutant discharge permits carried out in seventeen Chinese cities).

48. See The Provisional Measures for the Administration of the Water Pollutant Discharge Permit (promulgated by the National Environmental Protection Agency, Mar. 22, 1988, effective Mar. 22, 1988), available at <http://law.chinalaw.info.com/newlaw2002/SLC/SLC.asp?Db=ch1&Gid=7420> (last visited Sept. 6, 2007) (stating promulgation served to effectively control water pollution and strengthen management and supervision of water pollution sources); see also Li Zhiping, *The Challenges of China's Discharge Permit System and Effective Solutions*, 24 TEMP. J. SCI. TECH. & ENVTL. L. 375, 376-77 (2005) (stating that regulation facilitated establishment of plans for total pollutant control of water based on local conditions).

discharge permit for polluters discharging pollutants into ground water.<sup>49</sup> From 1991 to 1994, 1,021 enterprises in Jiangsu and Shanxi carried out the second phase of the pilot program for water pollutant discharge permit development.<sup>50</sup> Since 1991, sixteen cities, including Tianjin, have carried out the pilot program for air pollutant discharge permit systems.<sup>51</sup> Through 1996, Chinese cities above the prefecture level, namely the cities that govern counties and districts, generally implemented the water pollutant discharge permit system.<sup>52</sup> In 2000, the Standing Committee of the National People's Congress again revised the Law on Prevention and Control of Air Pollution (P.R.C.), establishing the air pollutant discharge permit system.<sup>53</sup> In that same year, the State Council issued the Rules for the Implementation of the Law on Prevention and Control of Water Pollution (P.R.C.), establishing the water pollutant discharge permit system.<sup>54</sup> As a result, the pollutant discharge permit system obtained a strong legal footing.<sup>55</sup>

In February 2004, the State Environmental Protection Administration developed a pilot program for integrated pollutant dis-

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49. See The Rules for the Implementation of the Law on Prevention and Control of Water Pollution (P.R.C.) (promulgated by the State Council, March 20, 2000, effective March 20, 2000), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=4355> (stating goals are to prevent and control water pollution, protect and improve environment, safeguard human health, ensure effective utilization of water resources and promote economic progress, and that polluters discharging pollutants to ground water are required to obtain pollutant discharge permit or provisional pollutant discharge permit).

50. See Zhu Xingxiang, *supra* note 35, at 23 (noting from 1991 to 1994, second phase pilot program for water pollutant discharge permit was carried out in Jiangsu and Shanxi).

51. See *id.* (recognizing that 16 cities since 1991 have implemented pilot program for air pollutant discharge permit systems).

52. See WANG XIAOJUN, DISCUSSION ON THE IMPLEMENTATION OF POLLUTANT DISCHARGE PERMIT SYSTEM IN CHINA, reprinted in COLLECTION OF PAPERS FOR 2002 CHINA ENVIRONMENTAL AND NATURAL RESOURCES LAW WORKSHOP 102, 104 (Environment and Resources Law Society of China Law Society ed., 2002) (stating that water discharge permit system was implemented in all Chinese cities above prefecture level by 1996).

53. See Law on the Prevention and Control of Air Pollution (P.R.C.), (revised and promulgated by the Standing Comm. Nat'l People's Cong., Apr. 29, 2000, effective Sept. 1, 2000), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=27171> (discussing congressional revision including air pollution discharge permit system).

54. See Rules for the Implementation of the Law on Prevention and Control of Water Pollution of P.R.C. (promulgated by the State Council, March 20, 2000, effective March 20, 2000), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=27161> (discussing water permit discharge system established in same year).

55. See Xiao Ai, *supra* note 37, at 28 (noting changed legal status of water and air discharge permits after 2000).



charge permits in Hangzhou, Shenzhen, Shenyang, Wuhan, Tangshan, and Yinchuan in order to further the prevention and control of pollution, and to establish a single permit system.<sup>56</sup> The goal was to make pollutant discharge permits the primary legal tool for addressing enterprises' environmental responsibilities, rights, and benefits.<sup>57</sup> In addition, it sought to realize "administration by permits, pollution discharge by permits, and punishing violators by permits," and to standardize the environmental acts of pollution dischargers.<sup>58</sup>

China's current pollutant discharge permit system controls water and air pollution.<sup>59</sup> The permits are based on a "connection between concentration control and total quantity control."<sup>60</sup> The early attempts to prevent and control pollution included: (1) the Marine Environmental Protection Law (P.R.C.) (1982);<sup>61</sup> (2) the Law on Prevention and Control of Water Pollution (P.R.C.) (1984);<sup>62</sup> (3) the Law on Prevention and Control of Air Pollution (P.R.C.) (1987);<sup>63</sup> (4) the Environmental Protection Law (P.R.C.) (1989);<sup>64</sup> (5) the Law on Prevention and Control of Solid Waste

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56. See Han Lin, *Six Cities Carry Out Pilot Programs for Integrated Pollutant Discharge Permit*, <http://www.china.org.cn/chinese/huanjing/495769.htm> (last visited Apr. 16, 2007) (discussing pilot program for integrated pollutant discharge permits was carried out in Hangzhou, Shenzhen, Shenyang, Wuhan, Tangshan, and Yinchuan).

57. See *id.* (noting goal of pilot program for integrated pollutant discharge permits).

58. *Id.* (discussing conglomerated legal components of discharge permits).

59. See Cai Shouqiu & Yang Zhaoxia, *The Definition and Content of Basic Principles for the Law of the PRC on Prevention and Control of Water Pollution*, 1 *ACAD. J. JISHOU U. (SOC. SCI. EDITION)* 121, 122 (2006) (describing China's current pollutant discharge permit system controls water and air pollution).

60. *Id.* (stating current water and air pollutant discharge permits are based on connection between concentration control and total quantity control).

61. Marine Environmental Protection Law (P.R.C.), (promulgated by the Standing Comm. Nat'l People's Cong., Aug. 28, 1982, effective Mar. 1, 1983), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=1367> (explaining law was not clear in provisions for pollutant discharge permit system).

62. Law on the Prevention and Control of Water Pollution (P.R.C.), (promulgated by the Standing Comm. Nat'l People's Cong., May 11, 1984, effective Nov. 1, 1984), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=2007> (addressing unclear provisions of pollutant discharge permit system).

63. Law on the Prevention and Control of Air Pollution (P.R.C.), (promulgated by the Standing Comm. Nat'l People's Cong., Sept. 5, 1987, effective Jun. 1, 1988), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=3468> (noting law was not clear in provision for pollutant discharge permit system).

64. Environmental Protection Law (P.R.C.), (promulgated by the Standing Comm. Nat'l People's Cong., Dec. 26, 1989, effective Dec. 26, 1989), available at

Pollution (P.R.C.) (1995);<sup>65</sup> (6) the Law on Prevention and Control of Environmental Noise Pollution (P.R.C.) (1996);<sup>66</sup> and (7) the Law on Prevention and Control of Radioactive Pollution (P.R.C.) (2003).<sup>67</sup> These laws, however, did not contain clear provisions for a pollutant discharge permit system. In order to remedy this lack of clarity in the face of rapidly growing environmental pollution, various statutory techniques were employed. Some laws supplemented the pollutant discharge permit system in the subsequent revisions, as shown by Article 15 in the Law on Prevention and Control of Air Pollution (P.R.C.) (2000),<sup>68</sup> and Article 3 in the Marine Environmental Protection Law (P.R.C.) (1999).<sup>69</sup> Other laws established the pollutant discharge permit system by adoption of matched rules, such as Article 10 in the Rules for the Implementation of the Law on Prevention and Control of Water Pollution (P.R.C.) (2000).<sup>70</sup> Laws such as the Law on Prevention and Control of Envi-

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<http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=4544> (addressing clarity of provision for pollutant discharge permit system).

65. Law on the Prevention and Control of Solid Waste Pollution (P.R.C.) (promulgated by the Standing Comm. Nat'l People's Cong., Oct. 30, 1995, effective Apr. 1, 1996), *available at* <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=13136> (noting law was not clear in provision for pollutant discharge permit system).

66. Law on the Prevention and Control of Environmental Noise Pollution (P.R.C.) (promulgated by the Standing Comm. Nat'l People's Cong., Oct. 29, 1996, effective March 1, 1997), *available at* <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=15411> (discussing lack of clear provision for pollutant discharge permit system).

67. Law on Prevention and Control of Radioactive Pollution (P.R.C.) (promulgated by the Standing Comm. Nat'l People's Cong., June 28, 2003, effective Oct. 1, 2003), *available at* <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=47118> (discussing clarity of provisions of regarding pollutant discharge permit system).

68. Law on Prevention and Control of Air Pollution (P.R.C.) (revised and promulgated by the Standing Comm. Nat'l People's Cong., Apr. 29, 2000, effective Sept. 1, 2000), *available at* <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=27171> (stating government's responsibility for establishing air pollutant discharge permit system). The State Council and the People's Governments at the provincial level may designate the areas of total discharge quantity control for main air pollutants, while the relevant local People's Governments in areas of total discharge quantity control for main air pollutants shall implement the total quantity pollutant permit system, and the enterprises with total quantity control task of main air pollutants must comply with the permits. *See id.*

69. Marine Environmental Protection Law (P.R.C.) (revised and promulgated by the Standing Comm. Nat'l People's Cong., Dec. 25, 1999, effective Apr. 1, 2000), *available at* <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=24094> (stating duties of state to establish and implement total quantity control system for pollution discharge in key sea areas to control sea pollution).

70. Rules for the Implementation of the Law on Prevention and Control of Water Pollution of P.R.C. (promulgated by the State Council, March 20, 2000, effective March 20, 2000), *available at* <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=27161> (stating responsibilities of local governments to



ronmental Noise Pollution (P.R.C.)<sup>71</sup> failed to outline any clear provisions on the pollutant discharge permit system, but some local rules were able to establish the system.<sup>72</sup> For example, Paragraph 1 of Article 2 of the Guangdong Province Measures for the Administration of Pollutant Discharge Permit<sup>73</sup> requires all enterprises and individual businesses that directly or indirectly discharge water, air, solid waste, noise, or radioactive pollutants into the environment within the province to apply for and obtain a Guangdong Pollutant Discharge Permit or a Guangdong Pollutant Discharge Provisional Permit.<sup>74</sup>

It is obvious that China's administration of pollutant discharge permits has achieved incredible progress over the past twenty years.<sup>75</sup> In the development process, however, this system suffered quite a few setbacks.<sup>76</sup> It is significant that the Standing Committee of the National People's Congress carried out debates on the pollutant discharge permit system while reviewing the Environmental Protection Law (P.R.C.) (draft) in December 1989.<sup>77</sup> Many objectors to the pollutant discharge permit system pointed out in the former Article 31 of the draft that the Environmental Protection Law (P.R.C.) (1989)<sup>78</sup> failed to establish the pollutant discharge

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issue pollution discharge permits). The environmental protection departments of the local People's Governments above the county level shall examine and approve the total quantity of the key pollutants discharged into the body of water by the units located in their administrative regions. *See id.*

71. Law on the Prevention and Control of Environmental Noise Pollution (P.R.C.) (promulgated by the Standing Comm. Nat'l People's Cong., Oct. 29, 1996, effective March 1, 1997), *available at* <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=15411> (prescribing general provisions on noise pollution but no provisions on permit system).

72. *See* Guangdong Province Measures for the Administration of Pollutant Discharge Permit (promulgated by the Environmental Protection Bureau of Guangdong Province, July 4, 2001, effective July 4, 2001), *available at* <http://www.gemc.gov.cn/view.aspx?id=118> (noting local rules in Guangdong Province established the pollutant discharge permit system).

73. *Id.* (describing local rule establishing pollutant discharge permit system in Guangdong Province).

74. *See id.* (explaining Guangdong Pollutant Discharge Permit System encompasses water, air, solid waste, noise, and radioactive pollutants).

75. For a further discussion on the progress of the legislation on the pollutant discharge permit system, *see supra* notes 45-74 and accompanying text.

76. *See* Cai Wencan, Discussion on the Establishment of Pollutant Discharge Permit System in the Environmental Protection Law of the PRC., <http://www.nre.cn/bbs/viewthread.php?tid=25121> (last visited Sept. 15, 2007) (discussing setbacks suffered during development of pollutant discharge permit system).

77. *See id.* (discussing congressional debate on pollutant discharge permit system).

78. Environmental Protection Law (P.R.C.) (promulgated by the Standing Comm. Nat'l People's Cong., Dec. 26, 1989, effective Dec. 26, 1989), *available at*

permit system.<sup>79</sup> This article was replaced by the system of declaration and registration, and amended: “[e]nterprises discharging pollutant[s], shall make [a] declaration and registration by the provisions of the competent environmental protection authority of the State Council.”<sup>80</sup> Thus, the current systems of pollution discharge permits in China are scattered within the individual laws or regulations concerning prevention and control of pollution.<sup>81</sup> The following sections discuss the historical evolution and variations within all systems on the permits for water, air, and environmental noise discharge.

#### A. Water Pollutant Discharge Permit System

The water pollutant discharge permit system was the first pollutant discharge permit system implemented in China. Twenty-two years ago, the protected area for upriver water sources of Shanghai Huangpu River took the lead in striving toward water pollutant quantity control by implementing the pollutant discharge permit system in 1985.<sup>82</sup> In the earliest days of the water pollutant discharge permit system, concentration control was the main focus. Then China began other policies for pollution prevention and control, such as executing a waste water discharge standard and pollution discharge fees.<sup>83</sup> The focus on pollutant concentration control was simple, convenient, practical, and effective.<sup>84</sup> But, the success was short-lived.

After 1992, China’s economy rapidly developed, causing industrial waste water and urban sewage discharges to increase significantly. In turn, water sources and soil became gravely polluted,

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<http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=4544> (failing to establish pollutant discharge permit system).

79. See See Cai Wencan, Discussion on the Establishment of Pollutant Discharge Permit System in the Environmental Protection Law of the PRC., <http://www.nre.cn/bbs/viewthread.php?tid=25121> (last visited Sept. 15, 2007) (discussing objection to pollutant discharge permit system and alternate state provisions for pollutant discharging).

80. Li Qijia & Cai Wencan, *supra* note 36, at 172 (quoting amended version of Environmental Protection Law (P.R.C.)).

81. For a further discussion of the current provisions on pollutant discharge permit system scattered within individual laws and regulations, see *supra* notes 53-41; see also *infra* notes 101, 106 & 112.

82. See Zhu Xingxiang, *supra* note 35, at 7 (discussing origins of water pollutant discharge permit system).

83. See Xiao Ai, *Comparative Study on Sino-American Water Pollutants Discharge Permit System*, 2 ACAD. J. ENVTL. MGMT. C. P.R.C. 30, 30-2 (2006) (describing policy behind Chinese pollution prevention control).

84. See *id.* (discussing advantages of pollution administration mode based on concentration control).



which highlighted a rather severe water resource shortage in China.<sup>85</sup> Additionally, concentration control demanded intensive human, material, and financial resources.<sup>86</sup>

Ultimately, "concentration control" lacked pragmatism and flexibility, and was unable to efficiently harmonize pollutant reduction with water quality targets.<sup>87</sup> By the 1990s, most of China's main rivers suffered from organic pollution, most lakes were in grave eutrophication, most river sections flowing through cities were polluted in general, and marine areas were polluted to a degree.<sup>88</sup> This dire state reflected the ineffectiveness of basing the water pollutant discharge permit system on "concentration control."

Rather than focusing on "concentration control," it was more effective to operate the water pollutant discharge permit system by determining the total quantity of the pollutants discharged, and distributing indexes of pollutant quantity reduction.<sup>89</sup> Since the mid-1990s, China's water pollutant discharge permit system transitioned from "concentration control" to a "combination of concentration control and total quantity control."<sup>90</sup> Article 16 in the Law on Prevention and Control of Water Pollution (amended in 1996) specifies that some water pollutants shall be subject to "total quantity control."<sup>91</sup> If the water pollutant discharge standard fails to satisfy

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85. See Gao Lihong, *The Historically Inevitable Choice for China: Review and Outlook of the Development of Watersaving Society*, Nov. 5, 2003, <http://2004.chinawater.com.cn/newscenter/flxw/szy/20031105/200311050015.asp> (last visited Nov. 12, 2007) (explaining negative environmental effects of China's rapidly developing economy).

86. See Cai Wencan, *Research and Analysis of Pollutant Discharge Permits from an Integrated Perspective*, WUHAN U. 1, 1-47 (2005) (master degree paper) (divulging need for human and economic resources in implementing environmental programs).

87. See He Yanjun, *Review on the Existing Legal Systems for Environmental Pollution Control*, 2 SHAANXI ENVIRONMENT, 11, 11 (2003) (setting forth disadvantages of pollution control system based on pollution concentrations).

88. See Wang Yangzu, *The Present Situation of Water Environment and Key Points in the Work of Preventing Water Pollution*, [http://co.163.com/forum/content/1792\\_448027\\_1.htm](http://co.163.com/forum/content/1792_448027_1.htm) (last visited May 12, 2007) (detailing negative aspects of environmental program based on pollution concentration control).

89. See Xu Jialiang & Fan Xiaoxian, *System Arrangements, Variance and Governmental Regulating Limitations: The Analysis of Evolution Processes on the Pollutant Discharge Permit*, 1 Q.J. SHANGHAI ACAD. SOC. SCI. 1, 2 (2002) (expressing what should have been included in pollutant discharge permit system).

90. *Id.* at 14 (discussing transition of water pollutant discharge permit system). The water pollutant discharge permit system transitioned from "concentration control" to a "combination of concentration control and total quantity control." *Id.*

91. Law on the Prevention and Control of Water Pollution (P.R.C.) (promulgated by the Standing Comm. Nat'l People's Cong., May 11, 1984, effective Nov. 1, 1984; revised and promulgated by the Standing Comm. Nat'l People's Cong., May

the state prescribed water quality standards in a certain body of water, the provincial People's Governments shall implement the total quantity control system for key pollutant discharge to investigate and determine the key pollutant discharge quantity for the enterprises with pollutant discharge reduction tasks.<sup>92</sup> The State Council shall prescribe specific measures.<sup>93</sup>

Although China's pilot program for the water pollutant discharge permit system developed from 1985 to 1996, after which the State Environmental Protection Authority suggested establishing the water pollutant discharge permit system, many industrial authorities strongly objected. The legislative body heeded the industry complaints and ultimately declined to establish the water pollutant discharge permit system.<sup>94</sup> Instead, it merely prescribed that China "implement the examination and determination system of the key pollutant discharge quantity to the enterprises with pollutant discharge reduction task."<sup>95</sup>

Despite the failure of the Law on Prevention and Control of Water Pollution to explicitly establish a permit system, the development of the water pollutant discharge permit system did not stagnate in China. On the contrary, regions all over the country issued provisions concerning water pollutant discharge permit systems, such as the Kunming Provisional Measures for the Administration of Water Pollutant Discharge Permit System.<sup>96</sup>

On March 20, 2000, the State Council issued the Rules for the Implementation of the Law on Prevention and Control of Water

15, 1996, effective May 15, 1996), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=14405> (requiring local governments to set total quantity for pollutants discharged into waters).

92. See *id.* (describing local governments' duties implementing total quantity control system).

93. See *id.* (specifying that necessary measures of act will be undertaken by State Council).

94. See Xiao Ai, *supra* note 37, at 26 (explaining circumstances of enactment of water pollutant discharge system).

95. *Id.* (noting examination and determination system of key pollutant discharge quantity was introduced instead of water pollutant discharge permit system).

96. See Kunming Provisional Measures for the Administration of Water Pollutant Discharge Permit System (P.R.C.) (promulgated by the Standing Comm. People's Cong. Kunming Mun., Nov. 19, 1999, effective Nov. 19, 1999), available at <http://www.law.chinalawinfo.com/newlaw2002/SLC/slc.asp?gid=16803140&db=LAR&keyword=%E6%B0%B4%E6%B1%A1%E6%9F%93%E7%89%A9%E6%8E%92%E6%94%BE> (exemplifying regional rules for implementing Water Pollutant Discharge System).



Pollution (P.R.C.).<sup>97</sup> Article 10 specifies that the environmental protection departments of the local People's Government above the county level shall each issue pollutant discharge permits or provisional pollutant discharge permits if polluting enterprises exceed the indexes of approved total discharge quantity.<sup>98</sup> Doing so will determine the legality of the water pollutant discharge permit system in the form of administrative regulation.

## B. Air Pollutant Discharge Permit System

There were no provisions for an air pollutant discharge permit system in the Law on Prevention and Control of Air Pollution (P.R.C.) in 1988. It was not until April 1991 that the Environmental Protection Competent Authority of the State Council initiated a pilot program for an air pollutant discharge permit system in sixteen cities, including Tianjin, Shanghai, Shenyang, Guangzhou, Taiyuan, and Baotou.<sup>99</sup> During three years of the trial program, the authorities issued 987 pollutant discharge permits to 6,646 industrial actors polluting the air with smoke, dust, and sulfur dioxide.<sup>100</sup> This trial period established a basis for an air pollutant discharge permit system sensitive to China's needs and methods of total quantity control for air pollutant discharge. It also was an important foundation for integrating the permit system with the legal system.<sup>101</sup> When the Law on Prevention and Control of Air Pollution (P.R.C.) was revised in 1995, however, the pollutant discharge permit system was not introduced.<sup>102</sup>

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97. See Rules for the Implementation of the Law on the Prevention and Control of Water Pollution (P.R.C.) (promulgated by the State Council, Mar. 20, 2000, effective Mar. 20, 2000), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=27161> (explaining procedures for environmental protection departments of local People's Government above county level to implement total discharge quantity control and water pollutant discharge permit system).

98. See *id.* (describing consequence of exceeding discharge quantities).

99. See AIR AND NOISE SECTION OF THE POLLUTION CONTROL DEPARTMENT OF THE STATE ENVIRONMENTAL PROTECTION ADMINISTRATION OF CHINA, AMENDMENT BACKGROUND MATERIALS FOR THE LAW OF THE PRC ON PREVENTION AND CONTROL OF AIR POLLUTION, 77 (P.R.C. Env'tl. Sci. Publishing House) (Aug. 2000) (providing background for implementation of air pollutant discharge permit system).

100. See *id.* (discussing main progress of pilot program for air pollutant discharge permit system).

101. See *id.* (describing effect of trial permit system on attitude towards establishing permanent air pollution permit system).

102. See Law on the Prevention and Control of Air Pollution (P.R.C.) (revised and promulgated by the Standing Comm. Nat'l People's Cong., Aug. 29, 1995, effective Aug. 29, 1995), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=12676> (noting when Law on Prevention and Control

In 2000, the Law on Prevention and Control of Air Pollution (P.R.C.) was revised again. Article 15 prescribes that:

[t]he State Council and the People's Governments in all provinces, autonomous regions and municipalities directly under the Central Government, may designate the regions failing to meet the prescribed air environmental quality standard and the acid rain control areas and sulfur dioxide pollution control areas approved and determined by the State Council as areas of total discharge quantity control for main air pollutants. The State Council shall specify the specific measures for the total discharge quantity control for main air pollutants. The relevant local People's Governments in areas of total discharge quantity control for main air pollutants shall examine and determine the total discharge quantity for main air pollutants of enterprises and issue the main air pollutant discharge permits, in accordance with the conditions and procedures specified by the State Council, and the principles of openness, fairness and justness. The enterprises with total quantity control task of main air pollutants must discharge pollutants in accordance with the determined total discharge quantity for main air pollutants and the discharge conditions specified by the permits.<sup>103</sup>

This was the first time China prescribed total pollutant quantity control and an air pollutant discharge permit system in a law. It was also the most authoritative legislation concerning pollutant discharge permits.

Many local governments have issued rules or regulations in accordance with the Law on Prevention and Control of Air Pollution (P.R.C.), which specify details for improving the air pollutant discharge permit system.<sup>104</sup>

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of Atmospheric Pollution was revised in 1995, air pollution permit system was not introduced).

103. See Law on the Prevention and Control of Air Pollution (P.R.C.) (promulgated by the Standing Comm. Nat'l People's Cong., Apr. 29, 2000, effective Sept. 1, 2000), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=2717> (noting that air pollution permit system was introduced in Law on Prevention and Control of Air Pollution when revised for second time in 2000 and specifying total discharge quantity allowed by law for certain air pollutants).

104. See Articles 12 and 13 in the Regulations of Zhejiang Province on Prevention and Control of Air Pollution (promulgated by the Standing Comm. People's Cong. of Zhejiang Province, June 27, 2003, effective Sept. 1, 2003), available at <http://law.chinalawinfo.com/newlaw2002/SLC/slc.asp?db=lar&gid=16822786>;



### C. Environmental Noise Discharge Permit System

The Law on Prevention and Control of Environmental Noise Pollution (P.R.C.) contains no provisions specifying that noise discharge in the environment requires a permit. Quite a few local regulations and normative documents such as the Guangdong Province Measures for the Administration of the Pollutant Discharge Permit,<sup>105</sup> and the Fujian Province Provisional Regulations on the Administration of the Pollutant Discharge Permit,<sup>106</sup> however, include noise pollution in their pollutant discharge permit systems.

### D. Declaration and Registration System of Solid Waste Pollutant Discharge

The Law on Prevention and Control of Solid Waste Pollution (P.R.C.) adopted in 1995 and amended in 2004, did not include provisions on a solid waste pollutant discharge permit. Article 57, however, requires that the units engaging in the operational activities of collection, storage and disposal of dangerous waste, must apply to the environmental protection authorities of the People's Government above the county level for an operational permit.<sup>107</sup>

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Articles 7, 8, 9, and 10 in the Regulations of Tianjin City on Prevention and Control of Air Pollution (promulgated by the Standing Comm. People's Cong. of Tianjin Municipality, July 18, 2002, effective Sept. 1, 2002; revised and promulgated by the Standing Comm. People's Cong. of Tianjin Municipality, Nov. 12, 2004, effective Nov. 12, 2004), *available at* <http://law.chinalawinfo.com/newlaw2002/SLC/slc.asp?gid=16835862&db=LAR&keyword=%E6%B1%A1%E6%9F%93%E9%98%B2%E6%B2%BB>; Articles 8 and 9 in the Regulations of Jinan City on Prevention and Control of Air Pollution (promulgated by the Standing Comm. People's Cong. of Jinan City, June 30, 2000, effective Sept. 1, 2000), *available at* <http://www.jnrd.gov.cn/dfgk/N42f1e382ae408.html> (listing local rules for improving air pollutant discharge permit system).

105. Guangdong Province Measures for the Administration of Pollutant Discharge Permit (promulgated by the Environmental Protection Bureau of Guangdong Province, July 4, 2001, effective July 4, 2001), *available at* <http://hzeqb.haizhu.gov.cn/printpage.asp?ArticleID=303> (explaining local rules for noise, air and water pollution in Guangdong Province).

106. Fujian Province Interim Measures for the Administration of Pollutant Discharge Permit (promulgated by the Environmental Protection Bureau of Fujian Province, Jan. 25, 2000, effective Jan. 25, 2000), *available at* <http://www.xmeme.org.cn/cgi-bin/dbfg/doc.cgi?id=1240> (describing local rules for noise, air, and water pollution in Fujian Province).

107. *See* Law on the Prevention and Control of Environmental Pollution by Solid Wastes (P.R.C.) (promulgated by the Standing Comm. Nat'l People's Cong., Oct. 30, 1995, effective Apr. 1, 1996; revised and promulgated by the Standing Comm. Nat'l People's Cong., Dec. 29, 2004, effective Apr. 1, 2005), *available at* <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=56444> (providing guidelines and regulations for controlling solid waste pollution in China).

Moreover, Article 32 prescribes that the state govern the implementation of the declaration and registration system of industrial solid waste, and requires the units producing industrial solid waste to provide all materials regarding category of waste, production quantity, flow direction, storage, and disposal of the industrial solid waste to the competent local environmental protection authorities.<sup>108</sup> These systems laid a foundation for the solid waste pollutant discharge permit to be established in the future.

#### E. Administration System of Land-Sourced Pollutant Discharge

The Marine Environmental Protection Law (P.R.C.) came into effect in 1983, but did not address the pollutant discharge permit system. In response to deterioration of the marine environment from land-sourced pollutants, Article 3 of the revised Marine Environmental Protection Law (P.R.C.) stated that "the state establishes and implements the total quantity control system of pollutant discharge in key marine areas, and determines the total quantity control indexes for main pollutant discharge into sea, and distributes the control quantities for main pollutant sources discharge. The specific measures shall be made by the State Council."<sup>109</sup> This legal provision is similar to the pollutant discharge permit system, but unfortunately the State Council has not issued any specific measures.

#### F. Administrative System of Radioactive Waste Discharge

The Law on Prevention and Control of Radioactive Pollution (P.R.C.), adopted in 2003, does not specify provisions on the pollutant discharge permitting. There are extremely strict administrative systems for the radioactive pollutant discharge. For example, Article 41 of this law notes: if a unit producing radioactive waste discharges gas and liquid into the environment, it should apply for a radioactive nuclear discharge permit with the environmental protection authorities and periodically report the discharge measurement result. Article 42 states that the units producing radioactive waste liquid must dispose of the waste or keep the radioactive waste

108. *See id.* (providing responsibilities and requirements under Law on Prevention and Control of Environmental Pollution by Solid Wastes).

109. Marine Environmental Protection Law (P.R.C.) (promulgated by the Standing Comm. Nat'l People's Cong., Aug. 23, 1982, effective Mar. 1, 1983; revised and promulgated by the Standing Comm. Nat'l People's Cong., Dec. 25, 1999, effective Apr. 1, 2000), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=24094> (establishing state's authority to implement total quantity control system in marine areas).



liquid from being discharged into the environment, in accordance with the state standards concerning prevention and control of radioactive pollution.<sup>110</sup>

#### IV. PROBLEMS AND LIMITS ON THE POLLUTANT DISCHARGE PERMIT SYSTEM OF CHINA

##### A. Legislative View

Currently, the enacted legislation regarding a national pollutant discharge permit system is insufficient. Further, the relevant local rules in various regions are not aligned with each other and are in a relative state of chaos. As stated above, the Environment Protection Law (P.R.C.) does not create a pollutant discharge permit system. Certain provisions discussing pollutant discharge permits are scattered throughout the laws and administrative regulations on water and air pollution but they are incomplete. Conversely, many local governments promulgate more comprehensive regulations or rules on pollutant discharge permit systems that are adapted to their own administrative regions. This means that the pollutant discharge permit system legislation at the central level has, to some degree, lagged behind the needs of local pollution prevention and cure.<sup>111</sup> In general, the development of a pollutant discharge permit system tends to become an awkward situation of "practice ahead of legislation, local legislation ahead of state legislation."<sup>112</sup>

Where uniformed state legal standards and bases for pollutant discharge permit have not been established, local authorities may have the option to promulgate related local regulations and rules based on the situation of local pollution prevention and control, and the locale's requirements. This may also cause problems such as unspecified permit conditions, separate instead of united stan-

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110. See Law on Prevention and Control of Radioactive Pollution (P.R.C.) (promulgated by the Standing Comm. Nat'l People's Cong., June 28, 2003, effective Oct. 1, 2003), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=47118> (requiring units producing radioactive waste gas to cooperate with state officials and dispose of pollutants in accordance with state standards).

111. See Ma Yan, *Research on Local Environmental Legislation*, <http://www.jcrb.com/zyw/n289/ca265723.htm> (last visited Sept. 6, 2007) (discussing pollutant discharge permit system legislation at central level is generally backwards compared with needs of local pollution prevention and cure).

112. Fu Yuping, *On the Tradable Pollution Permits*, [http://www.cei.gov.cn/loadpage.aspx?Page=ShowDoc&CategoryAlias=zonghe/ggmflm\\_zh&ProductAlias=zhuanjshj&BlockAlias=zjzjzd/&filename=/doc/zjzjzd//200708292468.xml](http://www.cei.gov.cn/loadpage.aspx?Page=ShowDoc&CategoryAlias=zonghe/ggmflm_zh&ProductAlias=zhuanjshj&BlockAlias=zjzjzd/&filename=/doc/zjzjzd//200708292468.xml) (last visited Nov. 12, 2007) (discussing awkward development situation of pollutant discharge permit system).

dards, ambiguity in subjects and substandard procedures, and even problems associated with arbitrary review when evaluating the permit application and collecting permit fees.<sup>113</sup> This severely influences the effect of the permit system on pollution prevention and control, and greatly impairs the solemnity and authority of this system.

## B. Practical Standpoint

In practice, the pollutant discharge permit system has caused problems of poor coordination, operating difficulties, and weak execution. The current situation of implementation is troubling.

Taking the current water pollutant discharge permit system as an example, there are two main problems with its actual implementation. First, the system is not in line with other environmental administrative policies, the outstanding manifestation of which is the difference in discharge standards. For instance, the discharge fee on water is based on the concentration standards, while the water pollutant discharge permit is based on both the quantity and concentration of the pollutant discharged. The difference in evaluating the standards of these two systems causes problems for local environmental authorities executing the pollutant discharge permit rules. Second, the system is weak in technical support and operational feasibility. The main manifestation of this is how to determine the total quantity control target of water pollutant discharge, and how to allocate the pollutant reduction indexes.

Taking the allocation of pollutant discharge reduction indexes as an example, it is difficult for local environmental protection authorities to provide the necessary data required for an optimized model because technicians are not trained in water quality models.<sup>114</sup> Additionally, technical support with the implementation of pollutant discharge permits is limited.<sup>115</sup> Therefore, it is hard for the pollutant discharge permit systems in many regions to execute the program after it is established. In the Shanghai Municipality and Zhejiang Province, where the pollutant discharge permit system has been implemented, the number of the pollutant discharge

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113. See Li Qijia & Cai Wencan, *Discussions on the Consolidation and Expansion of Pollutant Discharge Permit in China*, 6 ENVTL. & RESOURCES L. REV. 171, 180 (Mar. 2006) (discussing problems associated with local government having option to implement rules and regulations).

114. See Cai Wencan, *supra* note 86, at 34 (presenting example to show that technical support to pollutant discharge permit is weak).

115. See *id.* (acknowledging local environmental authorities' technical limitations).



permits issued by the government differs significantly from the actual number of polluting enterprises. In some places, the enterprises that have obtained pollutant discharge permits only account for twenty percent of all the polluting enterprises. More importantly, some regions have never seriously implemented this system.<sup>116</sup> One of the county level cities issued only forty temporary pollutant discharge permits in 1996, and issued zero pollutant discharge permits from 1997 through 2000.<sup>117</sup> Furthermore, many pollutant discharge permits have not obtained prior approval but instead were issued by the environmental administrative authorities subsequent to the pollutants discharged, as is especially obvious in rural areas.<sup>118</sup> In many regions, the pollutant discharge permit system only exists in theory.<sup>119</sup>

### C. The Insufficiency of Public Participation

Market and government failures are among the leading causes of present environmental problems. To overcome these failures, China must establish a system involving public participation. Such a system would enable society to exert its enthusiasm and creativity, while also allowing self-interest to make up for the shortage of market mechanisms and governmental supervision.<sup>120</sup>

The pollutant discharge permit system involves laws with multi-level provisions, administrative regulations, and administrative rules at the central government level in conjunction with rules and regulations at the local level. Currently, these provisions are randomly scattered and poorly coordinated. Moreover, while their practical operations are based on the internal formality of environmental authorities, most of the discharge permit procedures are controlled by local governments. The result is a lack of requirements both for what public services the polluting enterprises may require the gov-

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116. *See id.* at 28 (noting difficulty many regions face when executing pollutant discharge permit system following establishment).

117. *See id.* at 36 (stating number of permits issued by one municipality).

118. *See id.* (recognizing many permits are obtained following supervision of pollutants discharged by environmental authorities).

119. *See* Guan Gaofeng, "Green Taxation" and Sustainable Development, 7 PIONEERING WITH SCI. & TECH. MONTHLY 10, 10 (2005) (explaining pollutant discharge permit system did not work in many regions).

120. *See* Xu Jialiang & Fan Xiaoxian, *supra* note 89, at 16 (discussing lack of public participation in environmental affairs relating to pollution prevention and control).

ernment to offer and how the decision-making process of the permitting procedure will allow the public's participation.<sup>121</sup>

Many enterprises that produce pollution are attractive to local residents because they provide employment and increasing income. As a result, many locals tolerate the pollution. This leads to minimal public demand for environmental protection and limits the residents' awareness of the polluting enterprises.<sup>122</sup>

#### V. SOME THOUGHTS ON PERFECTING THE POLLUTANT DISCHARGE PERMIT SYSTEM

The provisions concerning the permit system, which are scattered throughout the environmental laws, regulations, and rules, should be consolidated based on the Administrative Permit Law (P.R.C.) that came into effect on July 1, 2004.<sup>123</sup> Scholars have two prominent points of view on this consolidation. One view is that the pollutant discharge permit is an administrative permit established by the provisions in the Administrative Permit Law (P.R.C.). This view requires the Central Government to promulgate an administrative regulation regarding the permit system based on the Administrative Permit Law (P.R.C.), which covers the discharge of water, air, and noise pollutants.<sup>124</sup>

Another view on the consolidation is that the Administrative Permit Law (P.R.C.) is promulgated by the Standing Committee of the National People's Congress, and its legal status is at the same level as other individually promulgated laws of the Standing Committee of the National People's Congress, such as the Law on Prevention and Control of Air Pollution (P.R.C.).<sup>125</sup> In accordance with the Law on Legislation (P.R.C.), however, the pollutant discharge permit system enacted in these individually promulgated

121. See Xiao Ai, *supra* note 37, at 51 (explaining public's loss of control over environmental issues affecting communities).

122. See Xu Jialiang & Fan Xiaoxian, *supra* note 89, at 18 (discussing effect that large enterprises have on small rural communities).

123. See The Administrative Permit Law (P.R.C.) (promulgated by the Standing Comm. Nat'l People's Cong., Aug. 27, 2003, effective July 1, 2004), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=49280> (detailing provisions concerning permit system, which are scattered through environmental laws, regulations and rules shall be consolidated based on Administrative Permit Law).

124. See Li Qijia & Cai Wencan, *supra* note 113, at 188 (explaining consolidation of pollutant discharge permit).

125. See Law on the Prevention and Control of Air Pollution (P.R.C.) (revised and promulgated by the Standing Comm. Nat'l People's Cong., Apr. 29, 2000, effective Sept. 1, 2000), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=27171> (reviewing alternative views on consolidation).



laws on pollution prevention and control may not follow the provisions of the Administrative Permit Law (P.R.C.).<sup>126</sup> The regulations and rules that do not comply with the Administrative Permit Law (P.R.C.) shall be amended or perfected in accordance with the law.<sup>127</sup> This avoids the necessity to promulgate another specific administrative regulation on the pollutant discharge permit system.

A workable pollutant discharge permit system may be accomplished by harmonizing the relationship between the Administrative Permit Law (P.R.C.), and the provisions in individually promulgated laws on pollution prevention and control. The government could achieve this result by first introducing and perfecting the pollutant discharge permit system in the environmental pollution prevention and control laws, thereby making the pollutant discharge permit system a standardized system with distinct levels and complete procedures. Additional laws and administrative regulations on the unification and specification of the pollutant discharge permit system would be promulgated by relying on legislative and corresponding practice.

Next, the public should be granted access to the pollutant discharge permit system. The public has a right to know and participate in environmental protection. This facilitates the complete collection of information by the environmental authorities and allows them to consider the will and demand of the public when making scientific and legal decisions.<sup>128</sup> Public participation will surely increase costs and cause frequent delays if there are no time restrictions; thus, it is necessary to create clear provisions for the permit system.

The following process' steps are examples that require some sort of time restriction and regulation: (1) submitting applications; (2) decision making process on acceptance and supplementing documents; (3) opportunity for public evaluation; (4) making the determination whether or not to grant the permit; (5) compiling

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126. See The Administrative Permit Law (P.R.C.) (promulgated by the Standing Comm. Nat'l People's Cong., Aug. 27, 2003, effective July 1, 2004), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=49280> (discussing relationship between laws for pollutant discharge permit system and Administrative Permit Law).

127. See Ye Ye, *Harmony between Single Laws on the Pollutant Discharge Permit and the Administrative Permit Law: Take an Example of the Water Pollutant Discharge Permit System*, 3 J. DONGHUA U. SOC. SCI. EDITION 77, 77 (2006) (stating regulations and rules for pollutant discharge permit system should be amended in accordance with Administrative Permit Law).

128. See Xiao Ai, *supra* note 37, at 53 (discussing that right of public to know and participate in environmental protection shall be respected).

and publicizing the permit draft for discussion; (6) issuance of a final discharge permit; (7) granting the permit; (8) expiration of the permit; (9) renewal of the permit; and (10) prior notice for suspending or canceling the permit. In accordance with the Administrative Permit Law (P.R.C.), there should be no more than forty days between the acceptance of an application and the granting of the permit.<sup>129</sup> Considering the complex scientific and technological issues involved in the discharge of pollution, the latency of the pollution and the complexity of the notification and hearing process, the period for approving a pollutant discharge permit may be properly extended only under specific circumstances outlined in the laws and regulations on pollution prevention and control.<sup>130</sup>

Third, the "separated pollution control model" that offers different permits to adapt to air, water, or solid waste pollutants should be changed into one "integrated pollution control model."<sup>131</sup> Presently, water and air pollutant discharge permit systems are more developed, and these systems are also more sophisticated in practice. There are only a few laws and regulations, however, directed at the more severe and increasing pollutants, including noise and solid waste. The lack of laws in this area causes concerns over implementation of effective laws. In February 2004, the State Environmental Protection Administration carried out a pilot program for integrated permit rules in the following six cities: Tanshang, Shenyang, Hanzhou, Wuhan, Shenzhen, and Yinchuan.<sup>132</sup> On one hand, it is necessary to perfect related legal systems based on the experiences and lessons of the discharge permits for water and air pollutants. On the other hand, it is also necessary to include the discharge of solid waste and noise pollutants. Such inclusion assists the discussion for the integrated pollution control model covering all water, air, solid waste, and noise pollutants. It also aids research on the laws and administrative regula-

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129. See The Administrative Permit Law (P.R.C.) (promulgated by the Standing Comm. Nat'l People's Cong., Aug. 27, 2003, effective July 1, 2004), available at <http://law.chinalawinfo.com/newlaw2002/SLC/SLC.asp?Db=chl&Gid=49280> (noting articles 42 and 44 state time period shall be no more than 40 days from acceptance of application to granting of permit).

130. See Xiao Ai, *supra* note 37, at 53-4 (explaining period of pollutant discharge permit system may be extended only under circumstances outlined in laws and regulations on pollution prevention and control).

131. Chen Jianxing, *On the Separated Pollution Control and Integrated Pollution Control*, S1 INTRODUCTION AND CONSULTATION 51, 51(2001).

132. See China.org.cn, Six Cities Develop Pilot Program for Integrated Pollutant Discharge Permit (Feb. 2004), <http://www.china.org.cn/chinese/huanjing/495769.htm> (discussing cities that began integration of discharge permit system).



tions for integrated pollution control so that "one permit" models and administrative rules may be established.

## VI. CONCLUSION

The pollutant discharge permit system, which has developed in China over the past twenty-two years, is one of the pollution prevention and control measures that is derived from western countries. It has not been established perfectly in the law, as it suffers from design flaws and lacks participation by the public. It has, however, undoubtedly exerted and continues to exert important power on the core of the legal system regarding pollution prevention and control in China. Given that the "Eleventh Five-Year Plan" has set a binding goal to reduce main pollutant discharges by ten percent, the key to arriving at this target centers on whether the pollutant discharge permit system can be fully utilized and perfected.