

Environmental Fiscal Reforms in China: Progress and Prospects

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Special Characteristics of China's Environmental Challenges

- **Large Population**
 - 22% of the world
 - Per capita resource is small
- **Economic growth**
 - 2.3 trillion \$, 9.9% growth rate in past 15 years
- **Economic structure**
 - Resource-intensive
 - Coal dependence – 2/3rd of energy generation

Special Characteristics of China's Environmental Challenges

- Discrepancies
 - urban and rural
 - rich and poor
 - Regional
- Development Stage
 - Industrialization
 - Urbanization
- Transition to Market Economy
 - Imperfect market
 - Public finance reform

Key observations

- China's economic growth and the regional discrepancies are posing a threat to the environmental and development safety.
- The trans-boundary effects and public-goods characters of environment require central government to take the capacity for coordination of environmental protection and economic development on national level.
- Need economic incentives on macro-level
- Public finance reform provide the opportunity

Applications of EFIs in China

Environmental fiscal instruments (EFIs) cover the range of fiscal instruments designed to promote efficient and sustainable use of natural resources and cost-effective pollution control or abatement. The EFI toolbox includes 3 main components:

- Environmental Fiscal Expenditures
- Environmental Taxation
- Environmental Pricing

three way to influence price mechanism

New Progress of EFR in China

- Environmental Fiscal Expenditure Account
 - 2007 new fiscal account for Environmental Protection
 - Governmental funds is planned to account for more than 50% of the environmental protection investments during the 11th Five Year Plan period
- Green Purchase of Government on eco-labeling products
 - since Jan 1st, 2007
- Ecological Compensation
 - Dec. 2004, Forest Ecological Benefit Compensation Fund
- Electricity Pricing
 - 0.015 RMB per kwh for desulphurized electricity
 - Price chain for de-sulphured power: consumption price for de-sulphured power raised by 0.025RMB per kw since June 30, 2006
 - Enforcement to ensure real operation

New Progress of EFR in China

- Environmental taxation
 - Increasing attention
 - Reform of natural resources tax
 - Fuel Tax to be implemented
 - the drawback of Export Tax payment on high energy intensive products abolished
 - To establish a new environmental tax
- Pollution Levy
 - 2006, 14.4billion RMB
 - Proposal for increasing rate of SO₂ from 0.6RMB/Kg to 1.2 RMB/Kg
- The urban waste water discharge fees are widely levied
 - Bottom price line

Economic and Environmental Impacts of EFIs: An example

- To the end of 2005, the total desulphurization capacity of the power plants was 53 GW in China. with the desulphurization electricity price of 0.015 RMB per kwh
- Cost
 - desulphurization cost 4.4 billion RMB per year.
- Benefit
 - 1.8 million tons SO₂ reduction per year(70% of 11th FYP goal).
 - A reduction of 36 billion RMB in environmental damage costs
 - A reduction of 1.08 billion RMB in the pollution levy on the power industry (at the current rate of 0.6 RMB / kg SO₂)
 - Desulphurization facilities worth 16-21 billion RMB could be utilized
 - Greatly promote the scrubber technology innovation and diffusion
 - Improve monitoring capacity for better enforcement

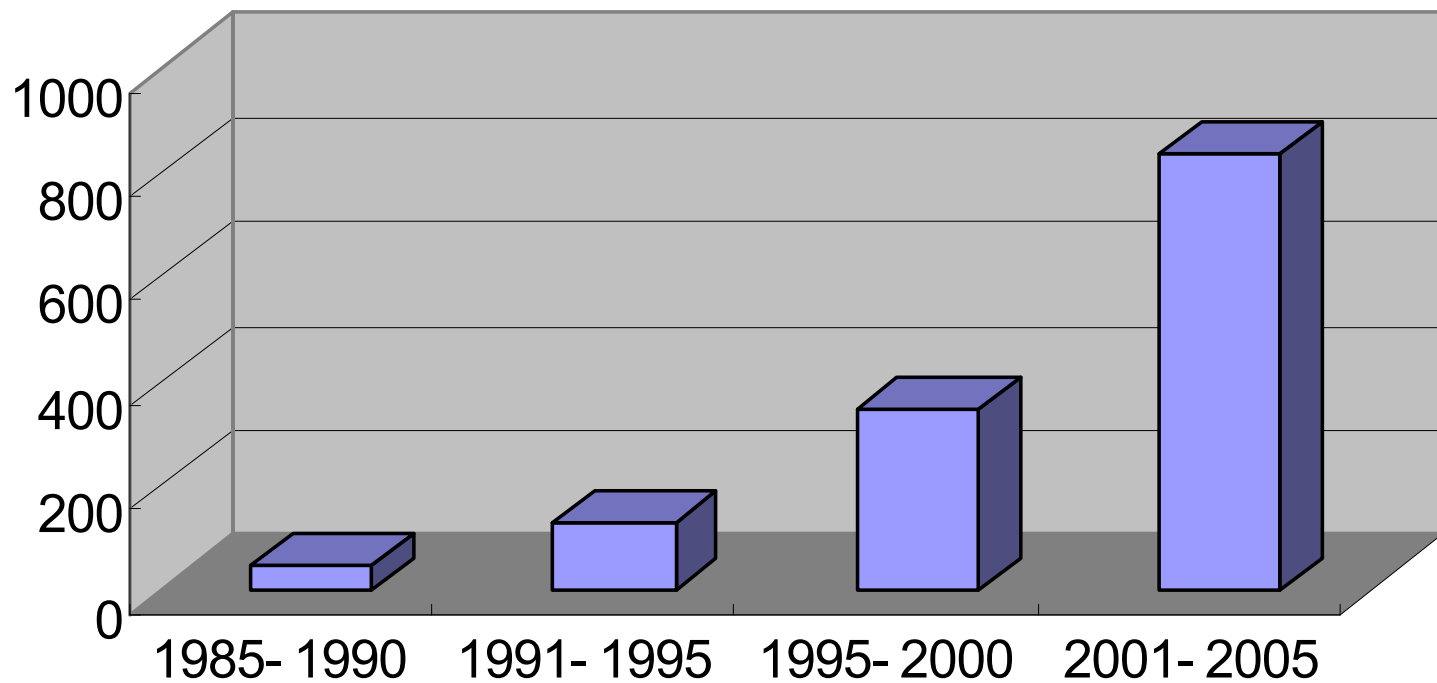
Findings

- Fiscal expenditure more and more used
- Direct pricing strengthened
- Environmental Taxation not mainstreamed
- *Institutional reason*
 - Central and local
 - NDRC and STA
 - Monopoly sector

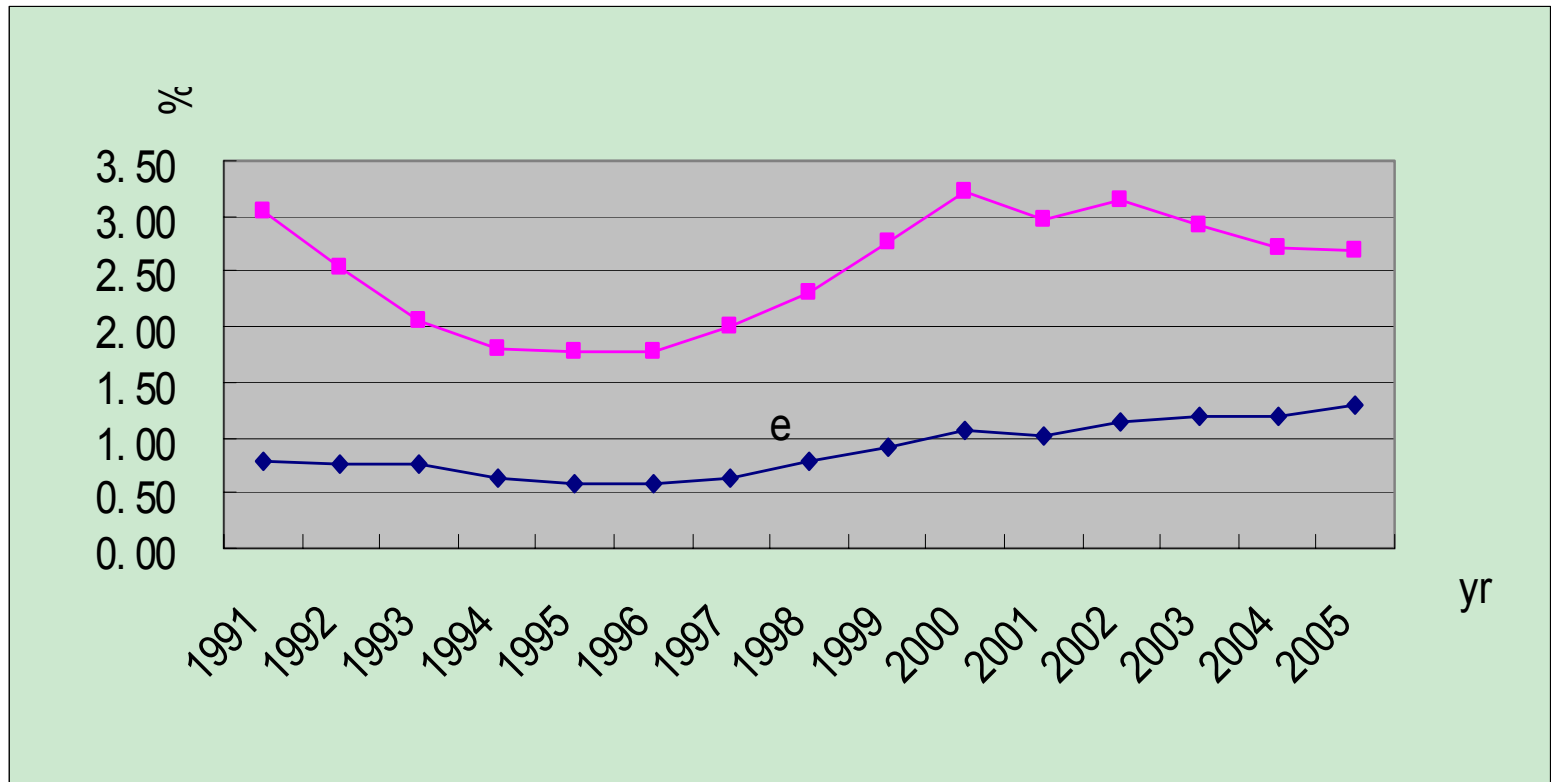
Findings

- Fiscal Investment should be increased
- Fiscal Investment should be designed to correct the pricing failure, for example
 - Investments in sewage treatment plants' construction have been concentrated mainly in:
 - Economically developed areas
 - Lower reaches of a river
 - Big cities
 - In relatively poor middle and upstream locations, investments in sewage treatment plants' lags far behind

Pollution Control Investment (billion RMB)



Environmental Investment in GDP and Fixed Assets Investment



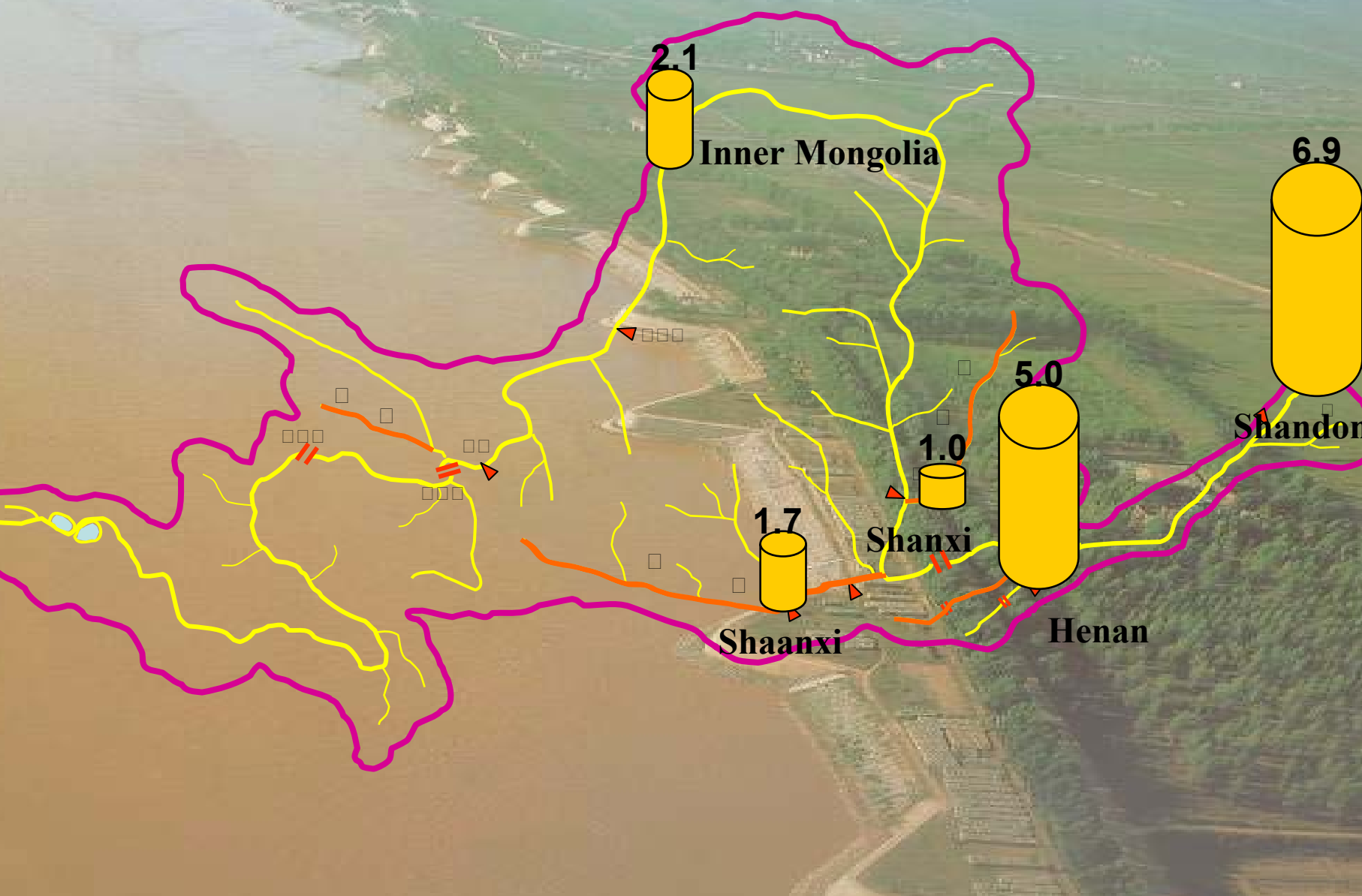
-----ratio of EI in FAI

-----ratio of EI in GDP

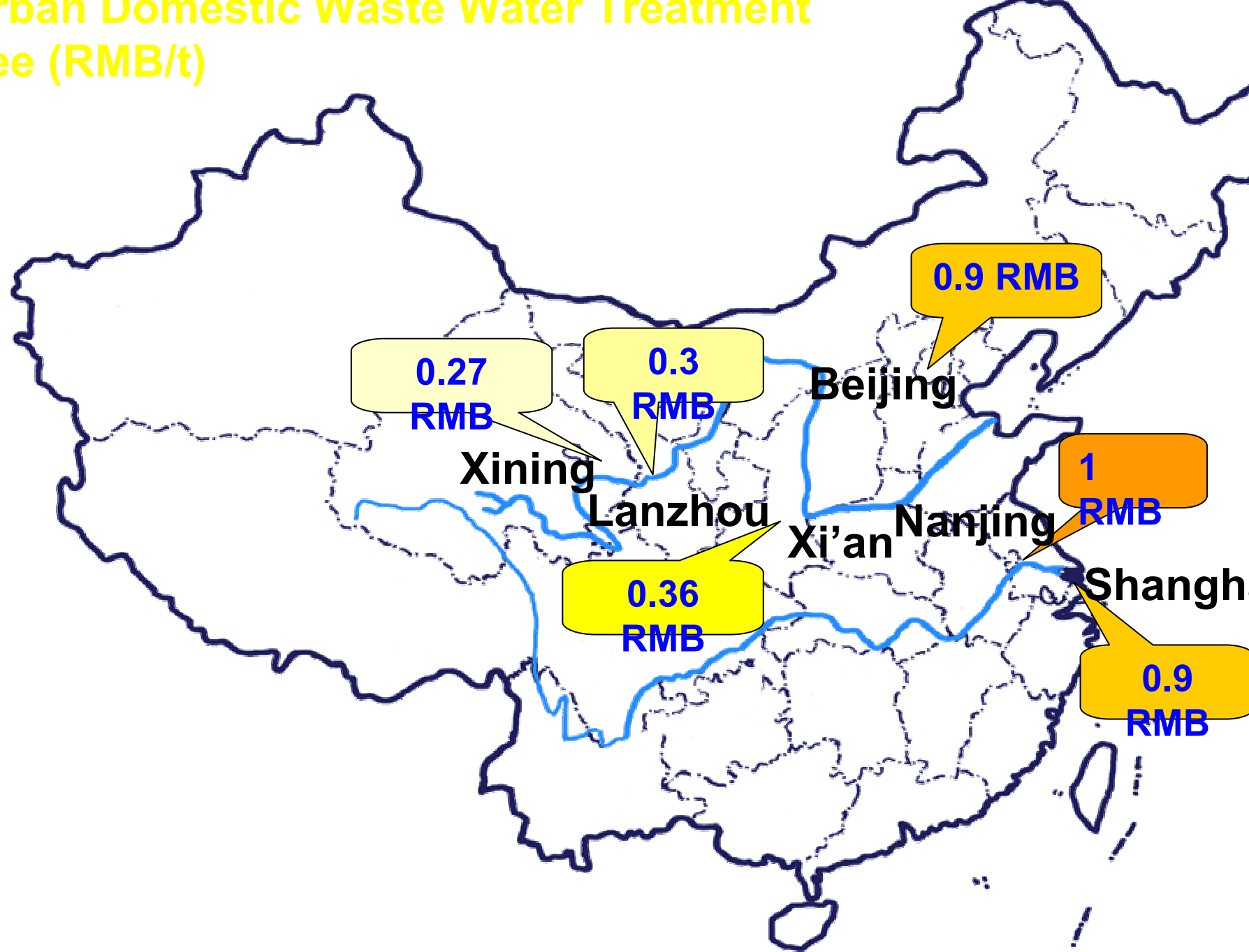
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Distribution of investments in wastewater treatment in the Yellow River (Bn RMB)



Urban Domestic Waste Water Treatment Fee (RMB/t)



Prospects of EFR in China

- To define the financial responsibility of different bodies according to the range of environmental impact
- Increase environmental input
- Government should fulfill its financial responsibility
 - Fiscal Account
 - Central –local: Responsibility match with capacity
- Comprehensive use of EFIs to achieve environmental goals
- Environmental taxation reform has to go together with pricing reform