



2018

**Report on the State of the
Ecology and Environment in China**

Ministry of Ecology and Environment,
the People's Republic of China

Summary

The year 2018 was a milestone in the history of China's ecological environmental protection cause. In 2018, CPC Party General Secretary Xi Jinping attended the National Conference on Ecological and Environmental Protection in Beijing and delivered an important speech, officially establishing Xi Jinping Thought on Ecological Civilization. The Central Committee of the Communist Party of China (CPC) and the State Council jointly issued the *Opinions on Comprehensively Strengthening Ecological and Environmental Protection and Resolutely Fighting the Tough Battle of Pollution Prevention and Control*, and explicitly identified the roadmap, work breakdown and timetable for the battle. In 2018, the Constitutional Amendment was passed at the First Session of the 13th National People's Congress (NPC) to incorporate the "new development philosophy", "ecological civilization" and "building a beautiful China" into the Constitution. The Fourth Session of the Standing Committee of the 13th National People's Congress made a resolution on comprehensively strengthening eco-environmental protection and lawfully fighting the tough battle of pollution prevention and control. The Third Session of the Standing Committee of the 13th National Committee of the Chinese People's Political Consultative Conference discussed the challenges facing pollution prevention and control and proposed solution recommendations accordingly. The Ministry of Ecology and Environment, established following the national institutional reform, is responsible for supervising various types of pollutant discharge and law enforcement in both urban and rural areas. Meanwhile, law enforcement teams for eco-environmental protection were established to enhance the consistency, independency, authority and efficiency of law enforcement.

Guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, various localities and departments have put into action the spirits embodied in the 19th National Congress of the CPC, the Second and Third Plenary Session of the 19th CPC Central Committee, Xi Jinping Thought on Ecological Civilization and the National Conference on Ecological and Environmental Protection and earnestly implemented the major policies and plans of the CPC Central Committee and the State Council. Focusing on improving ecological and environmental quality, various localities and departments have steadily sought progress, made overall plans and taken all factors into consideration, carried out integrated measures with coordinated efforts and marched forward with steady and solid steps in a pragmatic and orderly way. As a result, the battle against pollution got off to a good start.

nonattainment days was 45.7%; 31.0% of which were of slight pollution, 9.4% of intermediate pollution, 4.2% of heavy pollution and 1.1% of very heavy pollution. The attainment rate was within the range of 50~80% for 6 cities and less than 50% for 5 cities. Among the nonattainment days, the number

of days with PM_{2.5}, O₃, PM₁₀, NO₂ and SO₂ as the primary pollutants took up 44.7%, 36.4%, 18.7%, 0.5% and 0.2% respectively. There was no occurrence of nonattainment days with CO as the primary pollutant.

Change of average concentration of primary pollutants in Fenwei Plain in 2018

Region	Indicator	Average concentration (CO: mg/m ³ , others: μg/m ³)	Change compared with that of 2017 (%)
Fenwei Plain	PM _{2.5}	58	-10.8
	PM ₁₀	106	-7.0
	O ₃	180	-2.7
	SO ₂	24	-36.8
	NO ₂	43	-4.4
	CO	2.3	-14.8

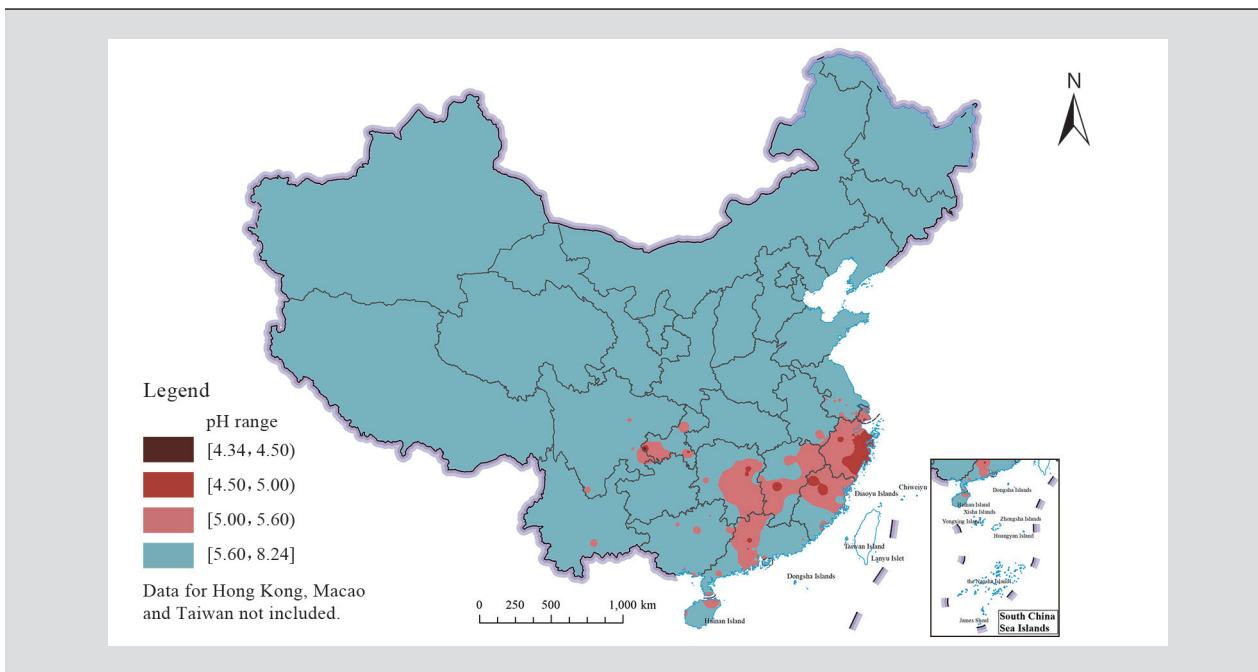
Straw burning In 2018, satellite remote sensing monitored a total of 7,647 straw burning points in the country (excluding fire point information under cloud cover), mainly distributed in Heilongjiang, Jilin, Inner Mongolia, Shanxi, Hebei and Liaoning. The number of fire points was 3,340 fewer than that in 2017.

Acid Rain

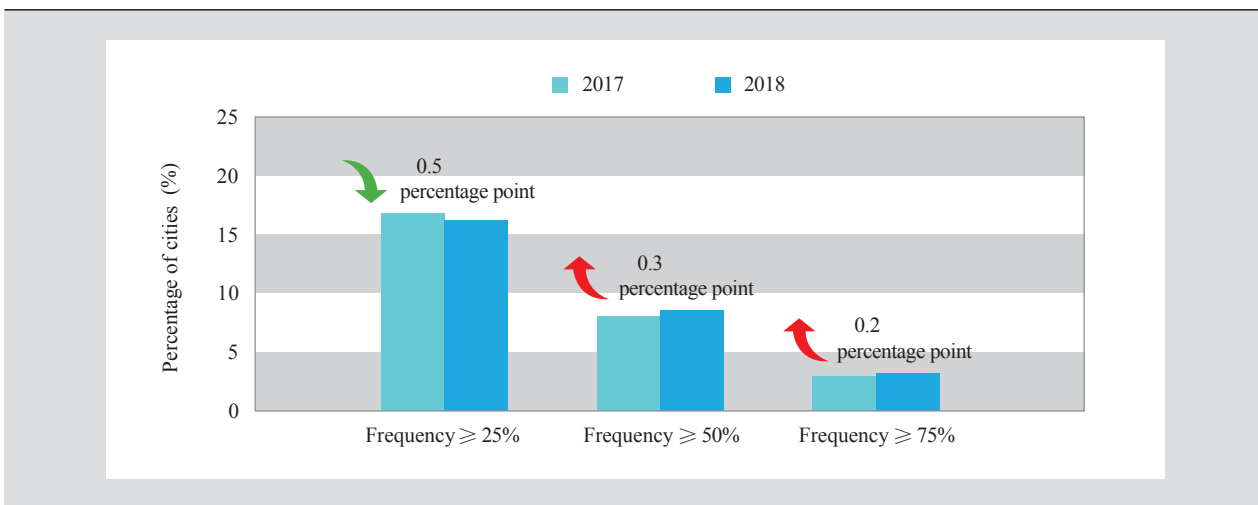
Acid rain distribution In 2018, the total area covered by acid rain was about 530,000 km², taking up 5.5% of total land area of China, down by 0.9 percentage point compared with

that of 2017. Among them, the percentage of land area with relatively serious acid rain was 0.6%. Acid rain was mainly distributed in the region south to the Yangtze River and east to Yunnan-Guizhou Plateau, mainly including Zhejiang, most of Shanghai, northern part of Fujian, central part of Jiangxi, central and eastern part of Hunan, central part of Guangdong and southern part of Chongqing.

Acid rain frequency In 2018, the average acid rain frequency of 471 cities (districts or counties) under precipitation monitoring was 10.5%, down by 0.3 percentage point compared with that of 2017. The rate of cities with acid rain occurrence was 37.6%, up by 1.5 percentage points compared with that of 2017. The percentage of cities with acid rain frequency over 25%, 50% and 75% was 16.3%, 8.3% and 3.0% respectively.



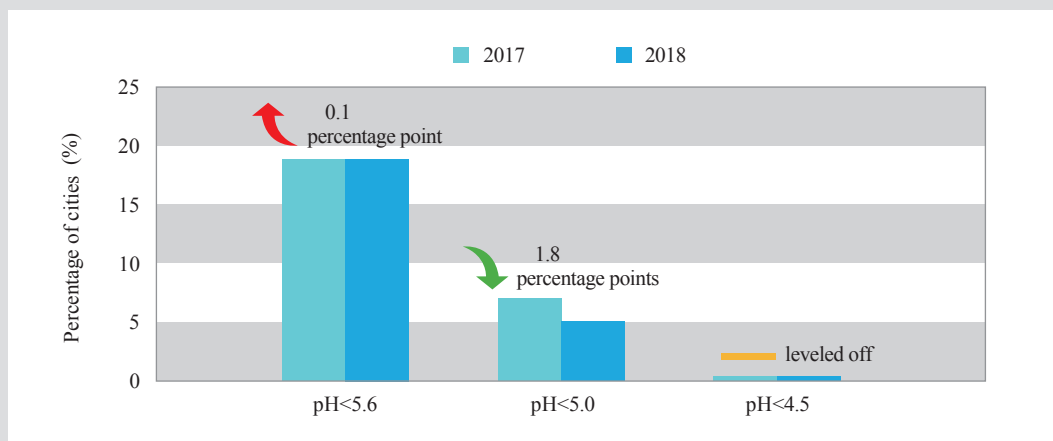
The isoline of annual pH value of precipitation in China in 2018



Interannual comparison of the percentage of cities with different acid rain frequency in 2018

Precipitation acidity In 2018, the annual average pH value of precipitation across the country was 4.34 (Dazu district in Chongqing) ~8.24 (Kashgar, Xinjiang) with an

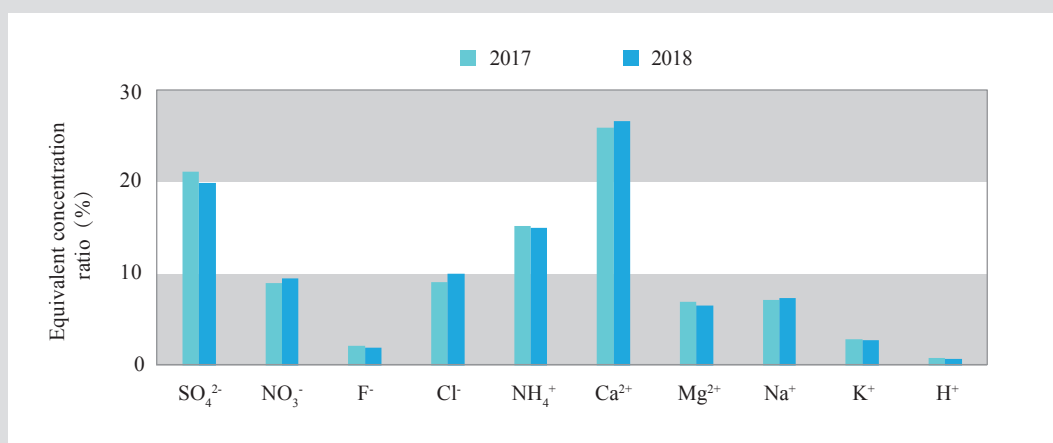
average value of 5.58. The rate of cities with acid rain, relatively serious acid rain and serious acid rain was 18.9%, 4.9% and 0.4% respectively.



Interannual comparison of the percentage of cities with different annual pH value of precipitation in 2018

Chemical composition In 2018, the main cations in precipitation were calcium and ammonium, taking up 26.6% and 15.0% respectively of total ion equivalent. The key anion was sulfate radical, taking up 19.9% of the total ion equivalent, while nitrate radical took up 9.5% of the total ion equivalent. In general, the type of acid rain can still be

classified as sulphuric acid. Compared with that of 2017, the percentage of concentration of sulfate radical and magnesium ion went down, while the percentage of concentration of nitrate radical, chloride ion and calcium ion went up a bit and the percentage of concentration of other ion equivalents kept at a stable level.



Interannual comparison of main ion equivalent concentration ratio of precipitation in 2018