

Eco-compensation Vs Pollution compensation

US Transboundary Watershed

Management:

Experiences and Lessons

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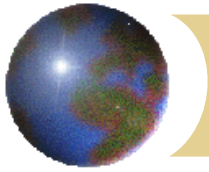
Chongqing

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Outline

- ❖ The Economic Essence of Watershed Management
- ❖ Watershed Eco-compensation/ Pollution Fees: Standards and Guidelines
- ❖ US Experiences and Lessons
- ❖ A Few Points of Discussion



THE ECONOMIC ESSENCE OF WATERSHED MANAGEMENT



The Economic Essence of Watershed Management

- ✦ **Watershed Management: Perspective of Environmental Economics and Institutional Economics**
 - ✦ Environmental Economics: Externality of individual/business behavior
 - Positive externalities
 - Oxygen is released during fruit tree production.
 - Negative externalities
 - Enterprises discharge pollutants during production.
 - ✦ Institutional Economics: Property rights-based infringement is a reflection of the legal system of negative externalities
 - Space infringement: Invading the right of neighbors
 - Sewage discharged to the downstream
 - Time infringement: Invade the right of next generation
 - Sewage into the ground



The Economic Essence of Watershed Management

✚ Institutional Issues of Watershed Management: Institutional Economics Perspective

✚ Market failure is due to the following factors:

- Property is unclear.
 - Water environment assets, public property (environmental capacity)
 - Environmental assets allocation (allocation of pollutant emission rights)
 - The rights and interests of the ecological environment; the property rights of pollution discharge are not clear.
 - The responsibilities between polluters and beneficiaries are unclear.
 - The responsibilities between upstream and downstream are unclear.
- Transaction costs are too high; property can not be exchanged.
- Trading price is difficult to determine; unable to force the transaction.



The Economic Essence of Watershed Management

✦ **Government Functions**

- ✦ Let the failed market work again.
 - Clarify environmental rights and interests: The "property rights" of pollution discharge
 - Who compensates, who benefits?
 - Reduce transaction costs: Clear trading rules, so that owners of ecological rights and interests of property rights prone to replacement
 - Determine the transaction price: Enforced



The Economic Essence of Watershed Management

✦ **Important Regulation Basis for Establishing a Long-term Mechanism of Watershed**

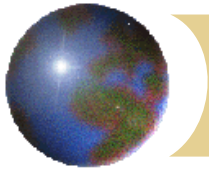
- ✦ Law of the People's Republic of China on Tort Liability, 26 December 2009 approved since 1 July 2010 will come into effect. Among them, “Chapter VIII Environmental Pollution Liability”
- ✦ State Council “on the implementation of the scientific concept of development to strengthen environmental protection decision” (National Development [2005] No. 39) Article 21 stipulates:

To establish a trans-provincial river section water quality assessment system, where the provincial government shall ensure that the exit water quality achieves the assessment objectives. The state will step up the coordination of environmental enforcement and pollution disputes across provincial boundaries. For upstream provinces sewage polluting downstream provinces, the upstream's provincial government should assume the responsibility for compensation, and in accordance with the law, hold accountable units and personnel.

The specific ways of compensation are proposed by the Ministry of Environmental Protection together with the relevant departments.

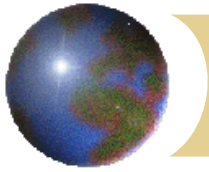


***WATERSHED ECO-COMPENSATION
OR POLLUTION FEES:
STANDARDS AND GUIDELINES***



Need to Answer the Question

- ⊕ Payer?
- ⊕ Payee?
- ⊕ How?
- ⊕ How much?
- ⊕ If not, what happens?



US EXPERIENCES AND LESSONS

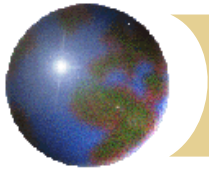


US Experiences and Lessons

- ❖ **The clear definition of watershed property rights**
 - ❖ The bottom-up constitution determines the rights of each state.
 - ❖ Legal traditions

- ❖ **The high transaction costs between upstream and downstream**
 - ❖ No eco-compensation, only pollution compensation
 - ❖ No "deal" price
 - ❖ High cost of judicial proceedings (not only money but also time costs)

- ❖ **The effect of watershed water quality management**
 - ❖ More than half of the water quality is not up to standards
 - ❖ Water quality standards (swimmable, fishable, drinkable)

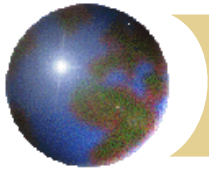


A FEW POINTS OF DISCUSSION



Property Rights and Eco-compensation / Pollution Compensation

- ✚ The essence of eco-compensation/pollution compensation is the replacement of the ecological environment property rights under the government's guidance, let the failed markets recover.
- ✚ Form a system, implemented by the administration, to reduce transaction costs, unless the controversial situation is resolved by judicial proceedings.



Output-based Compensation

- ⊕ Output-based compensation vs. Protection cost-based compensation
- ⊕ Output-based compensation vs. Compensation Rate Method based on Ecological Services Value/Pollution Damage Costs



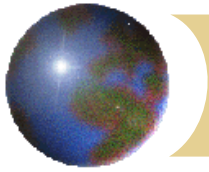
Local Protectionism

❖ **Local government costs-benefits**

- ❑ Benefits: Corporate tax
- ❑ Cost: Pay pollution compensation fees to downstream, including corporate sewage
- ❑ Benefits - Cost > 0?

❖ **Enterprises emit pollutants secretly.**

- ❑ Sewage discharged to the downstream: the total amount of money it steals is equal to the pollution compensation fees that the government pays for its downstream
- ❑ Sewage into the ground: pollution caused to the next generation and must be punished by severe and high fines



Ecological compensation and poverty alleviation funds

- ❖ Eco-compensation which compensates for ecological impacts is different from poverty alleviation funds, with different responsibilities.
- ❖ Poverty can be alleviated through transfer payment schemes, such as special poverty reduction funds.
- ❖ Poverty cannot be an excuse to pollute the downstream.



The Transformation of the Mode of Economic Development

The results of implementing ecological compensation/
pollution compensation in the whole watershed

- ✿ **The cost of pollution is fully included in the production costs.**



- ✿ Clean production,
improve water efficiency

- ✿ Transforming the economic structure and promoting Resource Conservation - Environmentally Friendly Development of less water and less polluting industries

THANKS!

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