Presentation given at the Southeast Asia Katoomba meeting

Katoomba XVII
Taking the Lead: Payments for Ecosystem Services in Southeast Asia

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Hanoi, Vietnam

Hosted by:

Forest Trends, the Katoomba Group, Ministry of Agriculture and Rural Development (MARD), Ministry of Natural Resources and Environment (MONRE), United States Agency for International Development (USAID) and Winrock International
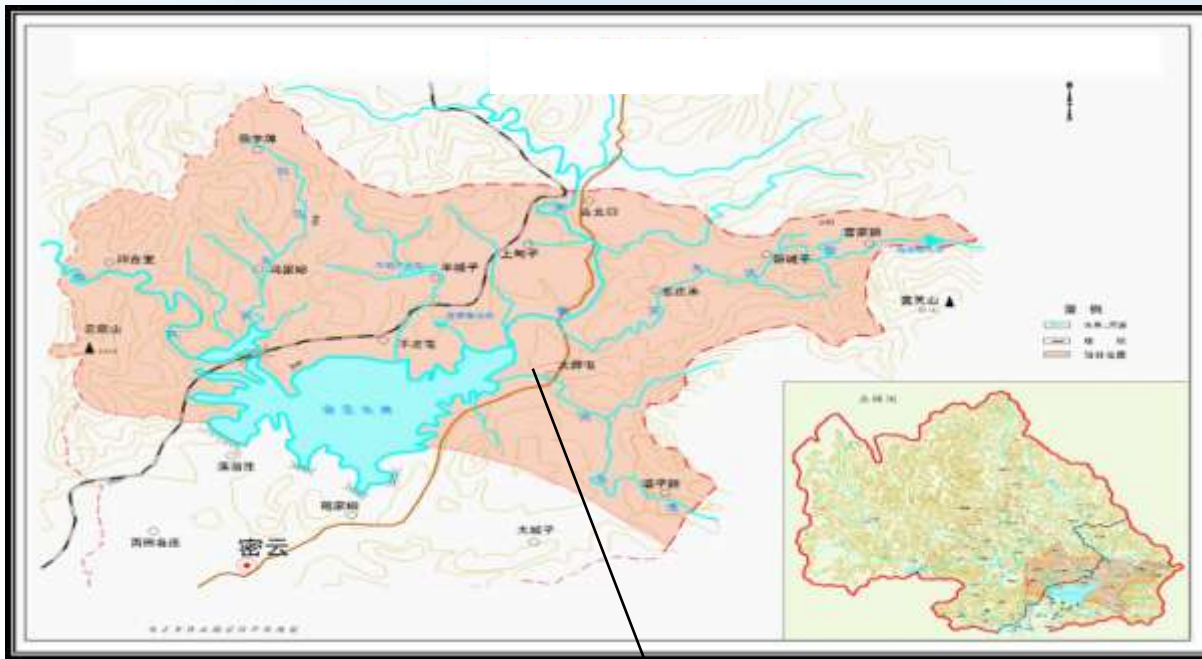
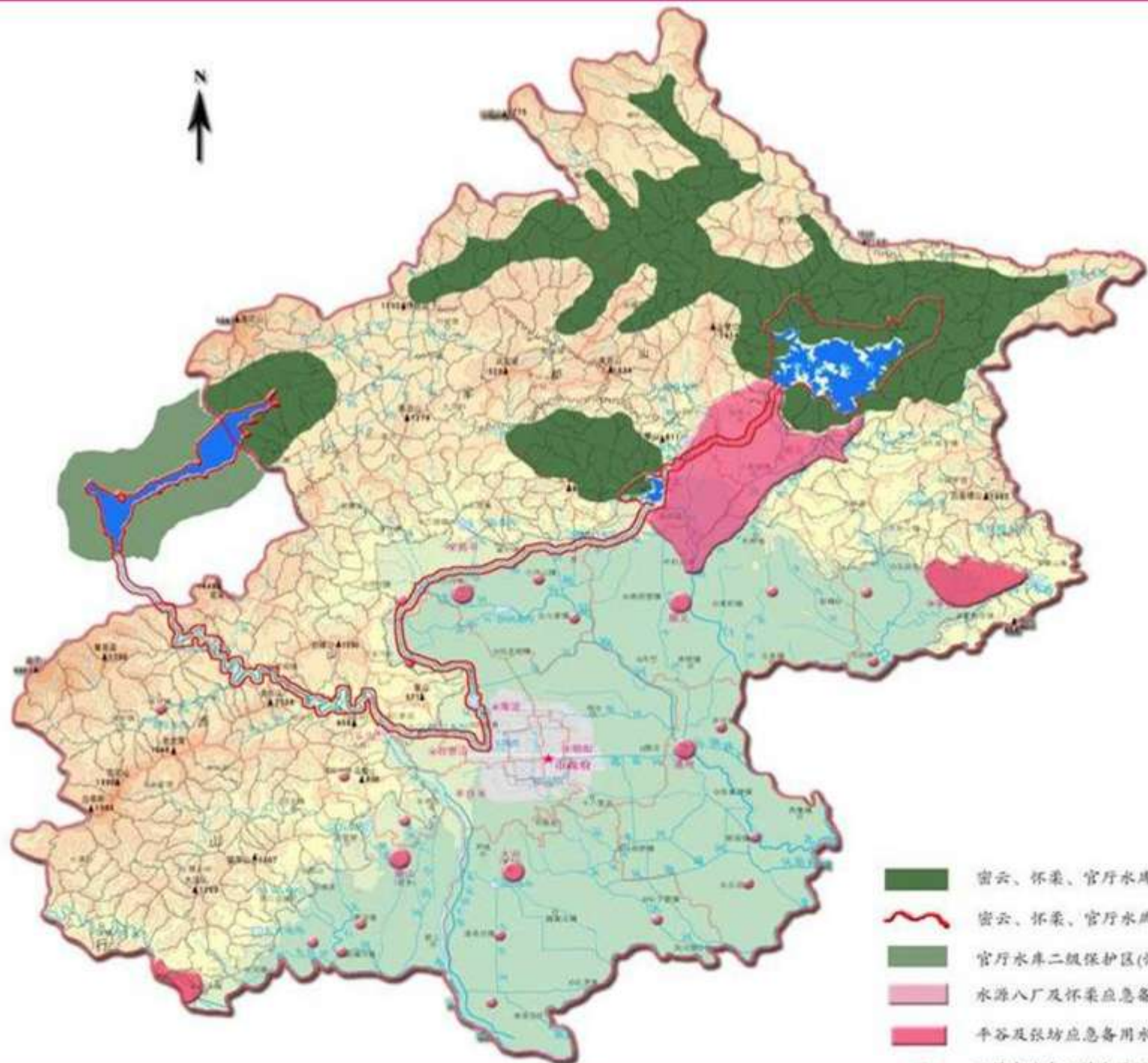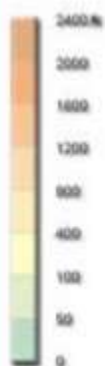# Practices of PES in Miyun Watershed: Stacking and Bundling

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Beijing Forestry and Parks Administration (BFPA)
Beijing Forestry Society (BFS)

June. 24, 2010

The total area of MWM : 13,800 km^2

图例：
- 密云、怀柔、官厅水库上游重点水源保护区
- 密云、怀柔、官厅水库一级保护区
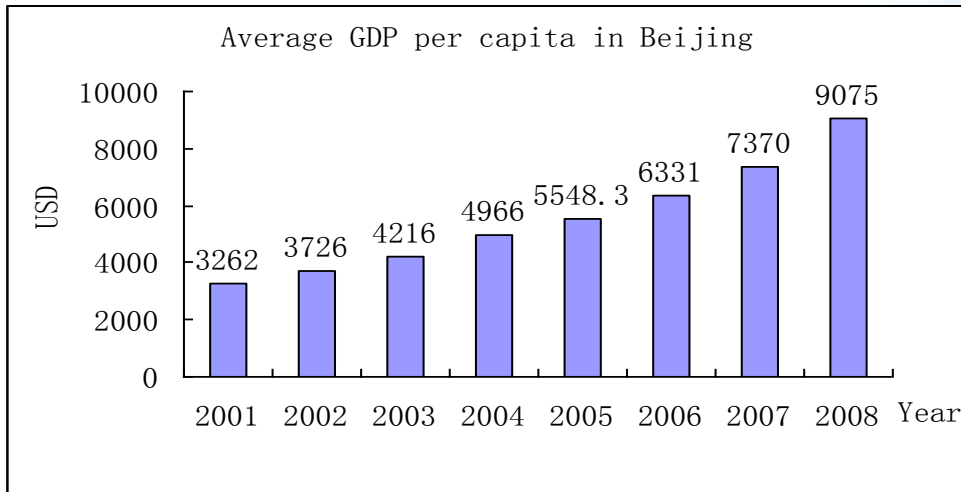- 官厅水库二级保护区(怀来县境内)
- 水源八厂及怀柔应急备用水源地重点保护区
- 平谷及张坊应急备用水源地重点保护区
- 卫星城及中心镇水源保护区

Background

❖ **Unbalance economic development**

Average GDP per capita in Beijing

🍃 **In 2008, in Beijing, the income of urban residents is two times more of the rural.**

Annual average net income per capita in 2008 (CNY)

Urban
Rural

Zhangjiakou — 10861.3 / 3656
Beijing — 24725 / 10747
Chengde — 12054 / 3286
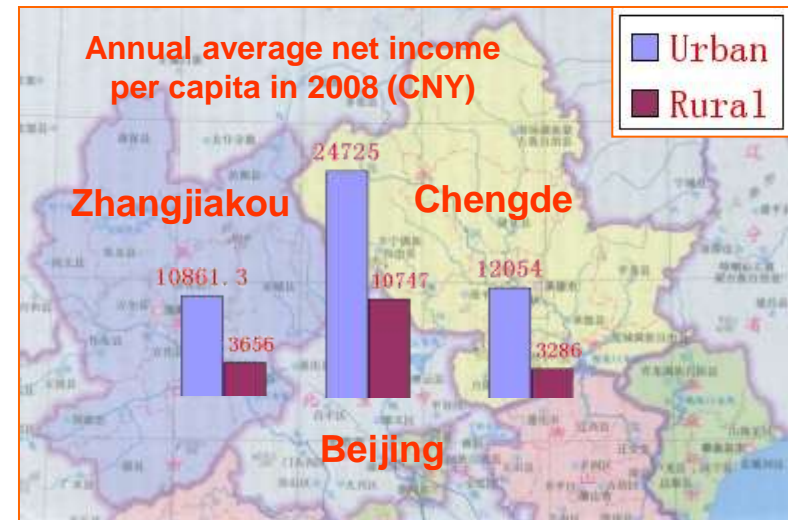
Background

❖ **Water resource shortage and pollution**

cubic meter of water Per capita

- Beijing: 285
- China: 2240
- World: 6918

yearly rainfall
10-year MA rainfall

Precipitation in Beijing between 1999-2006

Year	Precipitation (mm)
1998	731.7
1999	373
2000	438
2001	462
2002	413
2003	453
2004	539
2005	468
2006	448
2007	499
average (1999-2007)	455
average (1956-2000)	585
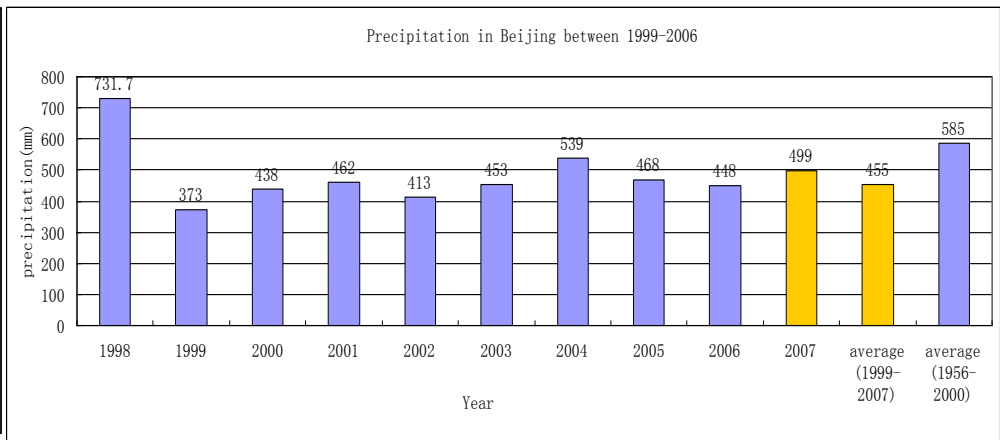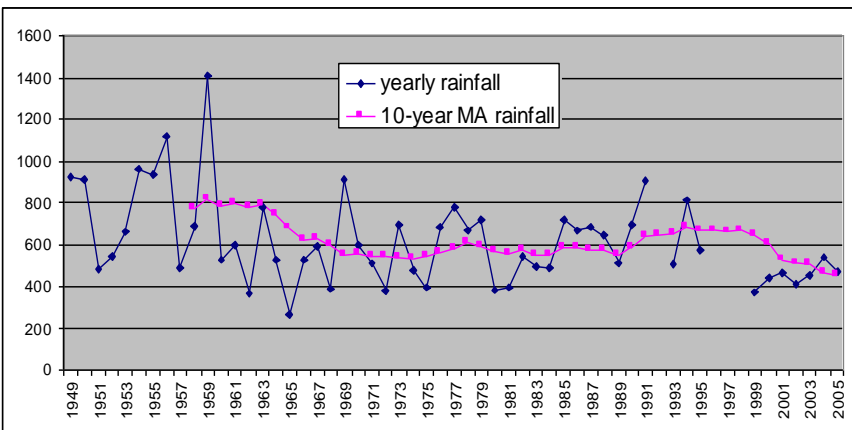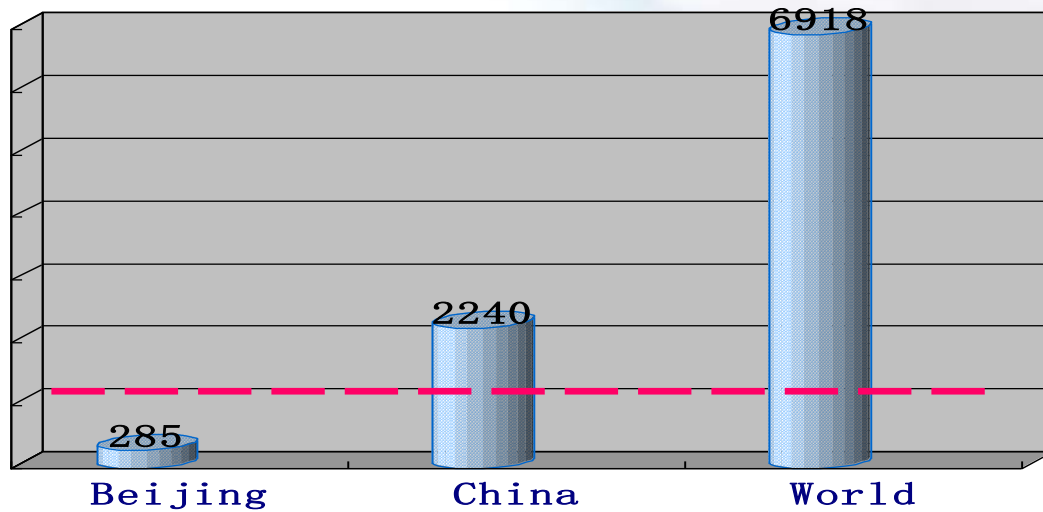
Water level in Miyun Reservior

Background

❖ **Forest carbon is considered as an effective tool to balance the economic development bet. Urban and rural.**
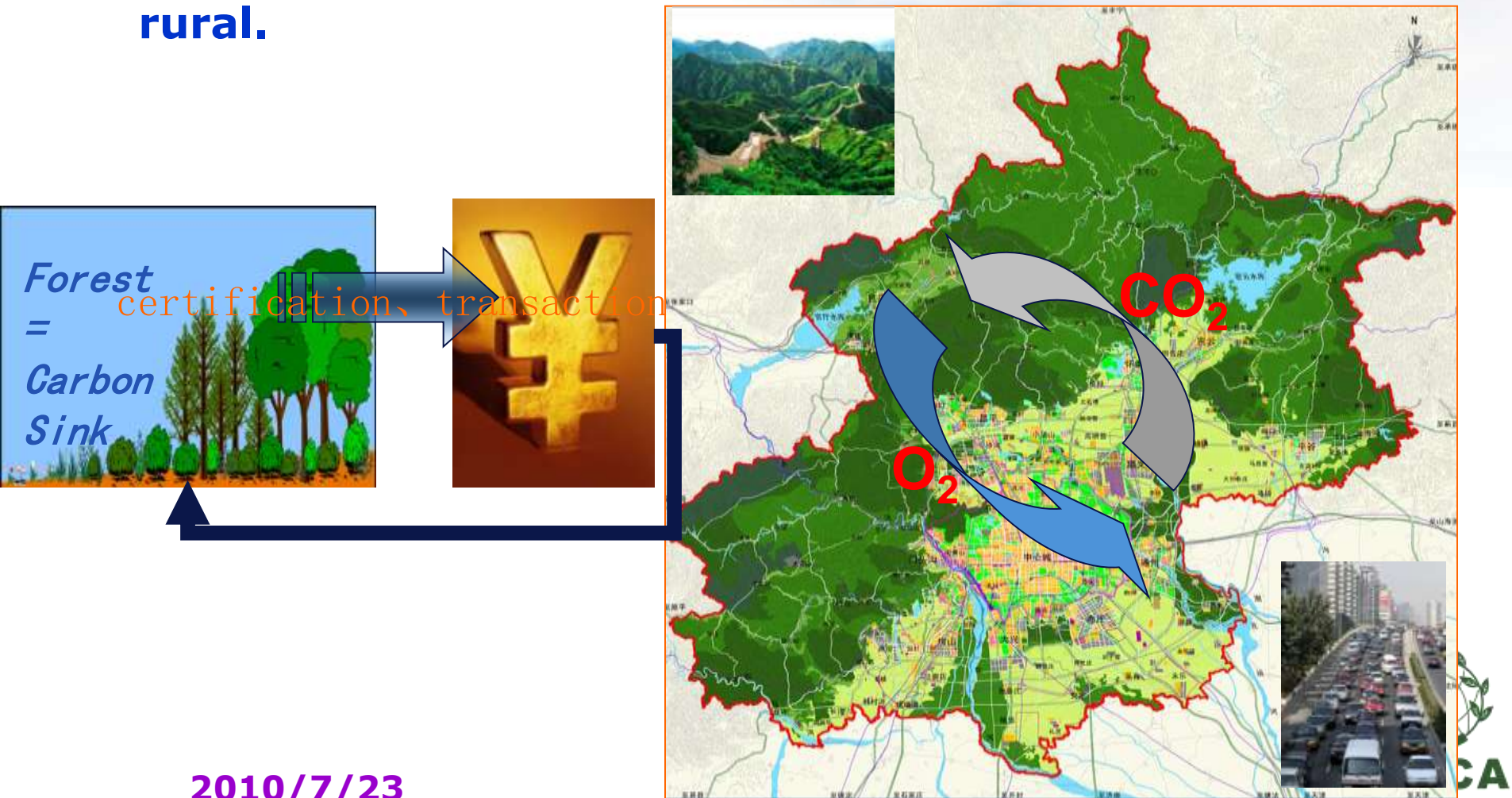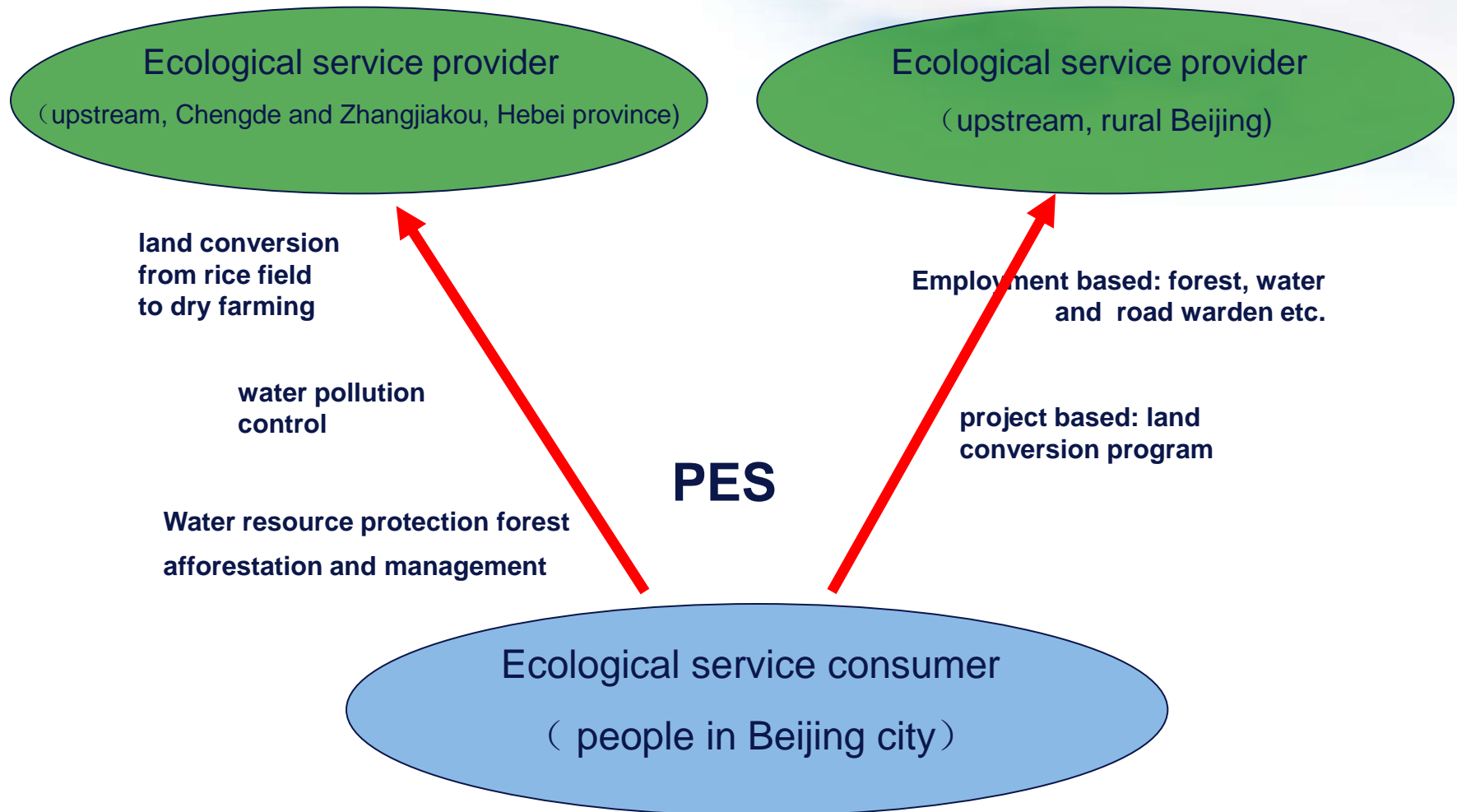
Forest
=
Carbon
Sink

certification、transaction

CO_2

O_2

2010/7/23

Practices

Payments for ecosystem services

Inter-regional Cooperation

❖ In 2006 and 2008, the governments of Beijing and Hebei signed the *Memorandum and agreement on Consolidation of Cooperation in Economic and Social Development respectively*.

➢ construction of the traffic infrastructure
➢ protection of water resource and eco-environment
➢ development of energies
➢ industrial adjustment
➢ industrial park zones
➢ agriculture
➢ tourism
➢ labor service and public heath.

京冀生态水源保护林建设合作项目位置示意图

2010/7/23

land conversion from rice field to dry farming

❖ Beijing and Hebei has been cooperating to replace rice paddies (12,200 hectares) by Low water-consumption crops (maize) to reduce water consumption since 2007.

❖ Subsidies $1350 /ha/year.

Urban to Rural of Beijing

Employment opportunities

❖ Forest warden

❖ Water warden

❖ Rural Cleaners

❖ Rural Roads warden

❖ Land and Mine Resources Warden

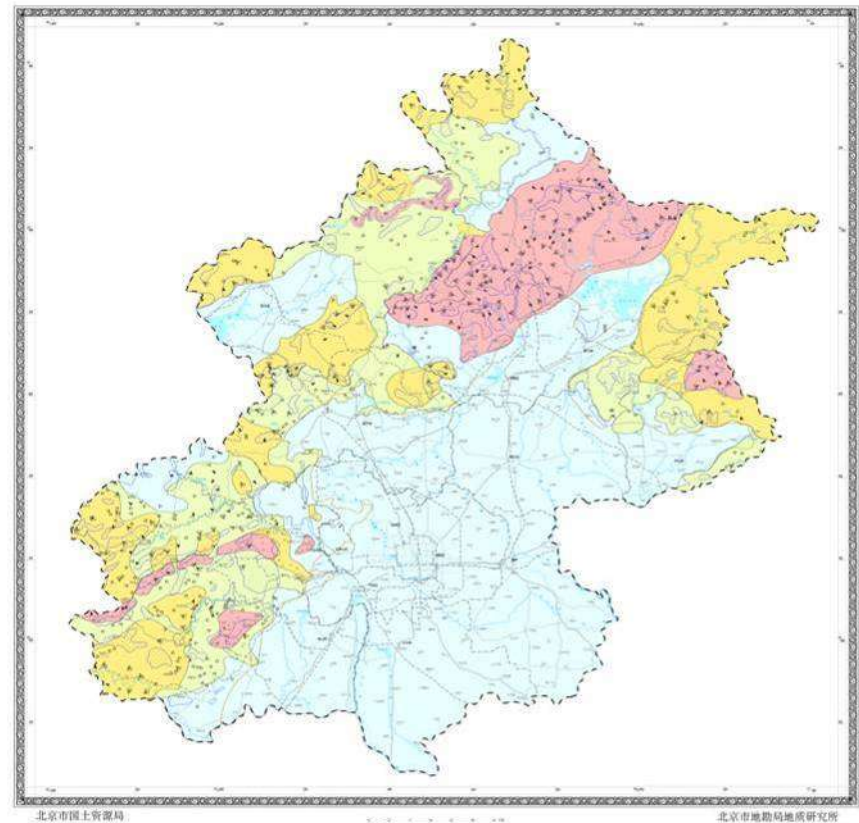Till end of 2008, created 100,000 ecology-related new jobs!

Ecological migration

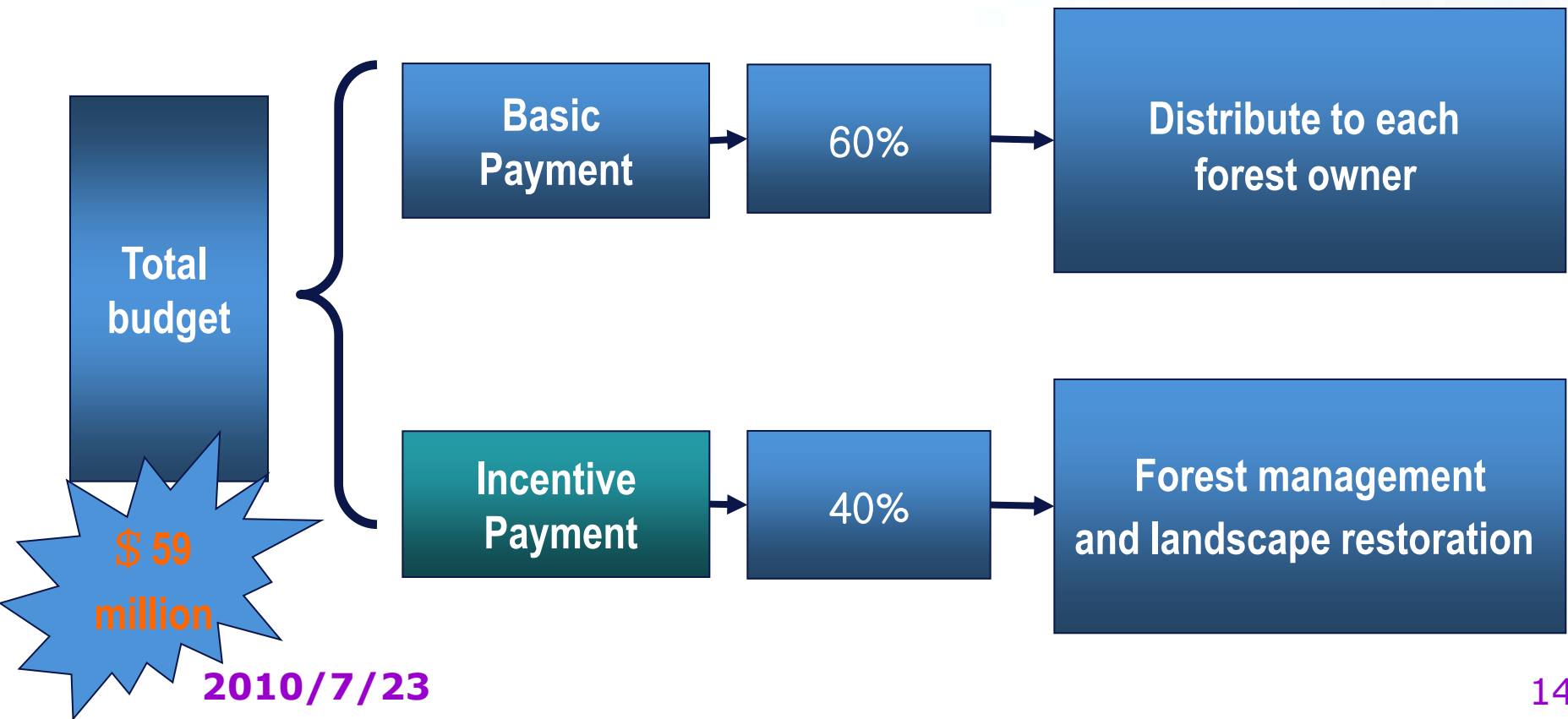➢ **40% of the mountainous area of Beijing is situated in high risky area of debris flow. About 6,000 people a year.**

北京市突发性地质灾害易发区划图

北京市国土资源局   北京市地勘局地质研究所

Set up a PES Mechanism

❖ From 2010, Beijing will provide ＄59 million each year to establish a PES mechanism (called Mechanism for development and encouragement of Eco-benefit). The funding will be adjusted every 5 years based on the change of ecological services, level of carbon stock and economic development.

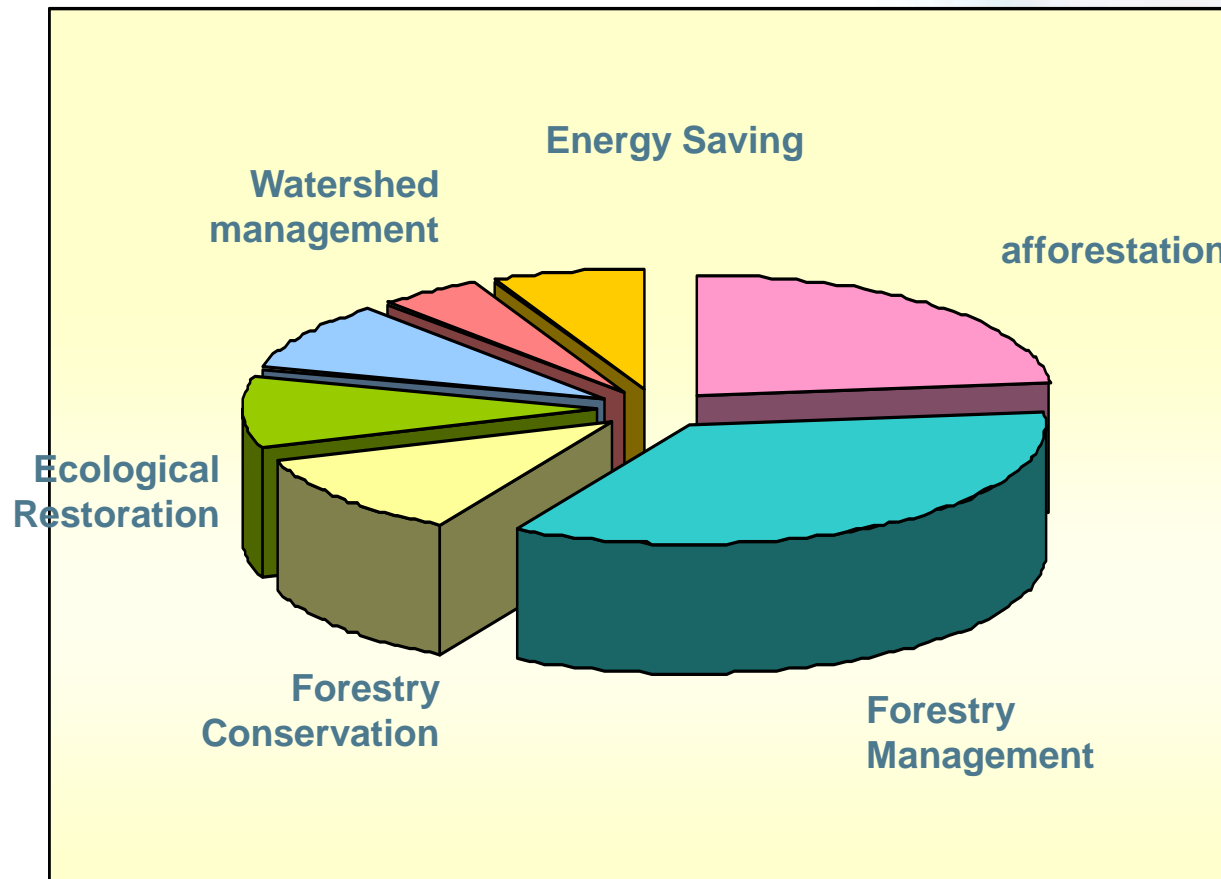| Total budget	Basic Payment	60%	Distribute to each forest owner
＄59 million	Incentive Payment	40%	Forest management and landscape restoration

Set up a platform for ES exchange

➢ In August 2008, Beijing environmental exchange was set up.

➢ In November 23, 2009, China forestry exchange was established.

Established Green Carbon Fund Beijing

Energy Saving

Watershed management

afforestation

Ecological Restoration

Forestry Conservation

Forestry Management

5,200 people participated,

About $ 470,000 till end of the April.

Challenges

- Limited sources of funding

- Adding payments for biodiversity? MRV?

- Immature market for Water and carbon

- How to balance water resource and forest carbon stock

- Poor awareness, less participation and unstable benefits of local communities

Thank You !