中美大气污染防治法国际研讨会

强化大气污染防治法的思考 Thoughts on Enhancing Clean Air Act of China

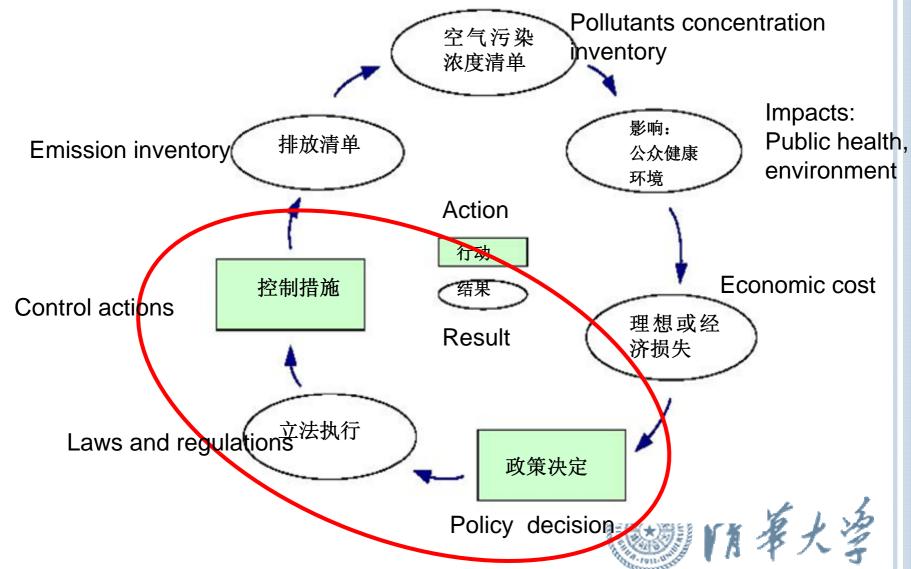
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主要内容 Outline

- 空气质量管理 Air quality management
- 固定源管理法律法规体系 Laws and regulations for stationary sources
- 移动源管理法律法规体系 Laws and regulations for stationary sources
- 存在问题及对策建议
 Problems and suggestions



空气质量管理结构 Element of air quality management



主要空气污染物的来源、影响和WHO指导标准 Source, impacts and WHO guidelines of main air pollutants

污染物	主要排放源	影响	健康指导标准
13,70		AV 11:3	(WHO 2002a)
一氧化碳 (CO)	机动车尾气;一些工业 生产过程	被吸入时对人体有毒; CO 降低血液输氧能力, 加重心脏和肺的负荷	8h 平均 10mg/m³(10ppm); 1h 平均 30mg/m3(30,000 μ g/m³)
二氧化硫 (SO ₂)	少量来自移动源;使用 含硫煤作为燃料供暖 和发电工厂;硫酸工厂	对人体有刺激作用; 促成 大气中酸雨的生成	24h 平均 125μg/m³; 10min 平均 500μg/m³
颗粒物 PM ₁₀	土壤,海盐喷溅,灌木 燃烧,家用燃料燃烧, 机动车,工业生产过 程,植物的有机灰尘	造成物的生成,增加癌症 的发生率,死亡率,恶化 呼吸道疾病	已有信息并不能说明浓度在 哪个限值下就不会对人体产 生不良影响,所以没有推荐的 平均浓度标准
铅 (Pb)	燃料添加剂	影响儿童的智力发育,很 多其它的不利影响	年均 0.5 µ g/m³
氮氧化物(NO,NO ₂)	机动车尾气中的副产物,高温燃烧时氧和氮气结合;供暖和发电厂;酸雨;炸药;植物的肥料	刺激性,光化学烟雾的前体	NO ₂ 1h 平均 200 µ g/m ³
光化学氧化物(主要是臭氧[O ₃];也有硝酸过氧化乙酰[PAN]和乙醛)	氮氧化物,碳氢化物在 日光的作用下在大气 中生成	刺激性,促进雾的生成, 对材料有腐蚀,恶化呼吸 道疾病	8h 平均 120 µ g/m³

空气质量管理的法规和标准体系 Laws and regulations for air quality management

- 1. 《中华人民共和国大气污染防治法》Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution
- 1987年9月5日由第六届全国人大常委会第22次会议通过,1988年6月1日起执行
 - Drafted and issued the law on 1st June 1988
- 1995年8月29日,第八届全国人大常委会第15次会议对该法进行 了修订
 - Modified the law firstly on 29th Aug. 1995
- 2000年对该法再次修订
 Modified the law again in 2000



2.中华人民共和国国家标准 National standard

环境空气质量标准 Ambient air quality standard

> GB3095-1996 (代替GB3095-82) 1996-10-01实施

国家环境保护局1996-01-18批准

● 主题内容与适用范围 Content and scope

本标准规定了环境空气质量功能区划分、标准分级、污染物项目、取值时间及浓度限值,采样与分析方法及数据统计的有效性规定。

The class of air quality regions, pollutants, sample method etc. are decided in this standard.

本标准适用于全国范围的环境空气质量评价。

The standard is available for air quality assessment all of the country.

环境空气质量标准的不足 Weakness of Ambient air quality standard

- 监测点位布置与人群活动规律关联松散
 Location of monitoring station doesn't relate to people' activities
- 臭氧峰值监测没有重点考虑布点,难以反映区域空气质量
 Downwind O3 monitoring is not captured, which is more regional
- 监测评估体系对区域PM2.5等问题(阴霾)很难关联
 Current API doesn't reflect people' feeling of haze/visibility problem, which is more of PM2.5 relevance
- 数据的公开性 Data dissemination



空气质量达标管理过于粗放 Weakness of Ambient air quality standard

- 地方政府对于确保空气质量达标缺乏法律手段
 Local government has no strong legal measures to achieve attainment
- 总量控制、排放许可等停留在概念上,没有可以操作的实施法规
 Total control and emission permission is not yet put into daily

management system

○ 区域空气质量达标/跨界污染输送问题难以操作
Regional air pollution /trans-boundary problems are not tackled yet by regulations

主要内容



Air quality management

固定源管理法律法规体系
Laws and regulations system for stationary sources

- 移动源管理法律法规体系 Laws and regulations system for stationary sources
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固定源管理的法规和标准体系

Laws and regulations system for stationary sources

《中华人民共和国大气污染防治法》People's Republic of China on the Prevention and Control of Atmospheric Pollution

1995年8月29日修改后的大气污染防治法,在控制固定源污染,改善大气环境质量方面起到了积极的作用:

Modified the law firstly on 29th Aug. 1995, after that,

- 强化了酸雨和二氧化硫污染控制
 Strengthen the control of acid rain and SO₂
- 推动了煤炭的清洁利用Promote the clean use of coal
- 加快了淘汰严重污染大气的落后工艺和设备的步伐
 Speed up the elimination of the technology and equipment with serious air pollution

固定源管理的法规和标准体系

Laws and regulations system for stationary sources

2000年第二次修订中固定源控制: Modified in 2000

- 新措施: 发展集中供热; 限期使用清洁能源; 要监管排放 SO_2 的新老企业; New actions: development of central heating, use of clean fuel, monitoring SO_2 of companies.
- 抓住重点,主要是抓住重点城市、重点区域:划定大气污染防治重点城市;实施大、中城市大气环境质量状况公报和预报; Clarify the key cities and regions; report and forecast the air quality in key cities.
- 在禁止超标排放、按排污量收费,以及总量控制和排污许可证方面取得了重大突破; There is a great development in prohibition of excessive emissions, charge according to emission quantity, license of emission etc.
- o 强化法律责任,加强执法监督。Strengthen the legal responsibility, strengthen supervision over law enforcement.

固定源管理的法规和标准体系 Laws and regulations system for stationary sources

- GB16297—1996 大气污染物综合排放标准 Integrated emission standard of air pollutants
- GWPB 3—1999 锅炉大气污染物排放标准 Emission standard of air pollutants for coal--burning oil-burning gas-fired boilers.
- GB4915—1996 水泥厂大气污染物排放标准 Emission standard of air pollutants for cement plant
- GB9078—1996 工业炉窑大气污染物排放标准 Emission standard of air pollutants for industrial kiln and furnace.



固定源管理的法规和标准体系 Laws and regulations system for stationary sources

- GB16171—1996 炼焦炉大气污染物排放标准 *Emission standard of air pollutants for coke oven.*
- GB13223-1996 火电厂大气污染物排放标准 *Emission standard of air pollutants for thermal power plants.*
- GWPB 5-2000 饮食业油烟排放标准 Emission standard of cooking fume
- GB5468-91 锅炉烟尘测试方法

 Measurement Method of smoke and dust emission from boilers.

国家标准难以适应地方需求 National or local?



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Laws and regulations system for mobile sources

《中华人民共和国大气污染防治法》(1987.9.5)

Drafted and issued Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution

第三十条规定如下:机动车船向大气排放污染物不得超过规定的排放标准,对超过规定的排放标准的机动车船,应当采取治理措施。

30th term: the air pollution from motor vehicles and boats must be under the standards the law provided, and for exceeding the standards, motor vehicles and boats should be punished.

Laws and regulations system for mobile sources

- 修改《大气污染防治法》;起草《条例》; 2000.4.29 Modified *The prevention and treatment for air pollution law*, drafted out *The regulation*.
- 专设第四章《防治机动车船污染》;在第六章《法律责任》 中对违反防治机动车排放污染的法律制度,设定了处罚措施。

In Chapter 4, the prevention and treatment pollution of motor vehicles and boats

In Chapter 6, *legal responsibilities* provided the punishment and measures for breaking the law



Laws and regulations system for mobile sources

- 第四章《防治机动车船污染》; Chapter 4
 - 第三十二条 机动车船向大气排放污染物不得超过规定的排放标准。Emission from motor vehicle is not exceed the standard.
 - 第三十三条 在用机动车不符合制造当时的在用机动车污染物排放标准的,不得上路行驶。In-use vehicle which is not up to the standard can not be drove on the road.
 - 第三十四条 国家鼓励生产和消费使用清洁能源的机动车船。The government encouraged production and consumption of clean fuel vehicle.
 - 第三十五条 对机动车排气污染进行年度检测。Emission from motor vehicle should be inspected every year.



Laws and regulations system for mobile sources

- o 在第六章《法律责任》 Chapter 6
 - o 对制造、销售或者进口超过污染物排放标准的机动车船的,没收违法所得,可以并处违法所得一倍以下的罚款; The proceeds of production and consumption and import of vehicle not up to the standard should be confiscated.
 - o 对无法达到规定的污染物排放标准的机动车船,没收销毁; The vehicle not up to the standard should be confiscated and scrapped.
 - o 对违法生产、进口、销售的含铅汽油的,没收燃油和违法所得。 The proceeds of production and consumption and import of lead fuel should be confiscated.
 - 未取得委托进行机动车船排气污染检测的,或者在检测中弄虚作假的,责令停止违法行为,限期改正,可以处五万元以下罚款;情节严重的,取消承担机动车船年检的资格。The office not get commission or fraud in the inspection should be stopped and punished.

Laws and regulations system for mobile sources

- 1.《汽车排气污染监督管理办法》 1990.8.15 Drafted and issued Regulation on motor vehicle exhaust pollution supervision and management
- 2.《防治机动车排放污染的技术政策》; 1999.6.8 Drafted and issued General supervision, management, and guiding coordinating the effort.
- o 3. 新生产车排放数据申报,发布环保达标车型目录 2000.11.20 Reporting the emission data of new designed vehicles. Issued the contents of environmental vehicle types. Nov, 20th,2000
- 4. 实行欧1标准发布实施标准的通知,联合有关部门发布超标车型的停产通知;2000.11.20
 - Application the notes of issuing the EUR. 1 standard. Interrelated apartment issued the non-production notice for improper vehicles type. Nov, 20th,2000
- 5. 控制农用运输车排放污染。2000年1月4日,发布了《农用运输车自由加速烟度排放限值及测量方法》(GB18322-2002)Controlling the air pollution of agriculture transportation.



Laws and regulations system for mobile sources

- o 6. 在用机动车报废制度; The scrappage systems of motor vehicles
 - 《汽车报废标准(1997)》the standard of vehicles scrappage(1997)
 - 《关于调整汽车报废标准若干规定的通知》2000。

the notice of regulating the vehicles scrappages standard

- 《农用运输车报废标准规定》2001
 - the rules of agriculture transportation scrappage standard
- 《摩托车报废标准暂行规定》2002

the temporary rules of motorbikes scrappage standard

- 7.采用欧洲排放指令与标准的整合 2001.4.16
 - Adopting EUR emission directives and standard. April 16th 2001
 - GB 18352.1/ 18352.2- 2001 轻型汽车污染物排放限值及测量方法(I)(II) *Limits* and measurement methods for emissions from light-duty vehicles(I)(II)
 - GB17691 2001 车用压燃式发动机排气污染物排放限值及测量方法 Limits and measurement methods for exhaust pollutants from compression ignition(C.I.) engines of vehicles
 - GB 18322-2002 农用运输车自由加速烟度排放限值及测量方法 Limits and measurement methods for smoke at free acceleration from agricultural vehicles

Laws and regulations system for mobile sources

- 8. 加强新生产车生产一致性的监督检查; Increasing the supervising of new vehicle
- 9. 在用机动车排放定期检测制度建设
 Form the rule of in-use vehicle inspection
 《在用机动车排放污染物检测机构技术规范》2005.1.13
 Technical criterion of inspection supervision of in-use vehicle emission
- 10. 《非道路移动机械用柴油机排气污染物排放限值及测量方法》2007.4.3

Standard and test method of emission from non-road mobile diesel engines

主要内容



固定源管理法律法规体系
Laws and regulations system for stationary sources

移动源管理法律法规体系 Laws and regulations system for stationary sources





区域大气污染问题:污染物不遵守城市的行政边界,而是在更广阔的空气流域内自由混合。

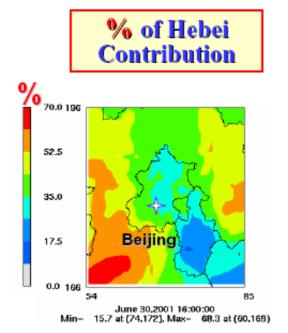
Pollutants are not limited inside the municipal boundary, but disperse to the wider air basin, which form the **regional air pollution**.

河北省对北京PM25的贡献率

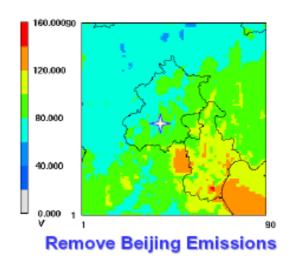
区域传输对北京O₃的贡献

Impact of Hebei Emission on Beijing Area PM_{2.5}

Impact of Transported Ozone on Beijing Area



Regional Transport Contribution





- o 防治战略(1) Strategy
 - 基本目标——防治大气污染,保护和改善环境;
 - 更高层目标——保护人体健康,促进经济社会的可持续发展
 Basic target- to prevent air pollution, protect and improve environment;
 Higher target- to protect human health, and promote the sustainable development of society and economy
 - 问题:在法律法规的具体规定中,重点放在对污染源的污染物产生、 排放、处理、处置控制方面,如何强化人群受体维护自身的健康权 益的问题。

Problem: in current stage, the law and regulation system is focus on emission sources, including the process of production, emitting, treatment. How to emphasize the rights of human health in the law?



- o 防治战略(2) Strategy
 - 建议: 在法律中强化以健康效益为评价基准,推动以污染源为主体的决策过程向以人群受体为主体的决策过程转变。

Suggestion: Strengthen the health benefit as evaluating tool in the law, promote the decision process to consider about receptor population.

污染源 Source	区域或对象 Target area	吸入因子 Intake fraction	数据来源 Reference
固定源 Stationary	中国,北京、大连、济南、重庆四城市 的采矿、化工、金属加工以及电厂等 4 cities in China	SO ₂ , 0.24-47.5×10 ⁻⁶ ; TSP, 0.41-53.2×10 ⁻⁶	Wang et al., 2005
sources	中国,湖南省17个电厂 Hunan Province	PM _{2.5} , 9.73×10 ⁻⁶	Li et al., 2003
移动源 Mobile	中国(北京,大连,济南) 3 cities in China	PM _{2.5} , 18.4-154×10 ⁻⁶	Wang et al., 2005
sources	中国59城市 59 cities in China	PM _{2.5} , 5.9-73.8×10 ⁻⁶	ICCT, 2005

- 管理体制 Institution of Management
 - 在机动车污染管理上,《大气污染防治法》中规定环保行政主管部门负责对机动车排气污染进行统一监督管理
 - For management of vehicular pollution, the Law stipulates that the environmental protection bureaus are in charge of vehicle exhaust pollution supervision and management.
 - 问题:实际工作中已形成环保、公安、交通等联合管理的体制,部门职责分工不明确
 - Problem: A joint management system is composed of environmental protection bureaus, police departments, traffic management bureaus and so on. The function of different bureaus in vehicle emission control is not clear.
 - 建议: 健全协调机制,明确环保部门的控制作用。 Suggestion: Improve the coordinating mechanism, clarify the responsibility of environmental protection administrative system.

- o 调控机制 Control mechanism
 - 问题:以鲜明的行政驱动和行政强制为特征,以达标排放、 总量控制、排污许可等为内容的"命令控制型"机制一直处 于核心地位。

Problem: Mainly rely on administrative enforcement actions. Emission standard, total amount control, emission permit constitute the core part of control mechanism.

建议:发展经济刺激机制,用税费工具来调控机动车的 消费和使用,例如基于排放的差别化使用税等。

Suggestion: Develop fiscal policy tools, control the consumption and usage of vehicles by approach of taxes, fees and other economic tools, such as differentiated vehicle taxes based on emission.

县级以上人民政府环境保护行政主管部门对大气污染防治实施统一监督管理。

The administrative department of environmental protections under the people's governments at or above the county level shall be the instrument conducting unified supervision and management of the prevention and control of atmospheric pollution.

• 问题: 现有的管理模式以城市为基础单位,分别制定各自的污染控制政策,实现各自的空气质量目标。

Problem: The basic administrative units are cities in current management system, which establish and implement pollution control policy and air quality aim respectively.

• 建议: 空气质量的区域化管理必须依法设立专门机构来执行,需要在法律中界定空气质量区域管理的行政部门和相应的职权。

Suggestion: It is necessary to define the specific administrative department and its authority to manage the air quality issues in the whole air basin.

- 移动源-设立新车车型核准制度
 - Mobile sources-Establish the type approval of new vehicles
 - 问题:根据防治机动车环境污染的特殊性和国际惯例,应当设置车型核准制度,其已经被制造商和国家管理部门所认同,但是目前所开展的许可审查缺乏符合要求的法律依据。
 - Problem: For the special features of vehicular pollution and international custom, Type Approval should have law basis.
 - 建议:根据我国的行政许可法的规定,这种行政许可权只能由法律和行政法规授予有关部门执行。因此,有必要在大气污染防治法中设立新生产车车型排放达标核准。
 - Suggestion: According to the Administrative Licensing Law, it is necessary to establish the type approval permit in the *Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution*.

- 移动源-车用燃料有害物控制和添加剂登记 Mobile sources-Control of toxics from fuel and registration of additives
 - 问题: 2000 年版大气污染防治法当时认识有局限性,没有将控制燃料的中有害物质含量提到管理制度的层次,只是提出鼓励性原则。
 - Problem: There is no institutional regulation except encouraging principle in the previous edition of the law.
 - 建议:增加相关规定,环保部门可以根据机动车排放标准实施要求,规定车用燃料的有害物质含量限制要求, 车用燃料国家标准应符合环保规定,燃料生产企业生产的车用燃料通过向环保部门登记证明符合环保部门的含量规定。
 - Suggestion: Establish relevant regulation to guarantee the rights of environmental protection administration to implement the control and registration.



- 固定源 Stationary source
 - 问题:只要求对已产生的污染物进行减量化、无害化和处理处置,仅限于末端治理;对严重污染环境的工艺技术的控制还不够,对采用清洁技术规定不够具体明确,尤其缺乏强制实施的措施。

Problem: The current law is focus on the reduction, safe treatment and disposal of produced pollutants, which is limited in tailpipe treatment. Meanwhile, it is lack of control on the hazardous technologies and the enforcement measures to apply the clean technologies.

• 建议:应当着重体现"全过程控制"和"清洁生产"的原则,将末端控制战略下的预防为主发展为源头控制战略下的预防为主。

Suggestion: 'Whole-process Control' and 'Clean Production' should be considered as basic principle in the new edition.

