THE ENVIRONMENT

Introduction

During the Commission's 2017 reporting year, the Chinese government reported modest progress in air and water pollution reduction,¹ while Chinese and international media reports detailed the ongoing severity of China's air, water, and soil pollution, and related health concerns.² Chinese President and Communist Party General Secretary Xi Jinping reiterated the government's commitment to environmental protection.³ Some reports noted improvements in data disclosure for air pollution and on pollution sources,⁴ yet lack of transparency with respect to environmental data remains a problem.⁵ Government inspectors this past year found widespread violations of domestic environmental standards by firms in China,⁶ and in at least one incident of data falsification, prosecuted environmental officials for manipulating air quality monitoring readings.7 Chinese officials continued to make statements calling for public participation in environmental protection;⁶ in terms of holding polluters accountable, however, as highlighted in a report by the UN Special Rapporteur on extreme poverty and human rights, "the Government tends to rely almost entirely on top-down processes."⁶ During this reporting year, authorities detained environmental advocates,¹o censored media reporting on the environment ¹¹ and natural disasters,¹² and cracked down on environmental protests,¹³ highlighting the government's conflicting goals of improving the environment and "maintaining social stability."¹⁴

Reported Environmental Progress

During this reporting year, non-governmental organizations (NGOs) and Chinese authorities reported modest progress toward achieving the government's goals of improving air quality and reducing water pollution. According to analysis of official data by Greenpeace, an international environmental advocacy group, "74 percent of Chinese cities fail[ed] to meet China's national air quality standards" in 2016, 15 an improvement from the 80 percent of cities that failed to meet the standards in 2015.16 The government reported that in 2016, national targets for surface water pollution were met, with 67.8 percent of surface water meeting officially designated moderate to high standards and only 8.6 percent of surface water failing to meet the lowest standards. ¹⁷ In the first half of 2017, 70.0 percent of surface water reportedly met the moderate to high standards and 8.8 percent of surface water failed to meet the lowest standards. 18 Authorities and independent sources nevertheless noted continuing areas of concern, such as deteriorating water quality in some areas and the prevalence of cancer villages and groundwater pollution. 19

Environmental Health Concerns

Reports from this past year continued to demonstrate that air,²⁰ water,²¹ and soil pollution ²² caused serious harm to the health of persons living in China. In February 2017, a U.S.-based research team published a report finding that air pollution globally may be

responsible for approximately one out of five dementia cases for persons living in areas with high concentrations of fine particulate matter (PM_{2.5}).²³ Many cities in China have high annual average concentrations of PM_{2.5}.²⁴ In May 2017, a group of international scientists published research on the "striking" consequences of diesel emissions on public health, finding that 31,400 premature deaths in China per year may be caused by diesel emissions.²⁵ In July 2017, a European non-profit organization reported the health costs in China "from fossil fuels through air pollution-caused premature deaths" at approximately US\$1.7 trillion in 2015.²⁶ Chinese and international media reported that health concerns motivated some urban residents to move away from polluted areas ²⁷ or take other action, such as beginning to monitor pollution or requesting government information on pollution, to protect their health.²⁸

Transparency Regarding Environmental Data

During this reporting year, environmental NGOs and the Chinese government expressed concern regarding the transparency or accuracy of pollution-related data. The Institute of Public & Environmental Affairs (IPE), a Beijing-based NGO, reported there were still "significant issues" with air pollution disclosures by many cities, and that in some key cities, monitoring data was still withheld from public disclosure.²⁹ IPE developed Blue Map, a mobile application (app) that provides real-time information on environmental quality.³⁰ As of January 2017, users had reportedly downloaded the app over 3 million times.³¹ In January 2017, a provincial environmental protection bureau reportedly ordered developers of another mobile application, Air Matters, to stop reporting pollution levels above a certain amount.³² In October 2016, Chinese authorities reportedly detained three environmental officials in Xi'an municipality, Shaanxi province, for "falsification" of air quality data.³³ In June 2017, the Xi'an Intermediate People's Court sentenced seven environmental officials, including the three officials previously detained, to prison terms ranging from 1 year and 3 months to 1 year and 10 months for "damaging the computer information system." 34 In July 2017, the Ministry of Environmental Protection (MEP), following a month-long inspection, strongly criticized the Tianjin municipal government for "wantonly covering up" its failed environmental protection efforts, finding that although Tianjin authorities had convened many meetings and launched campaigns, "it was more lip service than action." ³⁵ MEP inspectors discovered that officials from the Binhai New Area and Wuqing districts in Tianjin had "taken shortcuts" (zou jiejing) to report better air quality by spraying water and reducing traffic near air quality monitors, and that Jinghai district water bureau officials had fabricated official documents.36

Public Interest Litigation

The Supreme People's Court (SPC) continued to take steps to strengthen the legal framework that provides for environmental organizations to file environmental public interest lawsuits.³⁷ The number of organizations filing this type of lawsuit, however, remained low.³⁸ In March 2017, the SPC released for the first time

summaries of 10 public interest lawsuits as model cases.³⁹ The plaintiffs in some of the model cases were entities under government supervision, including procuratorates in three cases, rather than independent non-governmental organizations (NGOs).⁴⁰ Although an estimated 700 environmental NGOs in China have standing to bring public interest lawsuits, the number of environmental NGOs that filed litigation in China reportedly decreased from 11 in 2015 to 6 in the first 11 months of 2016.⁴¹ Some foreign experts remain optimistic about the future of environmental public interest litigation in China due to the government's apparent support for such litigation,⁴² although significant challenges exist, including the high costs of litigation.⁴³

Soil Pollution Litigation in Changzhou

In April 2016, Chinese media reported that hundreds of students had fallen ill at the Changzhou Foreign Languages School in Changzhou municipality, Jiangsu province. Following these reports, two environmental NGOs—Friends of Nature (FON) and the China Biodiversity Conservation and Green Development Foundation (CBCGDF)—sued three chemical manufacturers that allegedly polluted the soil near the school. In January 2017, the Changzhou Intermediate People's Court ruled in favor of the chemical manufacturers and held that the two NGOs were responsible for court fees totaling 1.89 million yuan (US\$270,000). The head of the litigation department at CBCGDF expressed concern that this case "would set a precedent for courts to use similar charging standards for future environmental public interest lawsuits." The February 2017, FON and CBCGDF reportedly appealed the judgment.

Suppression of Environmental Protests and Advocates

Chinese citizens continued to raise their concerns about health issues related to the environment through street-level protests and other forms of public advocacy.⁴⁹ China's Constitution provides for freedom of speech, assembly, association, and demonstration,⁵⁰ as do the International Covenant on Civil and Political Rights ⁵¹ and the Universal Declaration of Human Rights.⁵² The following cases illustrate the ongoing lack of protection for citizens' rights to freedom of speech, assembly, association, and demonstration when they raise environmental concerns:

- Shaanxi province. In October 2016, residents in Xi'an municipality, Shaanxi, protested plans to build a waste incinerator in a local drinking water priority protection area.⁵³ Local residents reportedly estimated that the crowds numbered over 10,000 people.⁵⁴ Following the protests, authorities reportedly restricted residents' movement and censored media coverage.⁵⁵
- Sichuan province. In December 2016, authorities reportedly briefly detained a number of advocates in Chengdu municipality, Sichuan, after they gathered wearing face masks to protest air pollution.⁵⁶ In addition, authorities in Chengdu responded to the local pollution protests by prohibiting students from wearing face masks, issuing censorship instructions to the media, and sending text messages to local students urging

them to "trust in the government to carry out anti-pollution work." 57

• Henan province. Between September 29 and October 10, 2016, public security officials in Gushi county, Xinyang municipality, Henan, took into custody seven residents of Tianhu village, Yangji township, Gushi,⁵⁸ initially holding them at the Gushi PSB Detention Center and criminally detaining them on suspicion of "sabotaging production and business operations." ⁵⁹ The detentions were reportedly connected to the residents' protests against and attempts to prevent illegal sand mining that threatened village fields and irrigation systems. ⁶⁰ One detained villager reported that authorities tortured him to obtain his signature on investigation documents. ⁶¹

• Hunan province. According to Radio Free Asia, on October 9, 2016, police in Changsha municipality, Hunan, took environmental NGO leader Liu Shu into custody. 62 On October 10, authorities ordered Liu to serve 10 days of administrative detention for "leaking counter-espionage work state secrets"; her alleged offense was sharing pollution data. 63 Liu is the director of the Shuguang Environmental Protection and Public Interest

Development Center, an NGO in Changsha.⁶⁴

• Liaoning province. In August 2016, the Panjin Intermediate People's Court in Panjin municipality, Liaoning, rescinded a 12-year prison sentence against Tian Jiguang. ⁶⁵ Upon retrial, however, the Shuangtaizi District People's Court in Panjin sentenced him to four years and six months in prison in June 2017. ⁶⁶ Tian was the founder and leader of the Panjin City Association of Volunteers for the Protection of the Spotted Seal. ⁶⁷ Authorities in Panjin detained Tian in October 2013 on charges including "extortion" after he wrote a blog post in which he criticized a state-owned enterprise for water pollution. ⁶⁸

Regulatory Developments

During this reporting year, the Chinese government implemented or drafted regulatory changes affecting environmental monitoring and wildlife protection. In December 2016, the National People's Congress (NPC) passed the PRC Environmental Tax Law.⁶⁹ The legislation, which will take effect in January 2018,⁷⁰ provides for new environmental taxes that will be jointly managed by environmental and tax authorities,⁷¹ superseding the previous pollution discharge fees that had only been managed by environmental authorities.⁷² Some legal experts believe the potential for tax authorities to collect taxes from polluters may result in a strengthening of pollution monitoring systems.⁷³ In July 2016, the NPC amended the PRC Wildlife Protection Law, which took effect in January 2017.⁷⁴ An international non-governmental organization noted "positive changes" and areas of concern with the law, including that the breeding and selling of protected animals like the tiger may continue.⁷⁵ During this reporting year, the NPC reportedly was in the process of drafting a new soil pollution law,⁷⁶ and in June 2017, the NPC amended the PRC Water Pollution Prevention and Control Law.⁷⁷ China Daily, a state-run media outlet, highlighted a new "river chief system" that gives provincial and

local officials "major responsibility for addressing water pollution" in the amended law. 78

In December 2016, the Supreme People's Court (SPC) and Supreme People's Procuratorate issued an interpretation on environmental crimes that, if implemented, may lead to more criminal enforcement for environmental data manipulation.⁷⁹ The interpretation, which took effect on January 1, 2017, provides that criminal penalties for companies found in violation of environmental standards may be based on the amount of money the company saved by not operating the pollution control equipment; ⁸⁰ criminal charges of more than three years could be imposed if the money saved totaled over 1 million yuan (US\$140,000).⁸¹ The Director of the SPC research office said that the new interpretation would enhance the effectiveness of relevant legislation to allow for the prosecution of environmental crimes.⁸²

The government continued to develop and release comprehensive plans for improving the environment, although the government also announced plans to increase coal-fired power capacity. In December 2016, the National Development and Reform Commission released China's 13th Five-Year Energy Development Plan (Energy Development Plan),⁸³ which builds upon mandatory environmental targets in China's overall 13th Five-Year Plan for National Economic and Social Development adopted in March 2016.⁸⁴ The Energy Development Plan set a mandatory target that energy from coal will account for 58 percent or less of energy production by 2020, a 6-percent decrease from 2015.⁸⁵ The 13th Five-Year Electricity Development Plan, however, included plans to increase coal-fired power capacity from 900 gigawatts in 2015 to no more than 1,100 gigawatts in 2020,⁸⁶ despite plans to reduce carbon dioxide emissions and existing coal overcapacity.⁸⁷

Notes to Section II—The Environment

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¹ Ministry of Environmental Protection, "2016 Report on Environmental Conditions in China"

[2016 nian zhongguo huanjing zhuangkuang gongbao], 31 May 17, 5; "State Council Report on

2016 China Environmental Conditions and Fulfillment of Environmental Protection Targets,
and Report on Study of Environmental Protection Law Enforcement and Investigation and Consideration of Opinions" [Guowuyuan guanyu 2016 niandu huanjing zhuangkuang he huanjing
baohu mubiao wancheng qingkuang yu yanjiu chuli huanjing baohu fa zhifa jiancha baogao ji
shenyi yijian qingkuang de baogao], 24 April 17, para. 1(1)—(2); Gao Jing, "Environmental Quality Improvement a 'Heavy Burden Going Forward'—Minister of Environmental Protection Chen
Jining Responds to Hot Topic of Serious Air Pollution" [Huanjing zhiliang gaishan 'fuzhong qian

ying"—huanhaohu huzhang chen jining huiying zhong wuran tiangi redian huatil Xinhua 7 xing"—huanbaobu buzhang chen jining huiying zhong wuran tianqi redian huatil, Xinhua, 7 January 17; "China Exclusive: Environment Minister Feels 'Guilty' for Air Pollution," Xinhua,

January 17; "China Exclusive: Environment Minister Feels 'Guilty' for Air Pollution," Xinhua, 7 January 17.

² Alice Yan, "Smog Linked to Third of Deaths in China, Study Finds," South China Morning Post, 23 December 16; Ruan Yulin, "61 Chinese Cities Begin Air Pollution Warnings" [Zhongguo 61 ge chengshi qidong kongqi wuran yujingl, China News Service, 31 December 16; "Local Govts Need To Be Tougher on Polluters," China Daily, 6 January 17; Deng Tingting, "In China, the Water You Drink Is as Dangerous as the Air You Breathe," Guardian, 2 June 17; Zheng Jinran, "Water Quality To Be Prioritized," China Daily, 20 December 16; "The Most Neglected Threat to Public Health in China Is Toxic Soil," Economist, 8 June 17.

³ Wang Zihui, "Since the 18th Party Congress, Xi Jinping Has Repeatedly Stressed 'Clear Water and Green Mountains'" [Shiba da yilai, xi jinping fanfu qiangdiao "lu shui qing shan"], Xinhua, 5 June 17; "Xi Calls for Building of Socialist Ecological Civilization," Xinhua, 2 December 16:

⁶Ministry of Environmental Protection, "Bulletin on Strengthening the State of Supervision and Investigation of Air Pollution Prevention in Beijing, Tianjin, Hebei, and Neighboring Areas" (Huanjing baohubu tongbao jing jin ji ji zhoubian diqu daqi wuran fangzhi qianghua du cha qingkuang], 8 June 17; "Inspections Find 70 Pct of Firms Violated Environmental Rules," Xinhua, 11 June 17; Ministry of Environmental Protection, "Bulletin on 2017 First Quarter Air Quality Special Inspection Situation" (Huanjing baohubu tongbao 2017 nian di yi jidu kongqi zhiliang zhuanxiang du cha qingkuang], 30 March 17; Ministry of Environmental Protection, "Bulletin on Strengthening the State of Supervision and Investigation of Air Pollution Prevention in Beijing, Tianjin, Hebei, and Neighboring Areas" (Huanjing baohubu tongbao jing jin ji ji zhoubian diqu daqi wuran fangzhi qianghua du cha qingkuang], 19 April 17; Bibek Bhandari, "Polluting Plants Shut by Officials Found Still in Use," Sixth Tone, 21 April 17.

7 Ning Jun, "For Giving Air Quality Monitoring Equipment 'Facemask,' Chang'an Environmental Protection Bureau Branch Director Among Seven People Sentenced" [Gei kongqi caiyangqi "dai kouzhao" huanbao chang'an fenju juzhang deng 7 ren huoxing], Chinese Business View, 16 June 17; Zhou Dongxu, "Wang Shekun: Falsification of Environmental Protection Data, Air Quality Monitor 'Wearing a Facemask' Is Just the Tip of the Iceberg" [Wang shekun: huanbao shuju zaojia kongqi caiyangqi "dai kouzhao" zhi shi bingshan yijiaol, Caixin, 28 October 16; "China Holds Five Officials Over 'Falsification' of Air Monitoring Data," Radio Free Asia, 27 October 16; Edward Wong and Vanessa Piao, "When China Wants Better Air Readings, Cotton Does the Trick," New York Times, Sinosphere (blog), 28 October 16.

8 "Ministry of Environmental Protection Vice Minister Zhao Yingmin Interprets the "13th Five-Year Plan" for National Eco-Environmental Protection, 6 December 16; Ministry of Environmental Protection, 6 December 16; Ministry of Environmental Protec and Investigation of Air Pollution Prevention in Beijing, Tianjin, Hebei, and Neighboring Areas

10 See, e.g., Chinese Human Rights Defenders, "Earth Day: China Must Protect Human Rights To Effectively Protect the Environment," 20 April 17; "China Jails Environmental Activist for Revealing State Secrets," Radio Free Asia, 11 October 16; "Chinese Environmental Protester Seeks Refuge in Thailand Ahead of Earth Day," Radio Free Asia, 21 April 17.

11 China Digital Times, "Minitrue: Notice on Chengdu Environmental Coverage," 12 December 16; "China Cracke Down on Chengdu Smog Protests, Detains Activists, Muzzles Media," Radio

16; "China Cracks Down on Chengdu Smog Protests, Detains Activists, Muzzles Media," Radio Free Asia, 13 December 16; "Xian Under Security Alert After Thousands Protest Incinerator Plant," Radio Free Asia, 17 October 16.

 $^{12}\,\mathrm{See},$ e.g., China Digital Times, "Minitrue: Delete Report on Causes of Deadly Landslide," 27 June 17; China Digital Times, "Minitrue: Follow Xinhua on Jiuzhaigou Earthquake," 8 Au-

27 June 17; China Digital Times, "Minitrue: Follow Xinhua on Jiuzhaigou Earthquake," 8 August 17.

13 See, e.g., "Xian Under Security Alert After Thousands Protest Incinerator Plant," Radio Free Asia, 17 October 16; Benjamin Haas, "China Riot Police Seal Off City Centre After Smog Protesters Put Masks on Statues," Guardian, 12 December 16.

14 See, e.g., Alex L. Wang, "Explaining Environmental Information Disclosure in China," Social Science Research Network, last visited 15 April 17, 20, 56; Chinese Human Rights Defenders, "Earth Day: China Must Protect Human Rights To Effectively Protect the Environment," 20 April 17.

¹⁵Greenpeace, "Almost Three Quarters of Chinese Cities Yet To Reach Air Quality National Standards," 17 January 17. See also Ministry of Environmental Protection, "2016 Report on Environmental Conditions in China" [2016 nian zhongguo huanjing zhuangkuang gongbao], 31

May 17, 5.

¹⁶ Greenpeace, "China Saw Average PM_{2.5} Levels Fall by 10% in 2015, but 80% of Cities Still Fail To Meet National Air Quality Standards," 20 January 16.

¹⁷ Ministry of Environmental Protection, "MEP Releases the Developments in Water Pollution Control," 27 March 17; Dongmei Han et al., "Deep Challenges for China's War on Water Pollution," Environmental Pollution, Vol. 218 (November 2016), 1223, 1227. The Chinese governments of the child ment's surface water quality standards range from the highest quality rating, Grade I, to the

ment's surface water quality standards range from the highest quality rating, Grade I, to the lowest of Grade VI.

18 Ministry of Environmental Protection, "Ministry of Environmental Protection Bulletin for First Half of 2017 on Water Quality in Every Province (Autonomous Region and Municipality) and Places Where Water Quality Declined" [Huanjing baohubu tongbao 2017 nian shangbannian ge sheng (qu, shi) shuizhi qingkuang he shuizhi xiajiang duanmianl, 14 August 17; "China Reports Uneven Progress in Reducing Water Pollution," Xinhua, 14 August 17. See also Ministry of Environmental Protection, "MEP Releases the Developments in Water Pollution Control," 27 March 17; Dongmei Han et al., "Deep Challenges for China's War on Water Pollution, "Environmental Pollution, Vol. 218 (November 2016), 1223, 1227.

19 Christian Shepherd, "China's Environment Ministry Finds Patchy Progress on Water and Soil Pollution," Reuters, 24 April 17; Matthew Currell, "Deep Challenges: China's 'War on Water Pollution' Must Tackle Deep Groundwater Pollution Pathways," American Geophysical Union, Water Underground (blog), 16 March 17; Greenpeace, "Evaluation of Water Quality Improvement Conditions in Every Province (Autonomous Region and Municipality) of China During the '12th Five-Year Plan'" ["Shi'er wu" qijian zhongguo ge sheng (zizhiqu, zhixiashi) dibiao shui huanjing zhiliang gaishan qingkuang pinggu], May 2017, 35; Deng Tingting, "In China, the Water You Drink Is as Dangerous as the Air You Breathe," Guardian, 2 June 17; Sue-Lin Wong and David Stanway, "China Urges Closer Ties With Non-Government Bodies, Media in War on Water Pollution," Reuters, 21 April 17; Ministry of Environmental Protection, "2016 Report on Environmental Conditions in China" [2016 nian zhongguo huanjing zhuangkuang gongbao], 31 May 17, 5.

water Pollution." Reuters, 21 April 17; Ministry of Environmental Protection, "2016 Report on Environmental Conditions in China" [2016 nian zhongguo huanjing zhuangkuang gongbao], 31 May 17, 5.

20 Die Fang et al., "Mortality Effects Assessment of Ambient PM_{2.5} Pollution in the 74 Leading Cities of China," Science of the Total Environment, Vols. 569–70 (1 November 16), 1551; Alice Yan, "Smog Linked to Third of Deaths in China, Study Finds," South China Morning Post, 22 December 16; Lisa Marshall, "Diesels Pollute More Than Tests Detect; Excess Emissions Kill 38,000 Yearly," CU Boulder Today, 15 May 17.

21 Dongmei Han et al., "Deep Challenges for China's War on Water Pollution," Environmental Pollution, Vol. 218 (November 2016), 1222–23, 1229–30; Matthew Currell, "Deep Challenges: China's War on Water Pollution" Must Tackle Deep Groundwater Pollution Pathways," American Geophysical Union, Water Underground (blog), 16 March 17.

22 "The Most Neglected Threat to Public Health in China Is Toxic Soil," Economist, 8 June 17; Changsheng Qu et al., "China's Soil Pollution Control: Choices and Challenges," Environment Science & Technology, Vol. 50, No. 24 (8 December 16), 13181.

23 Edward Wong, "Pollution Leads to Greater Risk of Dementia Among Older Women, Study Says," New York Times, Sinosphere (blog), 4 February 17; Emily Underwood, "The Polluted Brain," Science Magazine, 26 January 17.

24 Die Fang et al., "Mortality Effects Assessment of Ambient PM_{2.5} Pollution in the 74 Leading Cities of China," Science of the Total Environment, Vols. 569–70 (1 November 16), 1546; Ministry of Environmental Protection, "2016 Report on Environmental Conditions in China" [2016 nian zhongguo huanjing zhuangkuang gongbaol, 31 May 17, 8. See also Edward Wong, "Pollution Leads to Greater Risk of Dementia Among Older Women, Study Says," New York Times, Sinosphere (blog), 4 February 17.

26 Lisa Marshall, "Diesels Pollute More Than Tests Detect; Excess Emissions Kill 38,000 Yearly," CU Boulder Today, 15 May 17.

27 Lisa Marshall, "Di

²⁹ Shen Su'nan et al., Institute of Public & Environmental Affairs, "Blue Sky Roadmap Phase IV: Managing the 'Gap Effect,' "August 2016, 1.
³⁰ Institute of Public & Environmental Affairs, "About IPE," last visited 15 June 17. The Blue Map App can be downloaded from the IPE website at www.ipe.org.cn. Real-time maps of water quality, wastewater, air emissions, and air quality are also available.
³¹ Institute of Public & Environmental Affairs, "Seeking Blue Together: Institute of Public & Environmental Affairs 2016 Annual Report," 19 January 17, 8.
³² Wang Lianzhang, "Government Orders Chinese Air Quality App To Limit Readings," Sixth Tone, 10 January 17.
³³ Michael Lelveld "China Fraud Case Raises Smog Suspicions" Radio Free Asia, 14 Novem-

Environmental Affairs 2016 Annual Report," 19 January 17, 8.

32 Wang Lianzhang, "Government Orders Chinese Air Quality App To Limit Readings," Sixth Tone, 10 January 17.

33 Michael Lelyveld, "China Fraud Case Raises Smog Suspicions," Radio Free Asia, 14 November 16; Jane Li, "Chinese Officials Questioned After Cotton Wool Shoved in Equipment To Monitor Air Pollution: Report," South China Morning Post, 25 October 16; Catherine Lai, "Three Xi'an Officials Detained After Stuffing Cotton Into Air Quality Monitor To Altre Data," Hong Kong Free Press, 26 October 16.

34 Xi'an Intermediate People's Court, "Seven Defendants, Including Li Sen, Openly Sentenced in Two First-Instance Cases of Damaging the Computer Information System" [Beigaoren li sen deng qi ren pohuai jisuanji xinxi xitong yishen liang'an gongkai xuanpan], 16 June 17; "China Court Sentences Seven Over Falsifying Air Quality Data," Xinhua, 16 June 17.

35 Zhao Yusha, "Tianjin Slammed for Air, Water Pollution Coverup," Global Times, 30 July 17. See also Ministry of Environmental Protection, "First Central Environmental Protection Inspection Team Gives Feedback on Inspection Results to Tianjin Municipal Government" [Zhongyang di yi huanjing baohu ducha zu xiang tianjin shi fankui ducha qingkuang], 29 July 17; Zhuang Pinghui, "China's Environment Watchdog Reads Riot Act to Megacity Over Litany of Pollution Failures," South China Morning Post, 31 July 17.

36 Ministry of Environmental Protection, "First Central Environmental Protection Inspection Team Gives Feedback on Inspection Results to Tianjin Municipal Government" [Zhongyang di yi huanjing baohu ducha zu xiang tianjin shi fankui ducha qingkuang], 29 July 17; Zhuang Pinghui, "China's Environmental Watchdog Reads Riot Act to Megacity Over Litany of Pollution Failures," South China Morning Post, 31 July 17. See also Zhao Yusha, "Tianjin Slammed for Air, Water Pollution Coverup," Global Times, 30 July 17.

37 PRC Environmental Protection Law (Environmental Protection Law established the legal framework f

Supreme Court Releases Ten Model Environmental Public Interest Litigation Cases," Vermont Law School, Asia Environmental Governance Blog, 13 March 17.

40 "Supreme People's Court Releases Public Interest Environmental Litigation Model Cases" [Zuigao renmin fayuan fabu huanjing gongyi susong dianxing anli], Xinhua, 7 March 17; Zhang Chun, "Six Important Environmental Cases," China Dialogue, 11 April 17. See also Zhang Yan, "Public Interest Lawsuits To Grow Over Pollution, Food and Drugs," China Daily, 14 March 17. The China Daily article quotes a senior Supreme People's Procuratorate official as saying that a public interest lawsuit by the procuratorate should be "the last resort," and that governmental and non-governmental organizations should be urged to file cases first.

41 Yu Zhuang. "The Challenge of Litigation Costs and Damage Assessment Fees in Environ-

and non-governmental organizations should be urged to file cases first.

41 Yu Zhuang, "The Challenge of Litigation Costs and Damage Assessment Fees in Environmental Public Interest Litigation in China," Comparative Jurist, William & Mary Law School's International and Comparative Law Blog, 13 May 17.

42 See, e.g., Dimitri de Boer and Douglas Whitehead, "Opinion: The Future of Public Interest Litigation in China," China Dialogue, 8 November 16; "How China Is Using the Law To Protect the Environment," Client Earth, 24 October 16.

43 Scott Wilson, "China's NGO Regulations and Uneven Civil Society Development," University of Nottingham, China Policy Institute: Analysis (blog), 15 February 17; Zhang Chun, "Environmental Law Blunted by Crippling Court Costs," China Dialogue, 22 August 16.

44 Shi Yi, "Court Rules Against NGOs in Changzhou Polluted School Case," Sixth Tone, 25 January 17. See also Jiang Xiaoping, "Middle School Moves to New Site as 500 Students Have Health Irregularities, Some Found To Have Leukemia" [Zhongxue ban xinzhi 500 xuesheng shenti yichang gebie chachu baixuebing], CCTV, reprinted in Sina, 17 April 16; Tom Phillips, "China's Toxic School: Officials Struggle To Contain Uproar Over Sick Students," Guardian, 19 April 16; Yu Zhuang, "Friends of Nature (China)'s Fight Against Soil Pollution in China," Vermont Law School, Asia Environmental Governance Blog, 13 May 16.

45 Changzhou Intermediate People's Court, Jiangsu Province, Civil Judgment [Jiangsu sheng changzhou shi zhongji renmin fayuan minshi panjue shul, (2016) Su 04 Min Chu No. 214, 25 January 17, reprinted in China Judgements Online, 27 February 17; Zhang Chun and Tang Damin, "The Changzhou Soil Pollution Case Is Far From Over," China Dialogue, 24 February 17.

17.

46 Changzhou Intermediate People's Court, Jiangsu Province, Civil Judgment [Jiangsu sheng changzhou shi zhongji renmin fayuan minshi panjue shul, (2016) Su 04 Min Chu No. 214, 25 January 17, reprinted in China Judgements Online, 27 February 17; "Changzhou Polluted Soil Environmental Groups Lose Litigation, Plan To Collect Donations for Difficult Sum of 1.89 Million Yuan in Legal Fees" [Changzhou dudi an huanbao zuzhi baisu, nan chengdan 189 wan

lion Yuan in Legal Fees" [Changzhou dudi an huanbao zuzhi baisu, nan chengdan 189 wan susong fei ni mujuan], China Youth Daily, reprinted in Xinhua, 7 February 17.

47 Michael Standaert, "Chinese Ruling Threatens Environmental Public Interest Suits," Bloomberg, 24 February 17.

48 Zhang Chun and Tang Damin, "The Changzhou Soil Pollution Case Is Far From Over," China Dialogue, 24 February 17.

49 See, e.g., "Clashes Flare Amid Mass Incinerator Protests in China's Guangdong," Radio Free Asia, 8 May 17. See also Michael Standaert, "As China Pushes Waste-to-Energy Incinerators, Protests Are Mounting," Yale Environment 360, 20 April 17.

50 PRC Constitution, issued 4 December 82, amended 12 April 88, 29 March 93, 15 March 99, 14 March 04, art. 35.

⁵⁰ PRC Constitution, issued 4 December 82, amended 12 April 88, 29 March 93, 15 March 99, 14 March 04, art. 35.
⁵¹ International Covenant on Civil and Political Rights (ICCPR), adopted by UN General Assembly resolution 2200A (XXI) of 16 December 66, entry into force 23 March 76, arts. 19, 21, 22; United Nations Treaty Collection, Chapter IV, Human Rights, International Covenant on Civil and Political Rights, last visited 10 September 17; State Council Information Office, "National Human Rights Action Plan of China (2016–2020)" [Guojia renquan xingdong jihua (2016–2020 nian)], 29 September 16, sec. 5. China has signed and stated its intent to ratify the ICCPR.
⁵² Universal Declaration of Human Rights, adopted and proclaimed by UN General Assembly resolution 217A (III) of 10 December 48, arts. 19, 20.
⁵³ "Xian Under Security Alert After Thousands Protest Incinerator Plant," Radio Free Asia, 17 October 16; "10,000 in Xi'an Protest Against Construction of Waste Incinerator, Many Are Detained" [Xi'an wan ren kangyi lese fenshao chang jianshe duo ren bei bu], Radio Free Asia, 17 October 16.

17 October 16.

54 Ibid.

55 "Xian Under Security Alert After Thousands Protest Incinerator Plant," Radio Free Asia,

17 October 16.

56 See, e.g., "The Artist Protesters in a Polluted City on Edge," BBC, China Blog, 13 December 16; "China Cracks Down on Chengdu Smog Protests, Detains Activists, Muzzles Media," Radio Free Asia, 13 December 16.

57 "China Cracks Down on Chengdu Smog Protests, Detains Activists, Muzzles Media," Radio

Free Asia, 13 December 16.

Free Asia, 13 December 16.

Sa Rights Defense Network, "Five Gushi County, Henan Province, Villagers Criminally Detained on Suspicion of 'Sabotaging Production and Business Operations' for Protecting Dikes and Defending Fields by Blocking Sand Mining Truck From Mining Sand" [Henan sheng gushi xian wu nongmin wei hudi baotian zuzhi yunsha che yunsha bei yi "pohuai shengchan jingying zui" xingju], 6 October 16; Rights Defense Network, "Gushi County, Henan Province, Police Criminally Detained, Seven People Criminally Detained in Total" [Henan sheng gushi xian jingfang xingju budi baotian wu nongmin bei yingju zhi you yingju er ren gong xingju ginglu 13 October 16.

Detained, Seven People Criminally Detained in Total" [Henan sheng gushi xian jingfang xingju hudi baotian wu nongmin bei xingju zhi you xingju er ren, gong xingju qi ren], 13 October 16. For more information, see the Commission's Political Prisoner Database records 2017-00084 on Xu Jiande, 2017-00085 on Wu De'an, 2017-00087 on Sun Jiaxiu, 2017-00099 on Yu Yunshan, 2017-00091 on Zhang Jinzhi, 2017-00092 on Wu Xiufang, and 2017-00093 on Wu Deqian.

Se Rights Defense Network, "Five Gushi County, Henan Province, Villagers Criminally Detained on Suspicion of 'Sabotaging Production and Business Operations' for Protecting Dikes and Defending Fields by Blocking Sand Mining Truck From Mining Sand" [Henan sheng gushi xian wu nongmin wei hudi baotian zuzhi yunsha che yunsha bei yi "pohuai shengchan jingying zui" xingju], 6 October 16; Rights Defense Network, "Gushi County, Henan Province, Police Criminally Detained Five Villagers for Protecting Dikes and Defending Fields, Two More Criminally Detained, Seven People Criminally Detained in Total" [Henan sheng gushi xian jingfang xingju hudi baotian wu nongmin bei xingju zhi you xingju er ren, gong xingju qi ren], 13 October 16. 60 Ibid. See also Vince Beiser, "Sand Mining: The Global Environmental Crisis You've Probably Never Heard Of," Guardian, 27 February 17.

Se Rights Defense Network, "Gushi County, Henan Province, Public Security Used Brutal Torture Against Rural Rights Advocate Xu Jiande" [Henan sheng gushi xian gong'an shiyong canbao kuxing zhemo weiquan nongmin xu jiande], 19 March 17.

Se "For Exposing Pollution Data, Environmental Protection NGO Director Liu Shu Detained" [Pilu wuran shuju huanbao NGO fuzeren liu shu bei bu], Radio Free Asia, 11 October 16; "Changsha Environmental Activist for 'Revealing State Secrets,'" Radio Free Asia, 11 October 16; "Changsha Environmental Public Interest Figure Liu Shu Accused of 'Disclosing State Sevents' Detained by Delian' (Changsha Environmental Public Interest Figure Liu Shu Accused of 'Disclosing State Sevents' Detained

"China Jails Environmental Activist for 'Revealing State Secrets,'" Radio Free Asia, 11 October 16; "Changsha Environmental Public Interest Figure Liu Shu Accused of 'Disclosing State Secrets,' Detained by Police' [Changsha huanbao gongyi renshi liu shu bei zhi "xielou guojia mimi" zao jingfang juliul, Radio Free Asia, 11 October 16. For more information on Liu Shu, see the Commission's Political Prisoner Database record 2016-00451.

63 "For Exposing Pollution Data, Environmental Protection NGO Director Liu Shu Detained' [Pilu wuran shuju huanbao NGO fuzeren liu shu bei bul, Radio Free Asia, 11 October 16; "China Jails Environmental Activist for 'Revealing State Secrets,'" Radio Free Asia, 11 October 16; "Changsha Environmental Public Interest Figure Liu Shu Accused of 'Disclosing State Secrets,' Detained by Police' [Changsha huanbao gongyi renshi liu shu bei zhi "xielou guojia mimi" zao jingfang juliul, Radio Free Asia, 11 October 16.

65 Zhou Tailai and Li Rongde "Environmental Activist Convicted of Blackmailing Oil Cient

65 Zhou Tailai and Li Rongde, "Environmental Activist Convicted of Blackmailing Oil Giant Has Sentence Commuted," Caixin, 28 June 17. See also Love Is One Hundred Over Zero (Ai shi yibai bi ling), "March 1, International Spotted Seal Day. China's Number 1 Protector of Spotsnı yıbaı bı ınıg), "March 1, International Spotted Seal Day. China's Number 1 Protector of Spotted Seals—Tian Jiguang, Remains in Prison!" [3 yue 1 ri, guoji haibao ri. zhongguo ban haibao baohu di yi ren—tian jiguang, reng zai jianyu zhong!], Weibo post, 1 March 17, 3:13 p.m.; Liu Ji, "Environmentalist Tian Jiguang's Extortion Conviction Rescinded: Original Verdict Had Unclear Facts and Violated Procedures" [Huanbao renshi tian jiguang qiaozha an youzui panjue bei chexiao: yuanpan shishi bu qing weifan chengxu], The Paper, 12 August 16. 67 Zhou Tailai and Li Rongde, "Environmental Activist Convicted of Blackmailing Oil Giant Has Sentence Commuted," Caixin, 28 June 17; Love Is One Hundred Over Zero (Ai shi yibai bi ling), "March 1, International Spotted Seal Day. China's Number 1 Protector of Spotted Seals—Tian Jiguang, Remains in Prison!" [3 yue 1 ri, guoji haibao ri. zhongguo ban haibao baohu di yi ren—tian jiguang, reng zai jianyu zhong'l, Weibo post, 1 March 17, 3:13 p.m. For more information on Tian Jiguang, see the Commission's Political Prisoner Database record 2016-00452. See also Yaxue Cao, "12 Years in Prison for Trying To Protect Spotted Seals," China Change, 16 November 15; Bureau of Democracy, Human Rights, and Labor, U.S. Department of State, "Country Reports on Human Rights Practices for 2015—China (Includes Tibet, Hong Kong, and Macau)," 13 April 16, 48; Guo Rui, "Retrial for the Number One 'Protector of Spotted Seals,' Tian Jiguang, First Instance Sentence of 12 Years Shocked Environmental World" ["Baohu ban haibo" di yi ren tian jiguang an zaishen yishen bei pan 12 nian zhenjing huanbao jiel, Phoenix Net, 29 April 16.

68 Yaxue Cao, "12 Years in Prison for Trying To Protect Spotted Seals," China Change, 16 November 15; Bureau of Democracy, Human Rights, and Labor, U.S. Department of State, "Country Reports on Human Rights Practices for 2015—China (Includes Tibet, Hong Kong, and Macau)," 13 April 16, 48; Guo Rui, "Retrial for the Number One 'Protector of Spotted Seals,' Tian Jiguang, First Instance Sentence of 12 Years Shocked Environmental World" ["Baohu ban haibo" di yi ren tian jiguang an zaishen yishen bei pan 12 nian zhenjing huanbao jiel, Phoenix Net, 29 April 16.

69 PRO Environmental Protection Tay Law [Thonghua ronming generous huanjing hachu shui

haibo" di yi 'en tian jiguang an zaishen yishen bei pan 12 nian zhenjing huanbao jiel, Phoenix Net, 29 April 16.

⁶⁹ PRC Environmental Protection Tax Law [Zhonghua renmin gongheguo huanjing baohu shui fal, passed 25 December 16, effective 1 January 18; "China Focus: China To Introduce Environmental Tax for Enhanced Pollution Control," Xinhua, 25 December 16.

⁷⁰ PRC Environmental Protection Tax Law [Zhonghua renmin gongheguo huanjing baohu shui fal, passed 25 December 16, effective 1 January 18, art. 28.

⁷¹ Ibid., arts. 14–15; Laney Zhang, Law Library of Congress, "China: New Law Replacing Pollution Discharge Fee With Environmental Protection Tax." Library of Congress, Global Legal Monitor, 8 February 17. See also "China Pins Hopes on Taxation for Environmental Protection," Xinhua, 9 December 16.

⁷² National Development and Reform Commission, Measures for the Administration of Stand-

⁷²National Development and Reform Commission, Measures for the Administration of Standards for Levying Pollutant Discharge Fees [Paiwu fei zhengshou biaozhun guanli banfa], issued 28 February 03, effective 1 July 03, art. 3; Laney Zhang, Law Library of Congress, "China: New Law Replacing Pollution Discharge Fee With Environmental Protection Tax," Library of Congress, Global Legal Monitor, 8 February 17.

73 Shen Jinzhong, "Legal: Environmental Protection Tax Law Reforms," American Chamber of Congress in China. 12 April 17. "China Law and Palica (February 2017) New Taxos Tay Shen Taxos Tay Shen Tayos T

"Sneh Jinzhong, Legal: Environmental Protection 1ax Law Reforms, American Chamber of Commerce in China, 13 April 17; "China Law and Policy (February 2017): New Taxes To Support Environmental Protection in China," O'Melveny and Meyers LLP, 7 February 17. See also Owen Haacke, US-China Business Council, "Navigating the Haze of Environmental Compliance," China Business Review, 7 April 17; Scott Daniel Silverman and Danian Zhang, "China Issues Environmental Protection Tax Law," Baker McKenzie, 6 January 17.

⁷⁴PRC Wildlife Protection Law [Zhonghua renmin gongheguo yesheng dongwu baohu fal, passed 8 November 88, amended 28 August 04, 27 August 09, 2 July 16, effective 1 January

74 PRC Wildlife Protection Law | Zhonghua renmin gongheguo yesneng oongwu oaonu 121, passed 8 November 88, amended 28 August 04, 27 August 09, 2 July 16, effective 1 January 17, art. 58.

75 Environmental Investigation Agency, "China's Revised Wildlife Protection Law: Concerns and Opportunities," 3 March 17. According to the Environmental Investigation Agency, "There are an estimated 5,000–6,000 captive tigers held in more than 200 facilities in China, many of which are linked to trade in tiger parts and derivatives..."

76 "China's Top Legislature Schedules Bi-Monthly Session," Xinhua, 15 June 17.

77 National People's Congress Standing Committee, Decision on Amending the "PRC Water Pollution Prevention and Control Law" [Quanguo renmin daibiao dahui changwu weiyuanhui guanyu xiugai "zhonghua renmin gongheguo shui wuran fangzhi fa' de juedingl, 27 June 17. See also "China Considers Draft Revisions To Curb Water Pollution," Xinhua, 19 December 16.

78 Zheng Jinran, "Water Law Approved With 'Chief' System," China Daily, 28 June 17; PRC Water Pollution Prevention and Control Law [Zhonghua renmin gongheguo shui wuran fangzhi fa], passed 11 May 84, amended 15 May 96, 28 February 08, 27 June 17, effective 1 January 18, art. 5. See also Wu Wei, "What Is the Evaluation System Under 'River Chief System?' Huairou Uses Monthly 'Point System'" ["Hezhang zhi" zenme kaohe? huairou an yue "da fen"], Beijing News, 12 August 17.

79 Supreme People's Court and Supreme People's Procuratorate, Interpretation of Certain Issues Concerning the Application of Law in Handling Environmental Crimes [Zuigao renmin fayuan zuigao renmin jianchayuan guanyu banli huanjing wuran xingshi anjian shiyong falu ruogan wenti de jieshil, issued 23 December 16, effective 1 January 17, reprinted in Sina, 26 December 16, arts. 1(8), 1(9), 3(5), 17; "Press Conference on the Release of the 'Supreme People's Court, Supreme People's Procuratorate Interpretation of Certain Issues Concerning the Application of Lewins "Genavus unique of memin fayuan zuigao ren December 16, arts. 1(8), 1(9), 3(5), 17; 'Press Conference on the Release of the 'Supreme People's Court, Supreme People's Procuratoriate Interpretation of Certain Issues Concerning the Application of Law in Handling Environmental Crimes'" [Guanyu juban "zuigao renmin fayuan zuigao renmin jianchayuan guanyu banli huanjing wuran xingshi anjian shiyong falu ruogan wenti de jieshi" xinwen fabuhuil, Supreme People's Court, 26 December 16; PRC Criminal Law [Zhonghua renmin gongheguo xing fal, passed 1 July 79, amended 14 March 97, effective 1 October 97, amended 25 December 99, 31 August 01, 29 December 01, 28 December 02, 28 February 18, 29 August 15, official Novomber 15, art 29 June 06, 28 February 09, 25 February 11, 29 August 15, effective 1 November 15, art.

80 Supreme People's Court and Supreme People's Procuratorate, Interpretation of Certain Issues Concerning the Application of Law in Handling Environmental Crimes [Zuigao renmin fayuan zuigao renmin jianchayuan guanyu banli huanjing wuran xingshi anjian shiyong falu ruogan wenti de jieshil, issued 23 December 16, effective 1 January 17, reprinted in Sina, 26 December 16, art. 17. See also Paul Davies and Andrew Westgate, "China Focuses on Criminal Enforcement of Environmental Laws," Latham and Watkins LLP, 12 January 17; PRC Criminal Law [Zhonghua renmin gongheguo xing fa], passed 1 July 79, amended 14 March 97, effective

1 October 97, amended 25 December 99, 31 August 01, 29 December 01, 28 December 02, 28 February 05, 29 June 06, 28 February 09, 25 February 11, 29 August 15, effective 1 November 15, art. 338.

S1 Supreme People's Court and Supreme People's Procuratorate, Interpretation of Certain Issues Concerning the Application of Law in Handling Environmental Crimes [Zuigao renmin jianchayuan guanyu banli huanjing wuran xingshi anjian shiyong falu ruogan wenti de jieshil, issued 23 December 16, effective 1 January 17, reprinted in Sina, 26 December 16, art. 1(8); PRC Criminal Law [Zhonghua renmin gongheguo xing fal, passed 1 July 79, amended 14 March 97, effective 1 October 97, amended 25 December 99, 31 August 01, 29 December 01, 28 December 02, 28 February 05, 29 June 06, 28 February 09, 25 February 11, 29 August 15, effective 1 November 15, art. 338; "Press Conference on the Release of the 'Supreme People's Court, Supreme People's Procuratorate Interpretation of Certain Issues Concerning the Application of Law in Handling Environmental Crimes' "[Guanyu juban "zuigao renmin fayuan zuigao renmin jianchayuan guanyu banli huanjing wuran xingshi anjian shiyong

cerning the Application of Law in Handling Environmental Crimes'" [Guanyu juban "zuigao renmin fayuan zuigao renmin jianchayuan guanyu banli huanjing wuran xingshi anjian shiyong falu ruogan wenti de jieshi" xinwen fabuhui], Supreme People's Court, 26 December 16.

82 "Press Conference on the Release of the 'Supreme People's Court, Supreme People's Procuratorate Interpretation of Certain Issues Concerning the Application of Law in Handling Environmental Crimes'" [Guanyu juban "zuigao renmin fayuan zuigao renmin jianchayuan guanyu banli huanjing wuran xingshi anjian shiyong falu ruogan wenti de jieshi" xinwen fabuhui], Supreme People's Court, 26 December 16; Cao Yin and Zheng Jinran, "Court Applies Criminal Law to Data Fraud," China Daily, 27 December 17; Paul Davies and Andrew Westgate, "China Focuses on Criminal Enforcement of Environmental Laws," Latham and Watkins LLP, 12 January 17.

12 January 17.

83 National Development and Reform Commission, "'13th Five-Year' Energy Development

Plan' [Nengyuan fazhan "shisan wu" guihua], issued December 2016.

84 National People's Congress and Chinese People's Political Consultative Conference, PRC Outline of the 13th Five-Year Plan on National Economic and Social Development [Zhonghua] renmin gongheguo guomin jingji he shehui fazhan di shisan ge wunian guihua gongyao], issued 17 March 16, chap. 3. Ten of the 25 targets were related to resources or the environment and all of them were mandatory. See also Katherine Koleski, U.S.-China Economic and Security Review Commission, "The 13th Five-Year Plan," 14 February 17, 3, 15–19; Xiao Tang et al., "Mandatory Targets and Environmental Performance: An Analysis Based on Regression Discontinuity Design," Sustainability, Vol. 8, No. 931 (2016), 14.

Design," Sustainability, Vol. 8, No. 931 (2016), 14.

Strational Development and Reform Commission, "'13th Five-Year' Energy Development Plan" [Nengyuan fazhan "shisan wu" guihua], issued December 2016, 15; Alvin Lin, "Understanding China's New Mandatory 58% Coal Gap Target," Natural Resources Defense Council, Experts Blog, 17 March 17.

Natural Resources Defense Council, Experts Blog, 17 March 17.

Natural Resources Defense Council, Experts Blog, 17 March 17.

Natural Resources Defense Council, Experts Blog, 17 March 17.

Natural Resources Defense Council, Experts Blog, 17 March 17.

Natural Resources Defense Council, Experts Blog, 17 March 17.

Natural Resources Defense Council, Experts Blog, 17 March 17.

Natural Resources Defense Council, Experts Blog, 18 March 18.

Natural Resources Defense Council, Experts Blog, 18 March 18.

Natural Resources Defense Council, Experts Blog, 17 March 18.

Natural Resources Defense Council, Experts Blog, 17 March 18.

Natural Resources Defense Council, Experts Blog, 17 March 17.

Natural Resources Defense Council, Experts Blog, 17 March 17.

Natural Resources Defense Council, Experts Blog, 17 March 17.

Natural Resources Development Plan (2016–2020)" [Dianli fazhan "shisan wu" guihua (2016–2020 nian)], issued 7 November 16, 13; Meng Meng, "China To Cap Coal at 55 Percent of Total Power Output by 2020: NEA," Reuters, 7 November 16.

Natural Resources Defense Council, Experts Blog, 17 March 17.

Natural Resources Development Plan (2016–2020)" [Dianli fazhan "shisan wu" guihua (2016–2020 nian)], issued 7 November 16, 13; Meng Meng, "China To Cap Coal at 55 Percent of Total Power Output by 2020: NEA," Reuters, 7 November 16.

Natural Resources Development Plan (2016–2020)" [Dianli fazhan "shisan wu" guihua (2016–2020) [Dianli fazhan "shisan wu" guihua