
Green Economy in China

October 2019



Special thanks to EnviroVest for their contributions

This report provides environment-related market research, policy and regulatory developments and enforcement actions at the national and local levels in China from 2008 to 2019.

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Part I. Environment Protection Regulation and Policy Milestones in China

Highlight

1. Ecological Civilization Building Vital to Sustain China's Economic Development

The environmental supervision will be normalized, and the implementation will be increasingly refined

- Focus is on strengthening pollution source management and recycling, and the value concept is changing
- Attention on sanitation, hazardous waste, environmental supervision, water and soil pollution control and industrial pollution control

2. Significant Regulations and Policies Milestones in China from 2008-2019

- **2008-2012: Establishing the Ministry of Environmental Protection (MEP)**
cultivating fundamental laws and regulation for environment protection.ⁱ
In March 2018, the MEP changed name to the **Ministry of Ecology and Environment.**ⁱⁱ(MEE)
- **2012-2015: Environmental Law & Regulation Framework Completion**
China promulgated significant milestone laws and regulations since 2012, including the Air Ten, the Water Ten, and the New Environmental Law, and was resolute to tackle the problems head-on.
 - 1) In 2012, the Ministry of Environmental Protection, the National Development and Reform Commission, the Ministry of Industry and Information Technology and the Ministry of Health jointly issued the **"12th Five-Year Plan for the Prevention and Control of Hazardous Waste Pollution"**, which was considered a kick-off move of central government's battle on environmental protection in China.

During the "Twelfth Five-Year Plan" period, the Ministry of Environmental Protection continued to improve laws and regulations with corresponding government departments. The administration paid close attention to law enforcement supervision, strictly investigated accountability, strengthened target responsibility assessment, and comprehensively improved the level of prevention and control of hazardous waste pollution in China.ⁱⁱⁱ

2) In 2013

- ***Air Pollution Prevention and Control Action Plan (Air Ten Action)***, the law to regulate the air protection was promulgated.^{iv}
- ***The announcement from the Supreme People's Court and the Supreme People's Court of Prosecution on Several Issues Concerning the Application of Laws in Handling Criminal Cases in Environmental Pollution*** was implemented.

This marked the first and most important recent highest court interpretation of environmental pollution penalty.

"Illegal discharge, dumping, and disposal of hazardous wastes of 3 tons or more" constitutes a violation of Article 383 of the Criminal Law and is considered a serious crime of polluting the environment, and would result in imprisonment of less than three years or criminal detention, with a fine or a single penalty; longer term if the consequences are particularly serious.

3) In 2015

- ***Law of the People's Republic of China on Prevention and Control of Environmental Pollution (New Environment Protection Law)***, arguably the strictest environmental law in the world, was enacted in January 2015.

- The government's environmental agencies will be allowed to enforce strict penalties and seize property of illegal polluters.
 - Companies that break the law will be "named and shamed", with company executives subject to prison sentences of 15 days.
 - There will be no upper limit on fines.
 - ***Water Pollution Prevention and Control Action Plan (Water Ten Action)*** was issued to regulate water protection.
- **2016-2019: Environmental Regulation Strengthening Execution**
- 1) In 2016 Environmental Protection was included as one of the government's top priorities for the 13th Five-Year Plan spanning from 2016 through 2020.^v
 - January 2016, the Central Environmental Protection Inspector Move was launched to exam the environmental problem from all over China.
 - June 2016, the *new version of the National Hazardous Wastes List*, was released. It adjusted the total hazardous wastes categories from 49 to 46, but with 478 items (an additional 117 new items), and added a list to promote higher standard on hazardous waste treatment and risk control.
 - October 2016, the Ministry of Environmental Protection revised some of the provisions of the ***"Guidelines for the Review and Licensing of Hazardous Waste Business Units"***, which further constrained the application and approval of operation permits for hazardous waste treatment projects during the trial production period.
 - The State Council issued the ***"13th Five-Year Plan for Ecological Environmental Protection"***, effective November 24, 2016. The "Plan" proposed to deepen quality management, implement the three major

Action Plans of the Air, Water and Soil, and called for the construction of the three major pollution prevention detailed action plans.

2) In 2017

Given the pressure from environmental protection inspectors, the tailwind for environmental services and protection industry has continued to grow. The elevated price of violation has forced companies that produced industrial waste to pay qualified licensed waste treatment companies to dispose of the wastes properly, effectively promoting the hazardous waste treatment industry.

- From 2016 to 2017, the Inspector has completed a full coverage of 31 provinces across the country.
- April 27, 2017, the Ministry of Environmental Protection formulated the ***“13th Five-Year Plan for the Supervision and Assessment of the National Hazardous Waste Standardization Management”***.
- On September 10, 2017, the General Office of the State Council issued a ***“Second National Pollution Sources General Survey Plan (the Survey Plan)”***.

The Survey Plan is a major national investigation on environmental protection results. The Survey Plan is of great significance in an effort to understand the current environmental pollution situation in China, and to formulate and implement environmental protection policies and plans.

- November 2017, the Law Enforcement Inspection Group of the Standing Committee of the National People's Congress issued a ***Report on the Inspection of the Implementation of the NEW Environment Protection Law***. The release of this report further demonstrates the nation's laser focus on hazardous waste treatment and emissions management.

3) In 2018

- **“Waste Clearance Campaign 2018”** [“清废行动 2018”] was launched and it required authorities of all levels in the country to urge industrial companies to clean up all untreated wastes. The aim of Waste Clearance 2018 is to remediate all untreated solid wastes, especially hazardous wastes that have been accumulated over the years. MEE released information on identified violations, sources of the wastes involved, administrative penalties, as well as result of accountability investigation on the local officials, and made public announcement on local media and newspapers.

As a result of the campaign, the overall capacity for hazardous waste treatment was improved significantly. ^{vi}

- The Twenty-fifth Meeting of the Standing Committee of the 12th National People's Congress passed the **“Environmental Protection Tax Law of the People's Republic of China”**, effective January 1, 2018. It is the first tax law after the implementation of the statutory principle of taxation, in which taxation replaces sewage charges.

4) In 2019

- January 1st, 2019, **the Law on the Prevention and Control of Soil Pollution (Soil Ten Action)** was taken into effect to regulate the soil protection. By now, the environmental regulation purview is complete as air, water and soil are covered. The Chinese government has empowered environment-related authorities to control and standardize the country’s environment protection.

As part of its **“war on pollution”**, the issuance of the new law is a major step in China’s creation of a comprehensive legal system in preventing and

cleaning up soil pollution. It also creates new obligations, and potential liabilities, for land use right holders and manufacturers and operators in China.

- In January 2019, the General Office of the State Council issued the ***Pilot Work Plan for the Construction of “No Waste Cities.”*** On April 30 of the same year, the Ministry of Ecology and Environment announced 11 pilot projects for the construction of "No Waste Cities".
- In April 2019, the Ministry of Ecology and Environment launched ***“Waste Clearance Campaign 2019”***, with a focus on 11 provinces and 126 cities in the Yangtze River Economic Belt, aiming at establishing a long-term mechanism for solid waste regulation and providing a strong support for the ecological environment in areas along the Yangtze River.

Part II. Opportunities for Italian Companies

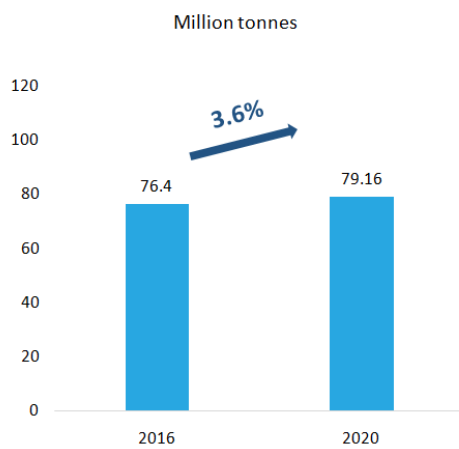
Highlight

1. China Market for Waste Management Continue to Increase

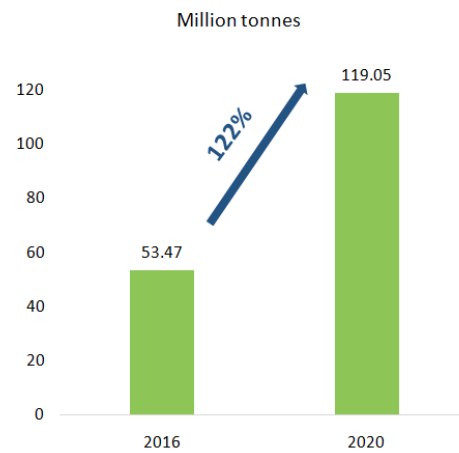
➤ Hazardous Waste

- China's market has entered a stage of high-speed growth, with forecasted growth between 2016 and 2020 to be 122%.^{vii}

EU Hazardous Waste Output Forecast

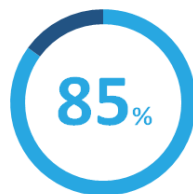


China Hazardous Waste Output Forecast

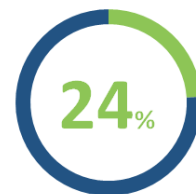


- China's treatment rate is much lower than EU^{viii}

EU 2016 Average treatment rate



China 2016 Average treatment rate



➤ Non-Hazardous Waste

- Waste annual increase 10 billion tons
- Historically stock up to 60-70 billion tons

➤ Soil Remediation

Soil remediation industry in China is still in the initial stage of growth. Compared with the 40 years' development in Europe, China's soil remediation technologies started late and is still an emerging industry.

Types of contaminated areas required soil remediation in China mainly include:

- Contaminated areas of industrial site: 130,000 hectares^{ix}
- Contaminated areas of mine land: 200,000 hectares^{ix}
- Contaminated areas of agriculture land: 26 million hectares^{ix}

With the implementation of the soil law and the gradual standardization of the industrial system, the demand for soil remediation projects is expected to increase and the market space is broad.

➤ **River Recovery**

- Treatment to clean polluted rivers
- Eco-friendly sustainable technology for dredging
- Coastal area recovery

➤ **Renewable Energy**

- Enhancing the natural energy resources is fundamental to promote the development strategies of renewable energies and to increase energy supply security, reducing greenhouse gas emissions.

➤ **Soil Remediation**

Soil remediation is the most challenging among the environmental protection issues. Italy outstands in several decontamination technologies and provides solutions that are specifically tuned to each pollutant in contaminated soil.

Part III. Overview on Environmental Investments, Employee, R&D and Patents in China

China Investments in Environmental Protection Industry* (currency units: 100 million RMB)

	100mIn RMB									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total investment in environmental pollution control	4,937.03	5,258.39	7,612.19	7,114.03	8,253.46	9,037.20	9,575.50	8,806.30	9,219.80	9,538.95
National fiscal environmental protection expenditure	1,451.36	1,934.04	2,441.98	2,640.98	2,963.46	3,435.15	3,815.60	4,802.89	4,734.80	5,617.33
Fixed asset investments in water conservancy, environment and public facilities management	13,534.30	19,874.40	24,827.60	245,231.00	29,621.60	37,663.90	46,225.00	55,679.60	68,647.60	82,106.10
Additional fixed assets investment in water conservancy,	6,122.10	9,361.20	11,959.60	15,238.40	17,571.80	23,344.20	32,390.20	41,168.50	41,096.90	50,218.00

environment and public facilities management										
Employment of urban units in water conservancy, environment and public facilities management (10,000 people)	197.30	205.70	218.90	230.30	243.80	259.20	269.10	273.30	269.60	268.50

Part IV. Chinese Institutions Reference

Institution Names	Website
Ministry of Ecology and Environment of the People's Republic of China	http://www.mee.gov.cn
Chinese Society for Environment Sciences	http://www.chinaces.org
International Ecological Economy Promotion Association	http://www.ieepa.org
China Energy Conservation Association (CECA)	http://www.cecaweb.org.cn
China Strategic Emerging Industry Environmental Protection Alliance	http://www.envirunion.com
China Information Industry Network (CIIN)	http://www.chyxx.com
Jiangsu Academy of Environmental Sciences	http://www.jsaes.com
School of Environmental and Biological Engineering, Nanjing University of Science and Technology	http://ebe.njust.edu.cn
Guanghua School of Management, Peking University	http://http://www.gsm.pku.edu.cn
E20 institute of Environment Industry	http://www.h2o-china.com

Part V. Major Events in China in Environmental Services Sector

Name of expo	Website	Period/time
IE Expo Guangzhou	http://gz.ie-expo.com/	September 2019 Guangzhou
Environmental protection technology & equipment show	http://www.ciif-expo.com/plus/list.php?tid=40	September 2020 Shanghai
China guangzhou international environmental protection industry expo (CPIEE)	http://www.bochang.net/hbz/	May 2020 Guangzhou
China international circular economy exhibition	http://wx.chinacace.org/pc2019/index.html	October 2019 Nanjing
2019 China (Chengdu) Environmental Protection Expo	https://www.cdepe.com/pages-1-40.html	March 2019 Chengdu
China International Environmental Protection Exhibition & Conference	http://www.chinaenvironment.org/en.htm	June 2019 Beijing
Clean Energy Expo China 2019	http://www.ceecintl.cn/	September 2019 Hangzhou
Watertech China (Guangdong)2020	http://www.watertechgd.com/en/	March 2020 Guangzhou
AVAI CHINA	http://www.avaichina.com/alone/alone.php?id=54	August 2019 Guangzhou
Chengdu Environmental Protection Expo (CDEPE)	https://en.ecomondo.com/worldwide/cdepe-expo	March 2020 Chengdu

Part VI. Acknowledgement and Disclaimer

Italian Trade Agency Guangzhou Office is the Governmental agency that supports the business development of Italian companies in the South of China (Guangdong, Guangxi, Guizhou, Hainan, Hunan and Yunnan). ITA provides information, assistance, consulting to Italian and foreign companies helping Italian enterprises to expand overseas and connecting with prospective partner.

EnviroVest is an environmental services company with a focus on industrial waste treatment and remediation in China. With a global network specialized in hazardous waste treatment, waste water treatment, and soil remediation technologies, the company and its team have accumulated decades experience in international environmental services business. Its hazardous waste treatment facility in East China, has been set as the industry benchmark in China.

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<https://baike.so.com/doc/5374218-5610237.html>

¹ <http://www.mee.gov.cn>

¹ <https://www.cnki.net>

¹ <https://baike.so.com/doc/5374218-5610237.html>

¹ <https://wenku.baidu.com/view/aff4d13be418964bcf84b9d528ea81c758f52edc.html>

¹ http://www.gov.cn/xinwen/2018-05/18/content_5291795.htm

¹ Estimated amount of hazardous waste generated by China in 2020 to be 119.05 million tons, using the “13th Five-Year Plan” for hazardous waste disposal plans introduced by the central and local governments

¹ Eurostat

¹ “Soil Remediation Industry Market Prospects and Investment Strategy Planning Analysis Report” by 前瞻产业研究院

¹ National Bureau of Statistics

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