Practices of Ecological Compensation in Beijing

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Backgrounds

- The vegetation of Beijing is mainly composed by warm and temperate zone deciduous broadleaved forest leaded by the Quercus, Tilia, Fraxinus, Aceraceae, Poplars and the conifer forest leaded by the *Pinus tabulaeformis* and *Platycladus orientalis*.

- Forest cover of Beijing increased from 1.3% in 1949 to 36.5% in 2007

- 71.25% of the forests are public benefit forest
Backgrounds

Water system of Beijing

- 5 water systems in Beijing
- 85 reservoirs including the big reservoirs of Miyun reservoir, Guanting reservoir.
- Up stream of Miyun and Guanting Reervoir are in Chengde and Zhangjiakou in Hebei province.
Backgrounds

- Miyun Reservoir with a total watershed area of 15,788 sq.km, 2/3 of the area are in Chengde and Zhangjiakou in Hebei Province, 1/3 located in Beijing (4,500 sq.km);
- With a volume of 4.38 billion cubic meters;
- Responsible for 70-80% of the water supply of Beijing city.
Backgrounds

- Guanting Reservoir located in Guangting Village, Huailai County, Hebei province and Yanqing County, Beijing. E112° 8.3′ ～ 116° 20.6′ and N41° 14′ ～ 38° 15′
- The watershed area of Guanting Reservoir is forty-three thousands square kilometers.
- Since the upstream of Yong Ding River was polluted, Guanting Reservoir’s drinking water supply systems was quit in 1997
- 21st, August 2007, Guanting Reservoir was recovery the drinking water supply systems and became the emergence wellhead engineering in Beijing
Backgrounds

Serious challenges we face:

- low forest quality, production and ecological function, urgently need management;
- Water crisis;
- Poverty rural Community
Backgrounds

- Water shortage

Beijing have experienced a prolonged dry spell over 9 years (1999-2007).
Backgrounds

- Water Pollution

![Image of polluted waterway]

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Socio-economics of Beijing

- Big gap between urban and rural, Beijing and Hebei (the annual average net income per capita in 2005)

![Bar chart showing annual average net income per capita in 2005 for Beijing, Chengde, and Zhangjiakou, with urban and rural sources of cash income.]  

- Sources of cash income in the rural areas are basically the same such as the eco-compensation, migration labor, and plantation of economic forest (chestnut and walnut).
Ecological Compensation

Ecological service provider
(Upstream Chengde and Zhangjiekou, Hebei province)

Land Conversion from Paddy Field to Dry Farming

Water pollution control

Water conservation forest management

Compensation

Ecological service consumer
(Downstream people living in Beijing city)

Ecological service provider
(Upstream sub-urban Beijing)

Forest warden

Water Warden

Respect Cooperation Creativity Sharing

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The Beijing Forest Ecological Benefit Compensation Fund (FEBCF) - set up in 2004

Aims to promote social, economic and forestry development in mountainous areas and to increase indigenous farmers’ income

It is a subsidy scheme for forest protection, basically providing jobs and income to so far 43,000 villagers

The scheme shall enhance the practices of ecological forest management on more than 608,000 ha of ecological forests in the Beijing Municipality.

The annual municipal budget earmarked between 2004 and 2010 is CNY 192 million.
Water Warden


The allowance of 500 yuan per month was offered to the managers by Beijing government.

1 to 3 water managers were set for every village in Beijing according to the length of river, water equipments condition, population, village area.

Driven well maintenance, water fee collection, sewage letting.

The managers aged from 18 to 50, with culture higher than junior high school, basic water related knowledge, computer knowledge. Village cadres and forest wards couldn’t be employed as water managers.
Ecological Compensation of Cross-border

- Memorandum of Enhancing Economy and Society Development Cooperation between Beijing and Hebei Government was subscribed in Beijing on 11 Oct. 2006.

9 cooperative topics include construction of basic transportation establishment, eater resource and ecological environment conservation, energy exploitation cooperation, industrial adjustment cooperation, industry park cooperation, agriculture cooperation, tourism cooperation, labor service market cooperation and hygiene cooperation.
The compensation of rice field changing to dryland

- The project of rice field changing to dryland was implemented both in Beijing and Hebei.
- Planting corns in 12,000 ha of rice field in Chengde and Zhangjiakou – upstream area of Miyun and Guanting reservoir. This project was collaboratively implemented in two terms.
- The compensation of 6750 yuan (1000USD) per year per ha was given to the farmers changing to dryland in Beijing.
- Support the use of biogas in Zhangjiakou and Chengde, conserving forestry resources and improving ecological environment.
Control water environment pollution

- From 2005 to 2009, Beijing government will collect **100 million Yuan** (**15 mil. USD**) to help control water environment pollution and develop water-saving industry in Zhangcheng area - the upstream of Miyun and Guanting reservoir;

- Presently, the first part of fund of **20 million yuan** (**2.8mil. USD**) has been allocated to support the implementation of the seven projects such as head stream conservation of Heihe River in Chicheng County.

- 53% water volume of Miyun reservoir comes from Chicheng, and all of the water in Baihebao reservoir comes from Chicheng.

- From 2004 to 2007, Chicheng County continuously delivered more than 60 million m3 of water to Beijing.
The ecological greening of Hebei Province will directly affect the air quality and water quality of Beijing;

Jointly apply to broaden the compensation area of ecological public welfare forest in Hebei Province, increasing the support to National Forest Farms;
The ecological greening

Jointly plan the construction project for the conservation of ecological water resource at upstream of Miyun and Guanting reservoir; as applying national support, Beijing will offer part of financial support to help the planting of ecological water source protection forest in Fengning, Luanping, Chicheng and Huailai County in Hebei Province in the Eleven-five year period; according to the test effect, supports will be offered to broaden the protection forest area in Hebei Province.

Beijing and Heubei water resource protection forestry and forest protection cooperation project action plan(2007 – 2011):

- water resource protection forest 200,000 Mu (18,000 ha), and invest 100 million Yuan (15 mil. USD),
- Invest 35 million (5 mil.USD) in forest fire prevention basic facilities 35 million
- Invest 15 million Yuan (2.2 mil.USD) in Forest pest bio-control.
Prospective

- Combine ecological compensation and carbon sequestration, realizing the marketization and monetization of the carbon sequestration function; (Draft version of forest carbon sequestration has completed and will be in operation soon, 150 mil. USD) totally will be distributed to 7 mountain countries)

- Seek for the diversification of ecological compensation methods: obtain ecological compensation fee from water fee;

- Promote the development and improvement of related ecological compensation policies and regulations, and construct the standard system for ecological compensation in key area;

- Enhance the coordination with related departments, put up the government-managed platform to help construct watershed ecological compensation system, and promote the construction of ecological compensation for water environment conservation of cross administration region.
Thank You!
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