2013-2017

Chengdu *Air Pollution Prevention and Control Action Plan* Formulation and Implementation Experience

Chengdu Environmental Protection Agency
Chengdu Academy of Environmental Sciences
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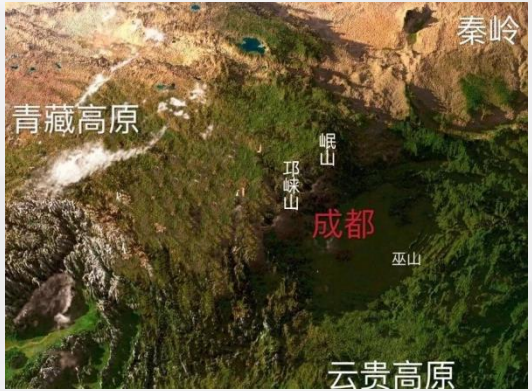
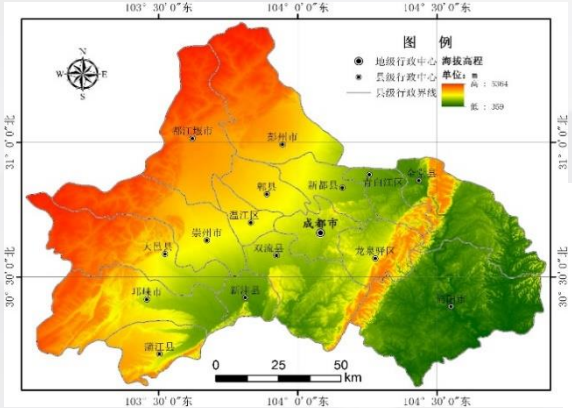
Contents

01 Background

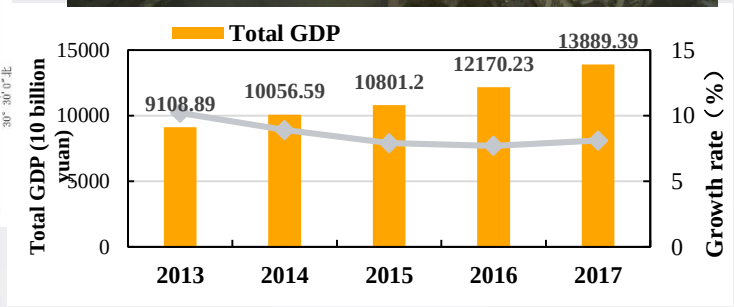
In 2013, the State Council issued the *Air Pollution Prevention and Control Action Plan* (referred to as "Ten Articles") , setting goals and tasks of air pollution prevention and control in China from 2013-2017.

Chengdu's unique geographical location make the pollutants are liable to accumulate.





Chengdu in the winter of 2013



02

Formulation & Implementation

Formulation process

On September 10, 2003, the State Council issued the *Air Pollution Prevention and Control Action Plan*

On February 14, 2014, the Chengd Municipal People's Government issued *Chengdu Air Pollution Prevention and Control Action Plan (2014-2017)*

2016 Implementation Plan of Chengdu Air Pollution Prevention and Control Action Plan was issued to deepen air pollution prevention and control

2013 ····· 2014 2015 2016 2017

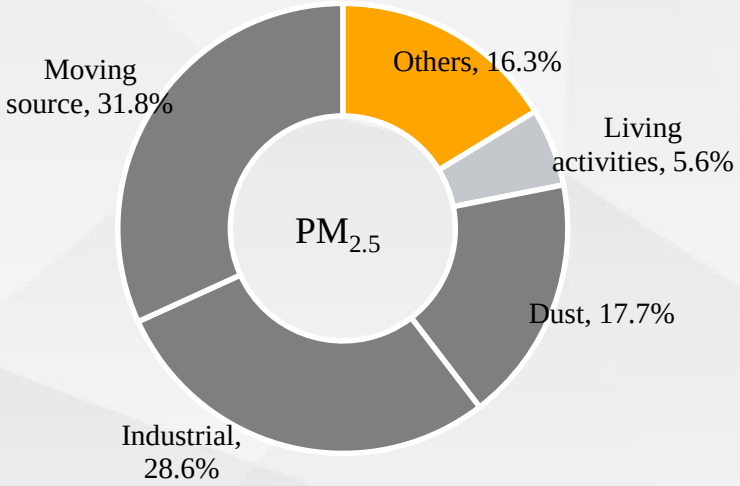
On October 8, 2013, The Environmental Protection Agency of Chengdu started survey and preparation of the plan

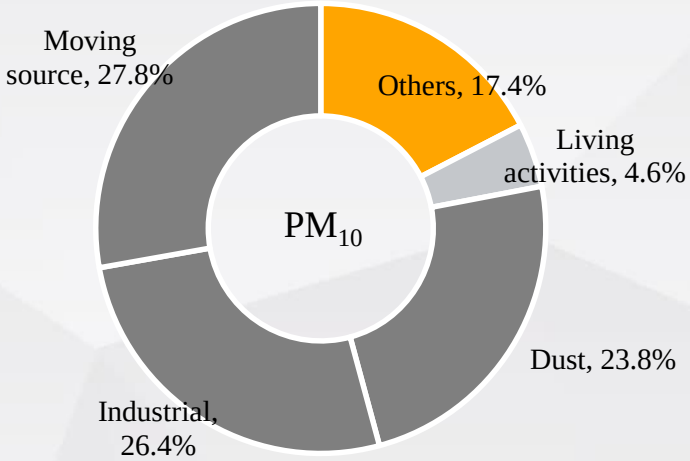
Implementation of *Chengdu Air Pollution Prevention and Control Action Plan (2014-2017)*

2017 Implementation Plan of Chengdu Air Pollution Prevention and Control Action Plan was issued

Analysis

PM source apportionment results help to identify key areas to be controlled.

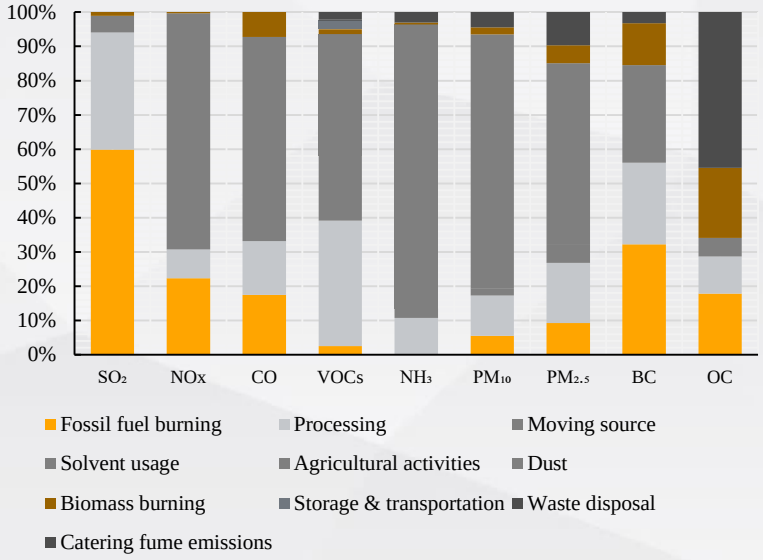




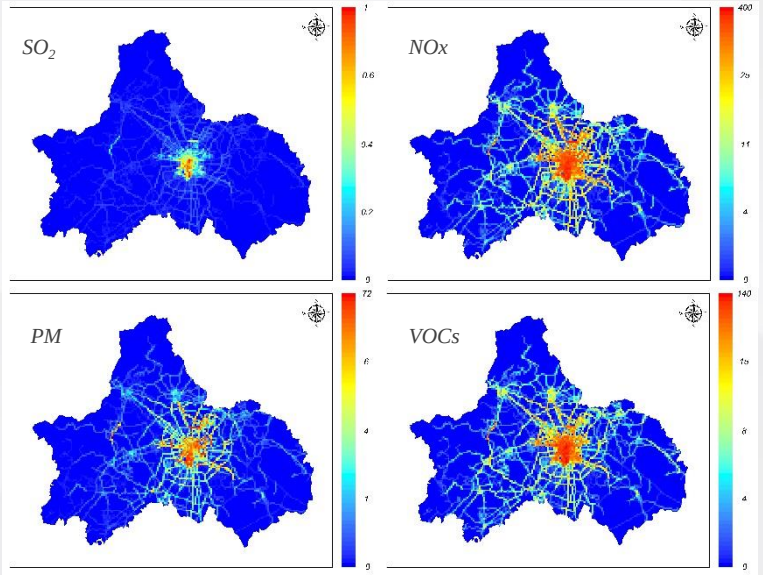
Mobile sources dominant, followed by industrial sources and dust.

Analysis

Air pollutant emissions inventory helped to develop refined management plan.

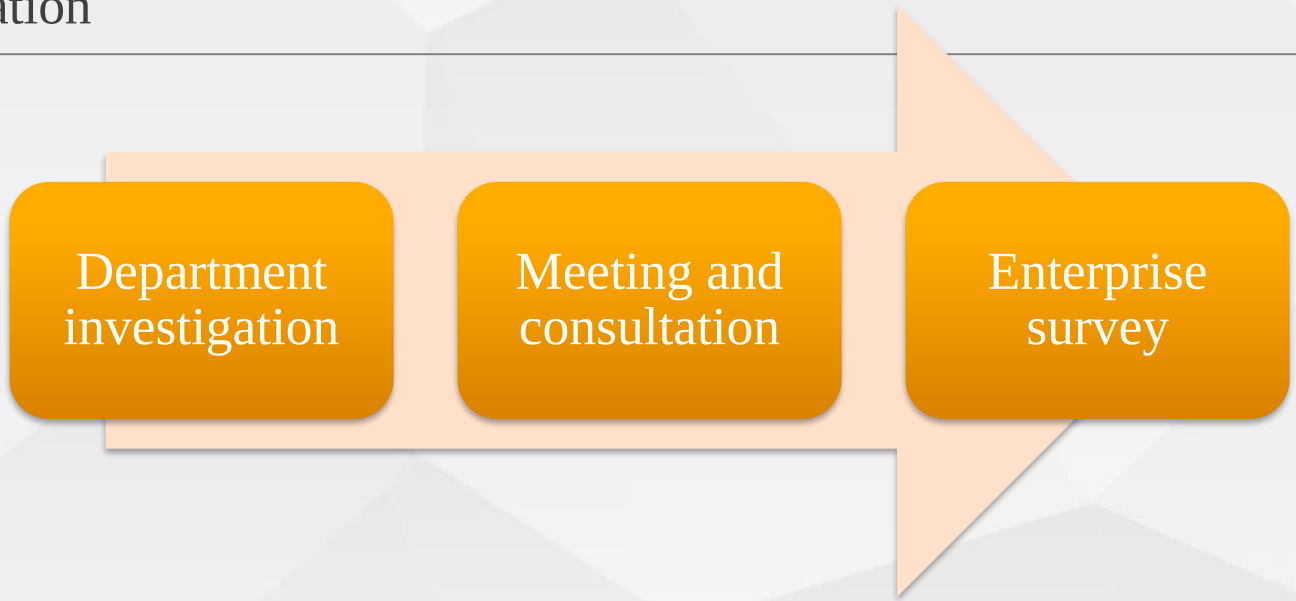


Contribution of different pollution sources



Distribution of pollutant emissions from motor vehicles

Investigation



Carry out investigation to ensure that emission reduction measures are successfully implemented

Implementation focus

Industrial restructuring

- Control overcapacity industries
- Phasing out outdated production capacity
- Adjust industrial layout
- Classified management of small industrial enterprise

Energy structure adjustment

- Select high pollution fuel banning zone
- Clean treatment of bulk coal
- Alternative use of clean energy
- Strict coal-fired boiler approval
- Oil quality upgrade

Industrial emissions management

- Pollution control in key industries such as thermal power, steel, cement, non-ferrous metal smelting, flat glass and other key industries.
- Pollution control of coal-fired boiler
- Pollution control of industrial kiln Treatment of volatile organic compounds

Dust controlling

- Improve the management system
- Bare soil covering, road hardening, green belt lifting and soil reduction, tree pool covering
- Online monitoring for construction site
- Dustfall monitoring
- Improve road dust cleaning and washing level, control dust from clay residue transportation

Implementation focus

Mobile source control

- Compulsory elimination of high-emission vehicle
- Promote the use of NEVs
- Motor vehicle traffic restriction
- Non-road motor environmental signature management

Straw burning control

- Ban the burning of leftover straw
- Provide subsidies for comprehensive utilization of straw

Catering fume control

- Install fume purification device in medium and above catering service units
- Eliminate barbecue in the open air
- Coal - to – gas /electricity in catering service

Heavy pollution emergency reponse

- Compiling and annually revising *The Emergency Response Plan for Heavy Air Pollution in Chengdu*
- Temporary control measures based on different levels in plan

Policy implementation

Inspect high emission trucks

Control industrial emissions

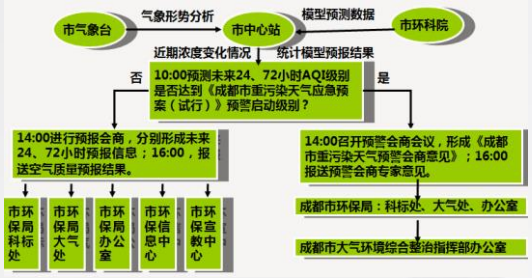
Control dust at construction sites

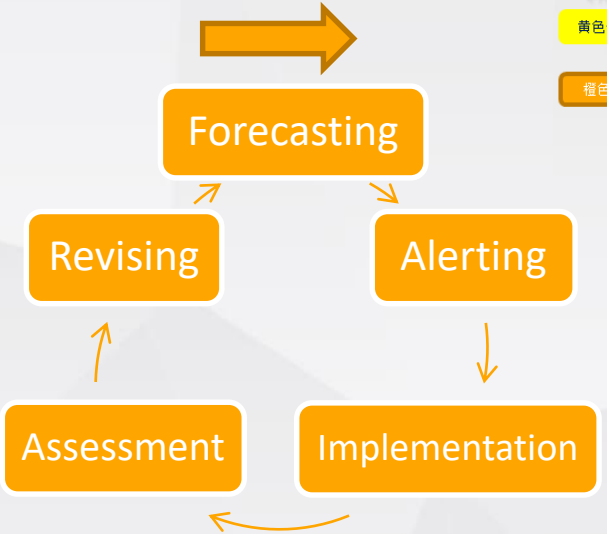
Control road dusts

Control catering exhaust

Publicize banning of straw burning

Emergency response





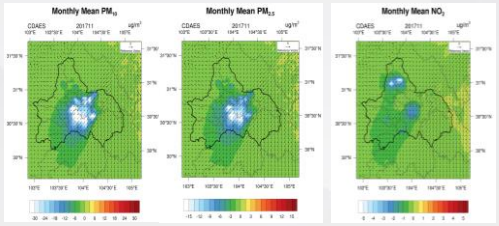

成都市人民政府办公厅文件

成办发〔2017〕42号

成都市人民政府办公厅关于印发成都市重污染天气应急预案（2017年修订）的通知

成都高新区、成都天府新区管委会，各区（市）县政府，市级有关部门：

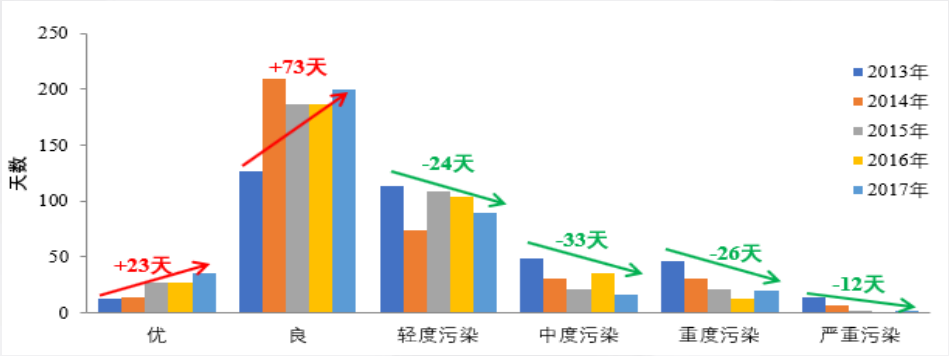
《成都市重污染天气应急预案（2017年修订）》已经市政府同意，现印发你们，请认真贯彻执行。



2017年11月8日~16日黄色预警期间PM_{10}、$PM_{2.5}$和NO_2浓度削减空间分布图

03 Effect

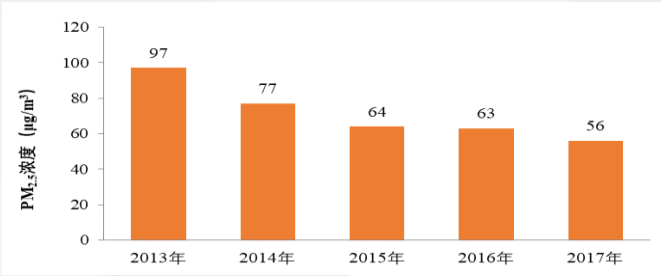
Number of attainment days increased significantly, and number of heavy polluted days decreased drastically.

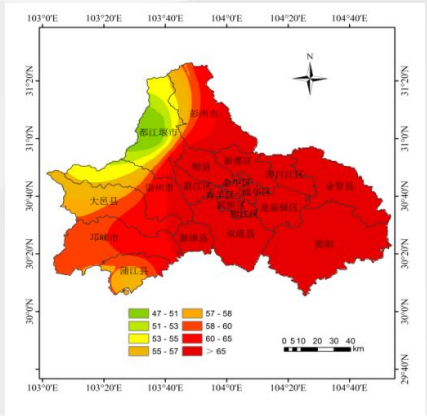


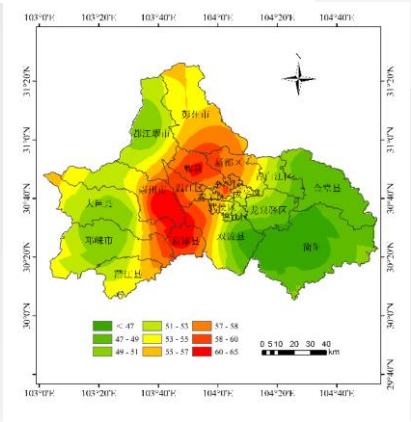
Item	$PM_{2.5}$ (μg/m³)	PM_{10} (μg/m³)	Excellent (day)	Heavily polluted (day)
2013	97	150	139	60
2017	56	88	235	22
Improved actually	-42.3%	-41.3%	+96	-38
Objectives of Sichuan/Chengdu "Ten Articles of Atmosphere"	-20%	-25%	Increased significantly	Reduced drastically
Assessment	Finished	Finished	Finished	Finished

- Compared to 2013, the concentration of $PM_{2.5}$ decreased by 42.3%;
- The decline of $PM_{2.5}$ is higher than the average of 74 cities (34.7%), ranking 10th.

- 235 attainment days in 2017, an increase of 96 days from 2013 (139 days), the largest increase among 74 cities.
- 22 days of heavy pollution, a decrease of 38 days from 2013 (60 days).

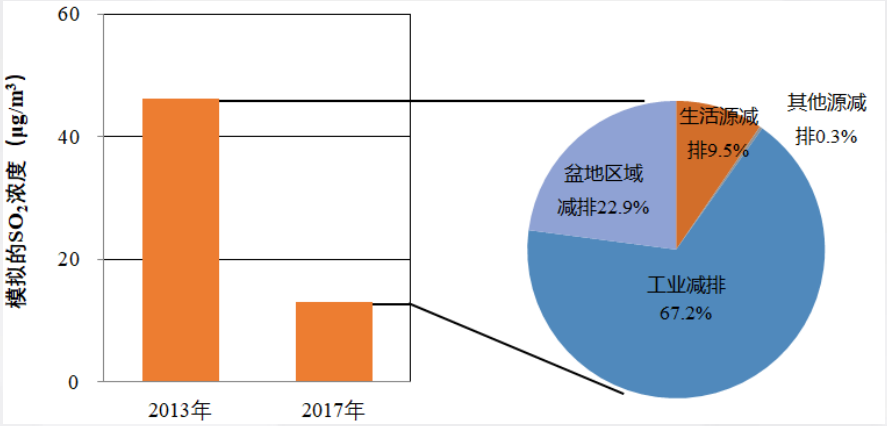




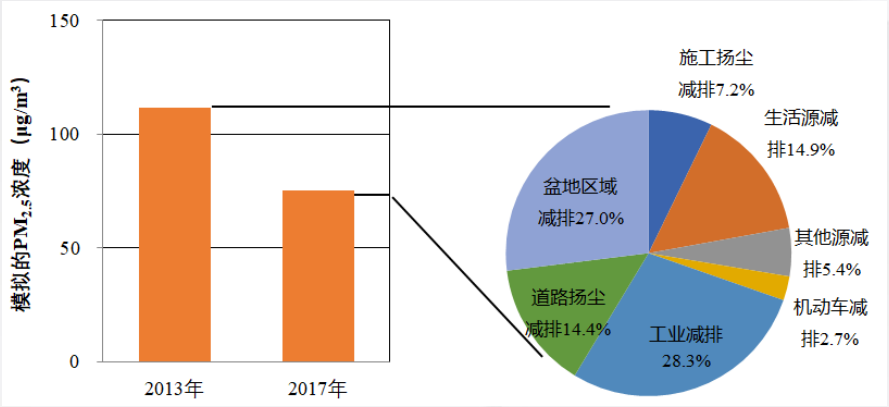


04 Assessment

Effectiveness evaluation of emission reduction measures based on air quality simulation



- Results shows that among the local emission reduction measures, industrial emission reduction contributed most to SO_2 concentration, accounting for 67.2%, followed by life activities, accounting for 9.5%;
- Emissions reduction in basin area contributed 22.9%.



- Results shows that among the local emission reduction measures, industrial emission reduction contributed most to $PM_{2.5}$ concentration, accounting for 28.3%, followed by dust, accounting for 21.6%; life activities, accounting for 14.9%.
- The above three contributed to 64.8% of Chengdu $PM_{2.5}$ concentration reduction.
- Emissions reduction in basin area contributed 27.0%.


Thanks for listening