



THE REFORM OF CHINESE POLLUTION LEVY SYSTEM

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THE REFORM OF CHINESE POLLUTION LEVY SYSTEM

- 1. What is the Chinese PLS?**
- 2. Why it needs to be reformed?**
- 3. How to reform it?**
- 4. What we have done for it?**
- 5. How about the future of Chinese PLS?**



The Reform of Pollution Levy System in China

1 INTRODUCTION TO PLS

- ✓ Piloted and established in 1979, and a national environmental policy, covers the whole country
- ✓ *Tentative Provision on Pollution Levy System*, issued by the State Council in 1982
- ✓ The adoption of *Polluters Pay Principle (PPP)*
- ✓ The nature of 1982' PLS is to levy on companies of exceeding-standards



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1 INTRODUCTION TO PLS

- ✓ Three types charges: Non-compliance Charges (NCCs), Four Small Parts (four penalties), Total Emission Charges (TECs) on SO₂
- ✓ Raised fund is local fiscal income and should be included into the government public budget
- ✓ No revenue is allocated to the central government although SEPA is looking for centralizing some revenue at the central level



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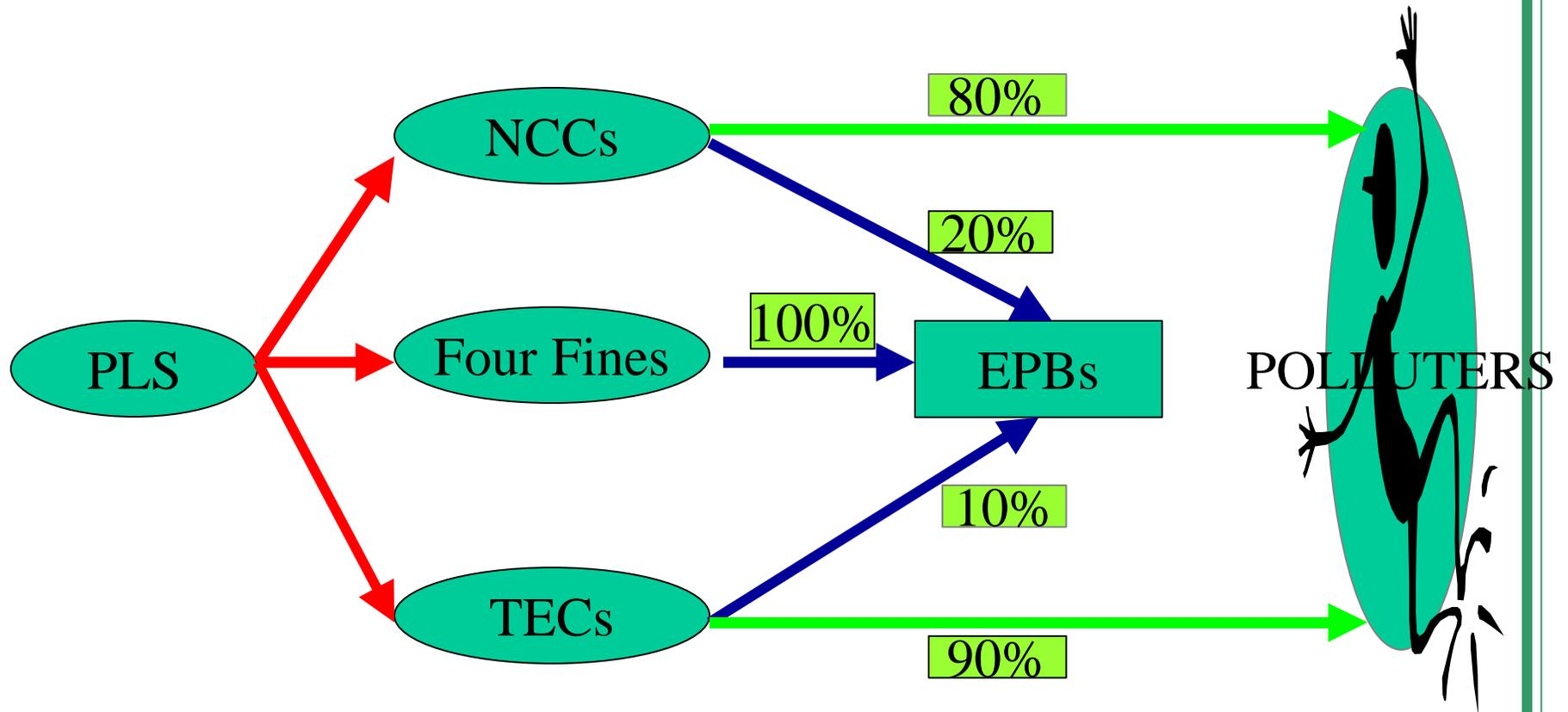
1 INTRODUCTION TO PLS

- ✓ 80% of revenue from NCCs should be used for pollution control and paid back paying-companies
- ✓ 20% of revenue from NCCs could be used for local EPBs capacity building
- ✓ All revenue of four penalties could be used for local EPBs capacity building



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Revenue Allocation of PLS





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1 INTRODUCTION TO PLS

- ✓ Provincial, municipal and county EPBs are responsible for the enforcement of PLS, the collecting procedures are varied by provinces
- ✓ Two functions: raise fund and provide incentives for pollution control, the former dominates and is more significant



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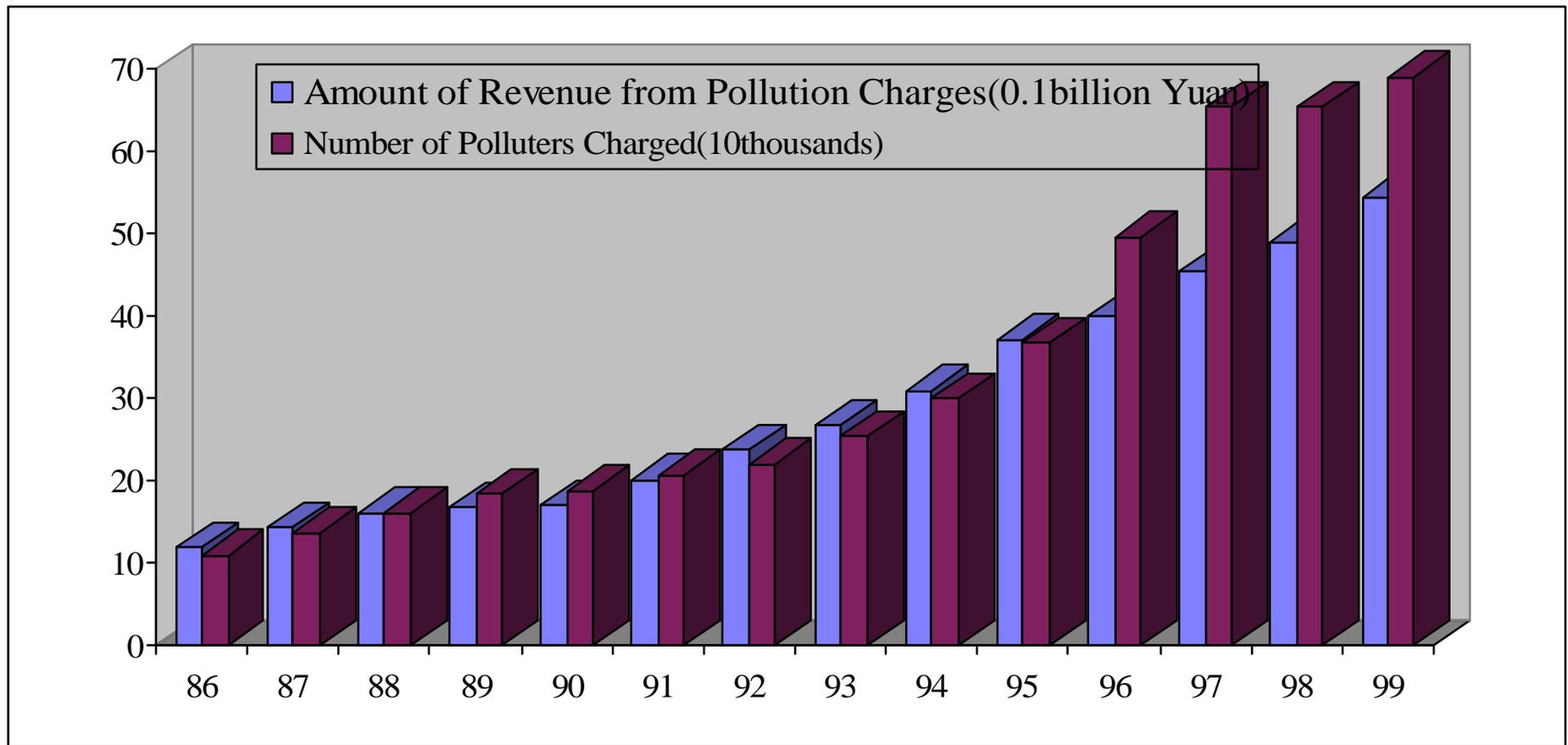
1 INTRODUCTION TO PLS

- ☞ In 1999, the total revenue from PLS was **5.45** billion yuans (**US\$ 0.66billion**), and levied companies were **691** thousands, 25% of TNE
- ☞ In 1998, the proportion of PLS revenue to Total Product Value and local government financial revenue were respectively **0.043%** and **0.568 %**



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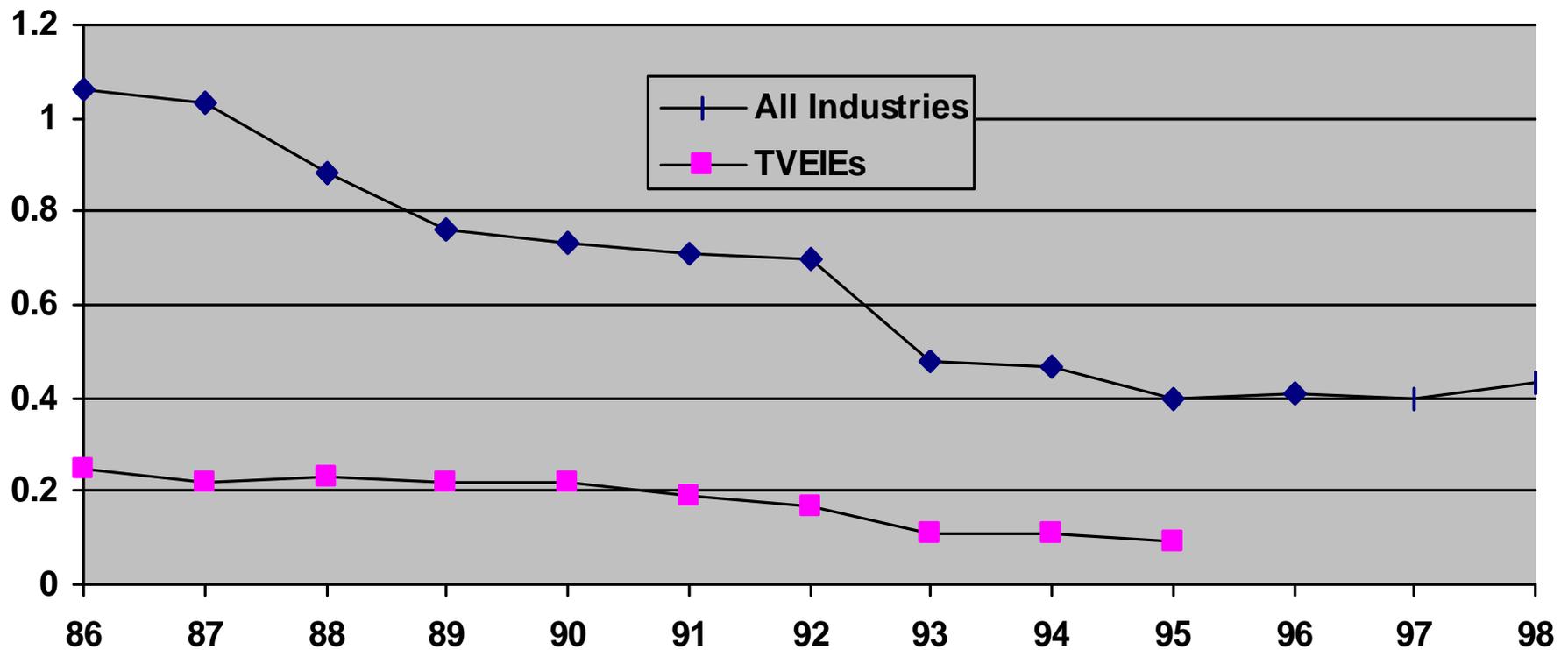
Collection of Pollution Charges in China from 1986 to 1999





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Proportion of PLS Revenue to TPV from 1986 to 1999(‰)





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1 INTRODUCTION TO PLS

- ☞ In 1998, the revenue from water PLS amounted to **16.37%**, the exceeding-standards part was **59.15 %**, the FSPs was **30.6%** and SO₂ charge was **10.5%**
- ☞ In 1998, the revenue from SOEs was about **55%**, and the revenue from non-SOEs was **45%**



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1 INTRODUCTION TO PLS

- In 1998, the PLS fund used for pollution control was 2.7 billion yuans, 55% of the total revenue
- The PLS fund used for implementing PLS and EPBs capacity building amounted to about 35% of total revenue, which varies by province and city



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2 MAJOR PROBLEMS WITH PLS

- Levying Policies: exceeding standards charge or non-compliance charge, based on discharge concentration, only levy on single pollutant, not consistent with other regulations, such as TEC
- Charge Scheme: low charge rates, 20% of pollution treatment cost, incomplete levy coverage



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2 MAJOR PROBLEMS WITH PLS

- Revenue Use: ownership of revenue, illegal use of PLS revenue, effectiveness of using the revenue, freely paying-back policy
- Fiscal Reform: It is possible to shift PLS into pollution taxes?
- Weak capacity of implementing institutions



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3 PROPOSED PLS REFORM: Charge Scheme

- Shift from non-compliance charge to real pollution charge, levy a penalty on non-compliance polluters
- Shift from concentration-based charge to total emission-based charge
- Shift from single pollutant charge to multiple pollutants

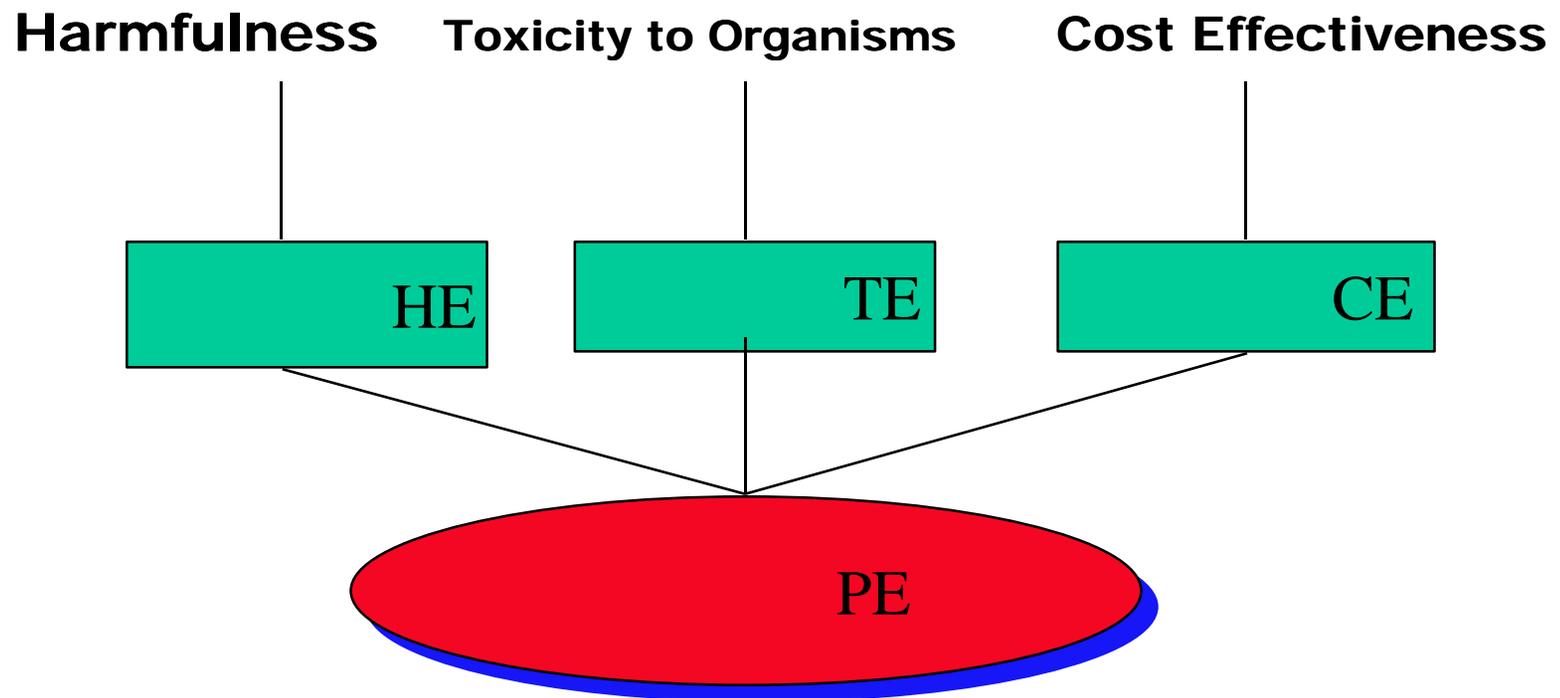


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3 PROPOSED PLS REFORM: Charge Scheme

- Shift from stable charge rates to dynamic charge rates, vary by year and region
- Shift from low charge rates to the charge rates higher than marginal treatment costs
- Shift from multiple charge bases to uniform charge base, e.g., pollution equivalents,
 $1\text{PE}=1000\text{g COD}=0.5\text{g Hg}=\dots=500\text{g SO}_2$

Pollution Equivalent





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3 PROPOSED PLS REFORM:

Charge Rates

- Water Pollution: 1.4yuan/PE **US\$0.16/kgCOD**
- Air Pollution: 2.4 Yuan/PE **US\$0.14/kgSO₂**
- Industrial Solid Wastes: 5~30 yuan/ton
- Hazard Wastes: 1000 yuan/ton
- Noise Pollution: 350~11200 yuan/exceeding
1dBA above noise standard



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3 PROPOSED PLS REFORM: Charge Rates

- Mobile Sources: 112~1045yuan/annual-vehicle
- Air Planes: 60~80 yuan/sorties
- Domestic Wastewater: 0.38~0.50 yuan/ton
or 30 yuan/household-annual
- Domestic Refuse: 60 yuan/ton or
90 yuan/household-annual

Proposed Adjusting Coefficient for PCR

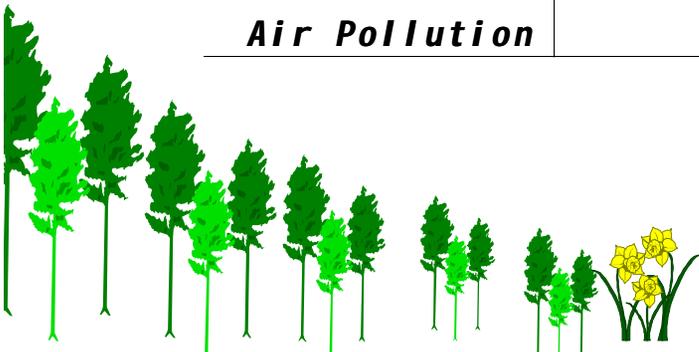


K₁ (Regional K1)

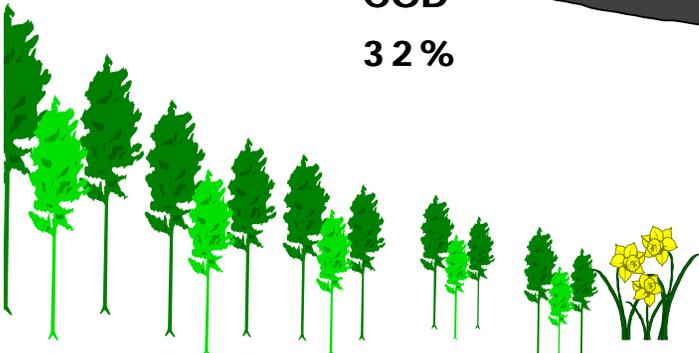
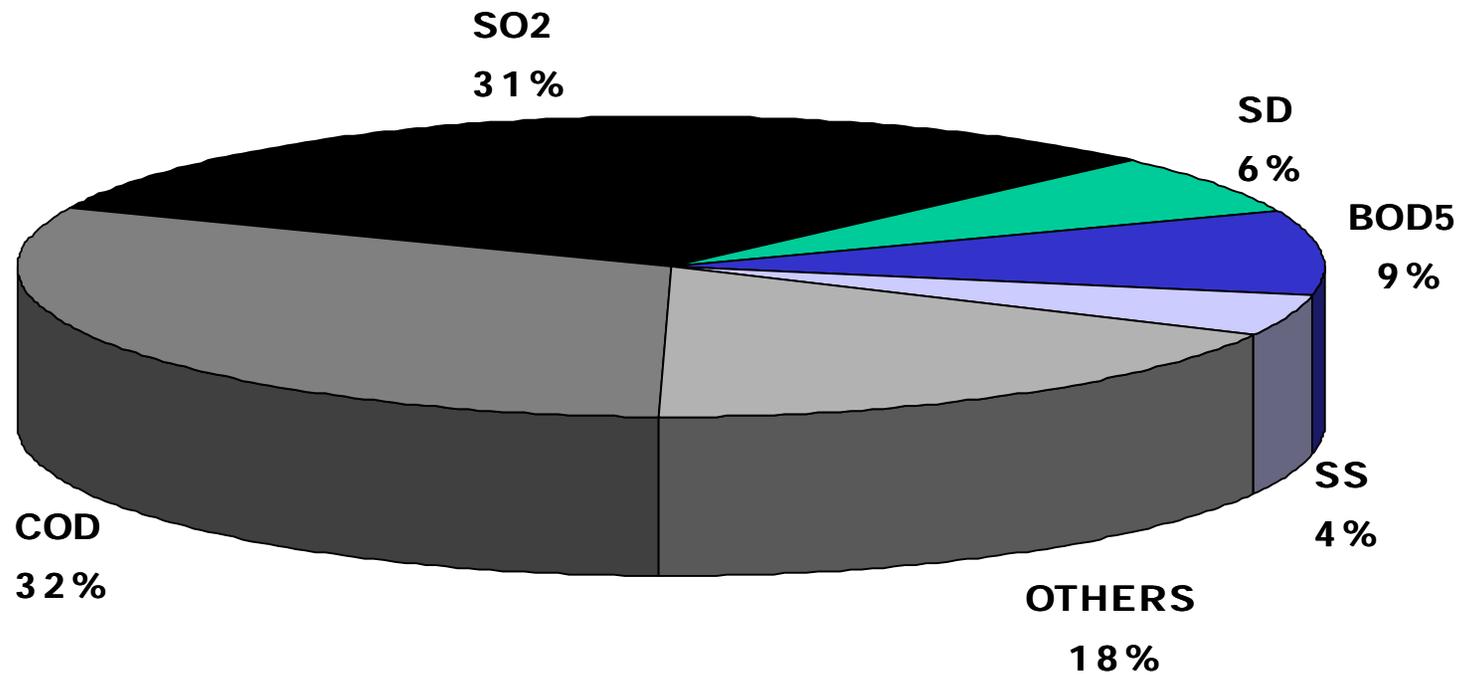
<i>Region</i>	Underdeveloped	Ordinary	Developed
<i>AC</i>	1.0	1.2	1.4

K₂ (Environ. Function District K2)

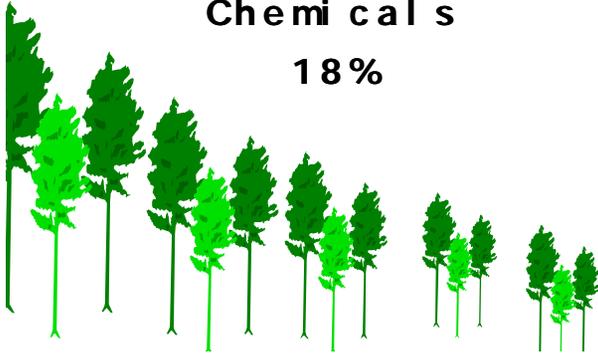
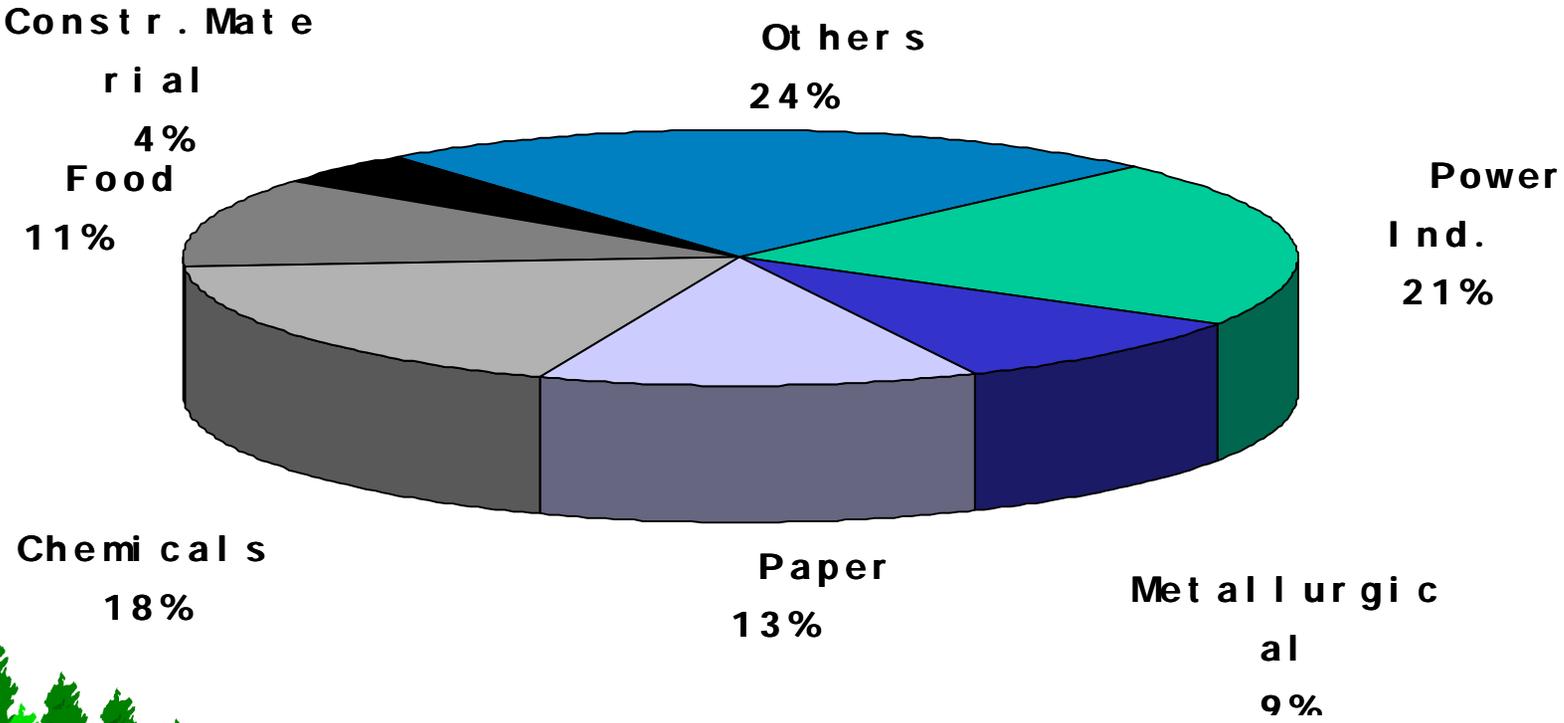
<i>EFD Type</i>	V	IV	III	II	
<i>Water Pollution</i>	1	1.2	1.4	1.6	1.8
<i>Air Pollution</i>			1	1.2	1.4



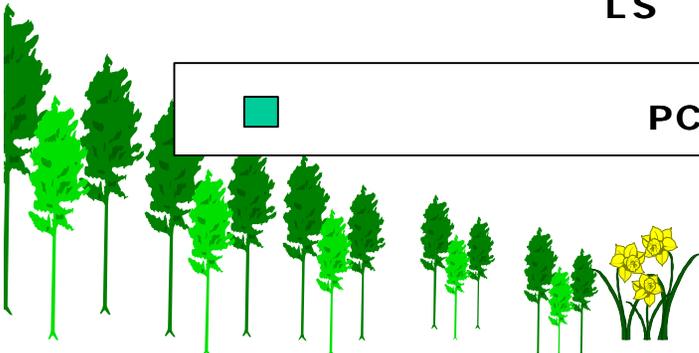
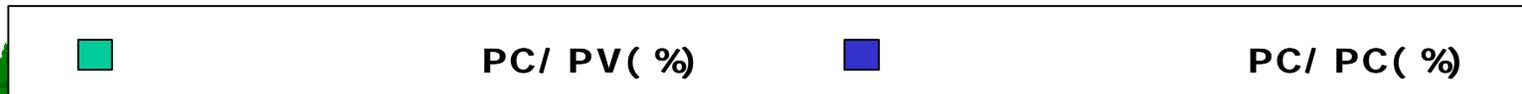
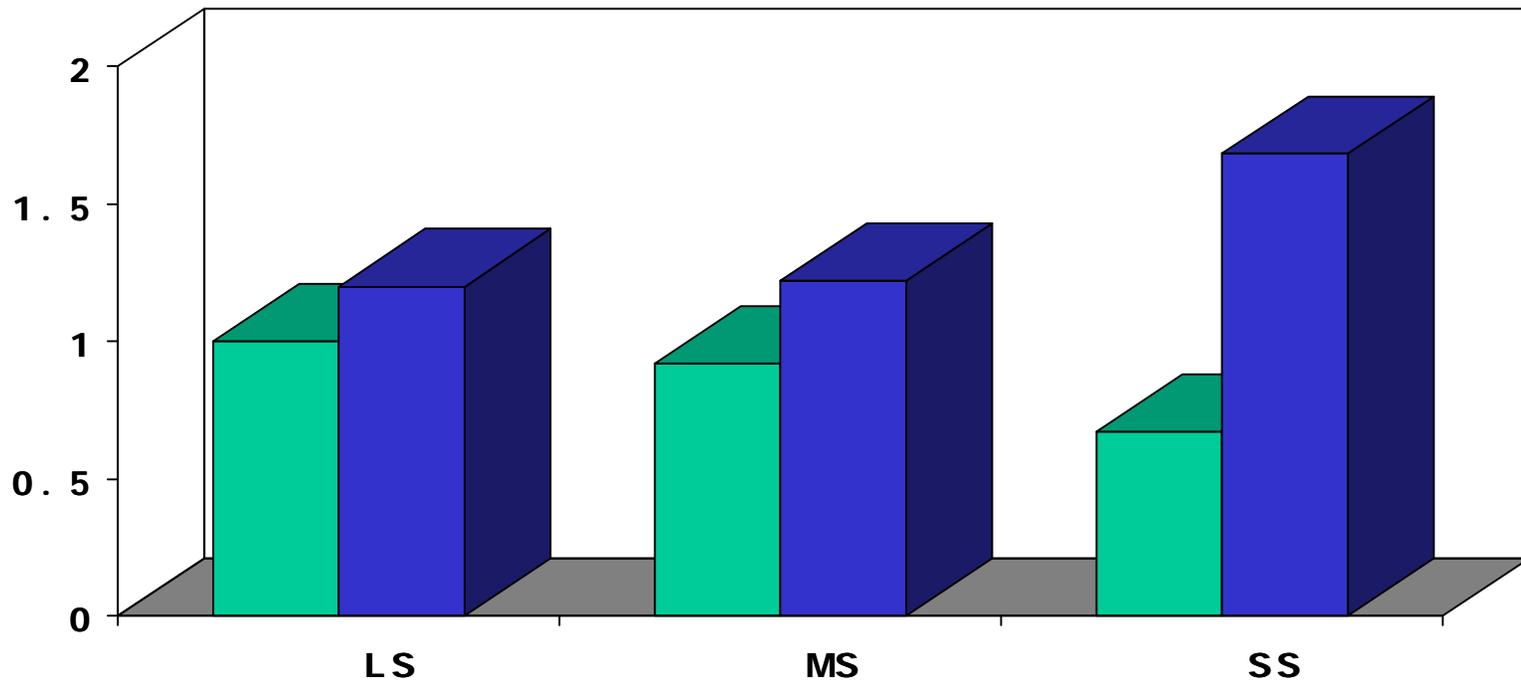
Main Pollutants to be Charged



Main Industries to be Charged

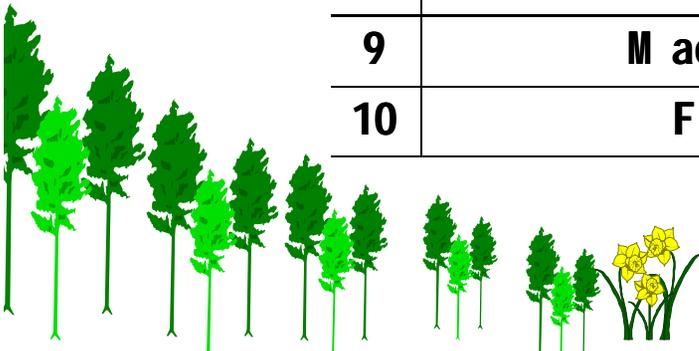


Impacts on Enterprises by Scale



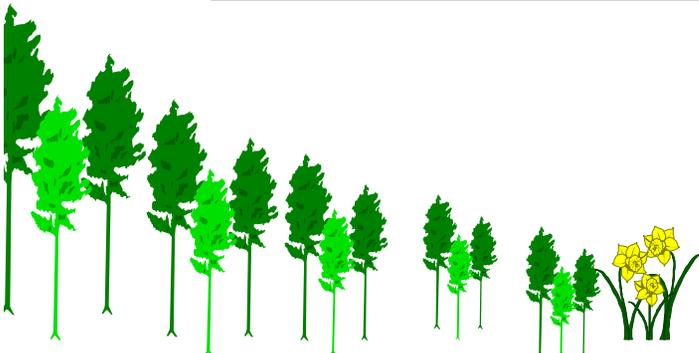
Impacts on Product Prices by Industry

	<i>Industry</i>	<i>Price Increment (%)</i>
1	Food	0.024947
2	Textile	0.018215
3	Pulp and Paper	0.043245
4	Power	0.044265
5	Pertolum	0.014148
6	Chem iacal	0.029674
7	Constr. M ater.	0.015696
8	M etalluugical	0.023579
9	M achinery	0.00901
10	Food Service	0.018635

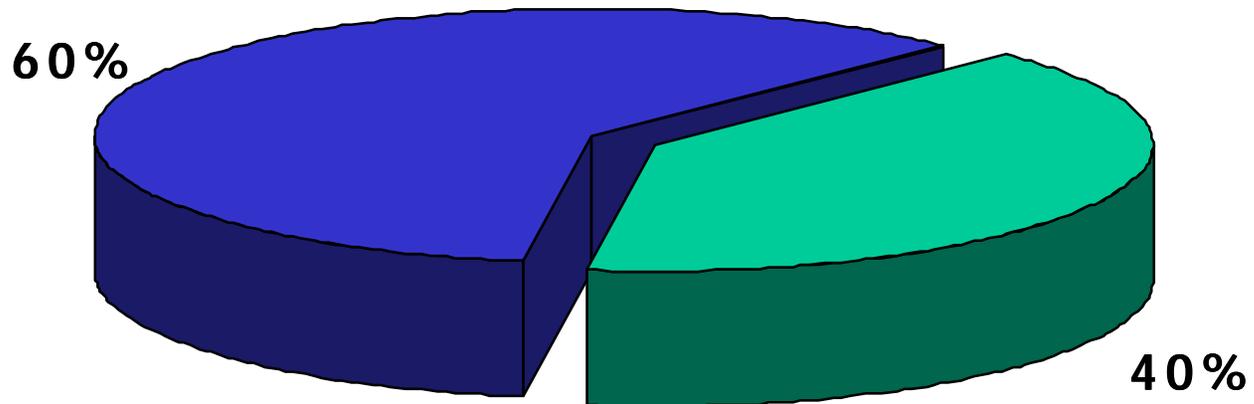


Burden Distribution Among Targets

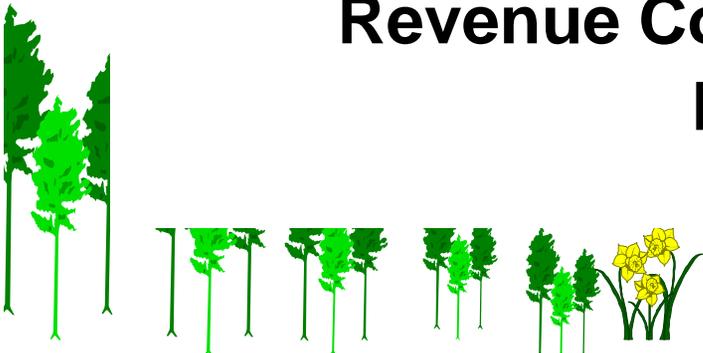
<i>Burders</i>	<i>, 0.1BY)</i> <i>Amount of PCL</i> <i>Burdered</i>	<i>(%0</i> <i>Burdering</i> <i>Percentage (%)</i>
Central Gov.	39.93	7.8
Local Gov.	36.86	7.2
Enterprises & Comsumers	435.2	85.0
	512	100



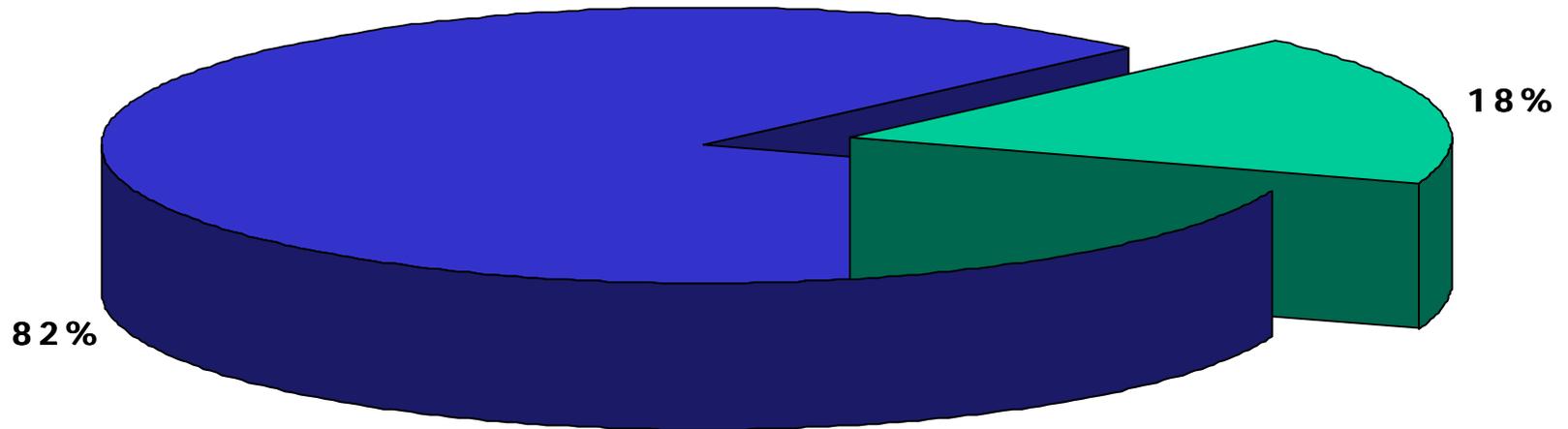
Potential Contribution to Fund Raising



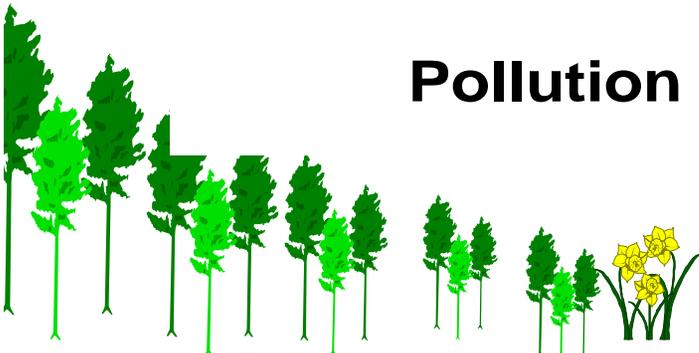
40
Revenue Collected/Environ. Investment
Demanded 40



PLS Compensation for Pollution Loss



Pollution Charge/Pollution Damage 18





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3 PROPOSED PLS REFORM: **Revenue Allocation and Use**

- 5% of total revenue is suggested to allocate to SEPA and to be one source of National Environmental Fund (NEF)
- 10% of total revenue is suggested to allocate to provincial EPBs and to be the source of Provincial Environmental Fund(PEF)



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3 PROPOSED PLS REFORM: Revenue Allocation and Use

- Other 85% fund goes to financial departments of municipal and county governments, mainly subsidizing the interest of pollution fund
- PLS fund will be strictly managed by financial departments and EPBs as an earmarked fund, the right for EPBs to allocate the PLS fund will be reduced with the process of fiscal reform



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4 PLS REFORM PROGRESS IN CHINA:

What Is SEPA Doing for the Reform?

- SO₂ Charge has been implemented in Acid and SO₂ Pollution Control Zones, in Beijing, SO₂ charge rate is 0.60~1.20 yuan/kg
- Hanzhou, Zhenzhou and Jilin have finished the pilots of Total Emission Charges, active response by polluters



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4 PLS REFORM PROGRESS IN CHINA:

What Is SEPA Doing for the Reform?

- New provision on PLS will be approved by the State Council, which reflects the above reform proposals, obstacles for introducing TECs have been overcome in new *Air Pollution Control Act*
- It is expected to implement the new PLS in 2000 in 21 cities and key pollution control river basins identified by the State Council



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5 **PLS will be replaced by Environ. Taxes?**

- Charge system and taxation policy have different functions in environmental protection and fiscal system, levying system and revenue allocation
- Fiscal and taxation departments are more interested in revenue of taxes and their tax base, SEPA is more care for the incentives for reducing pollution



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5 **PLS will be replaced by Environ. Taxes?**

- Water pollution charges is unable to be replaced by pollution taxes as there are lots of technical procedures which MOF and SAT are not familiar with, but converting SO₂ charge into SO₂ tax is possible
- Some proposals of environmental taxes have been developed by CRAES and IFS/MOF and submitted to MOF with the support of the WB



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5 PLS will be replaced by Environ. Taxes?

- **Proposal 1:** levy an environmental tax on firm and business individual based on the current urban construction and maintenance tax, tax rate is 3~5% of three taxes (VAT, BT, IT)
- **Proposal 2:** Levy taxes on water resources and high pollution energies, mainly on coal
- **Proposal 3:** Levy taxes on some environmental unfriendly products, such as package, ODS, batteries, P-detergents, etc.



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Make Great Efforts for China to Establish Environmental Taxes

