

Policy Implications of Co-benefit on China: Linking Air Pollution and GHGs

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Integration of air pollution control and GHGs reduction

◆ Integration policies

- How large of Co-benefits, significant enough?
- If so, what are challenges and opportunities for national government
- If so, will China adjust its policies?

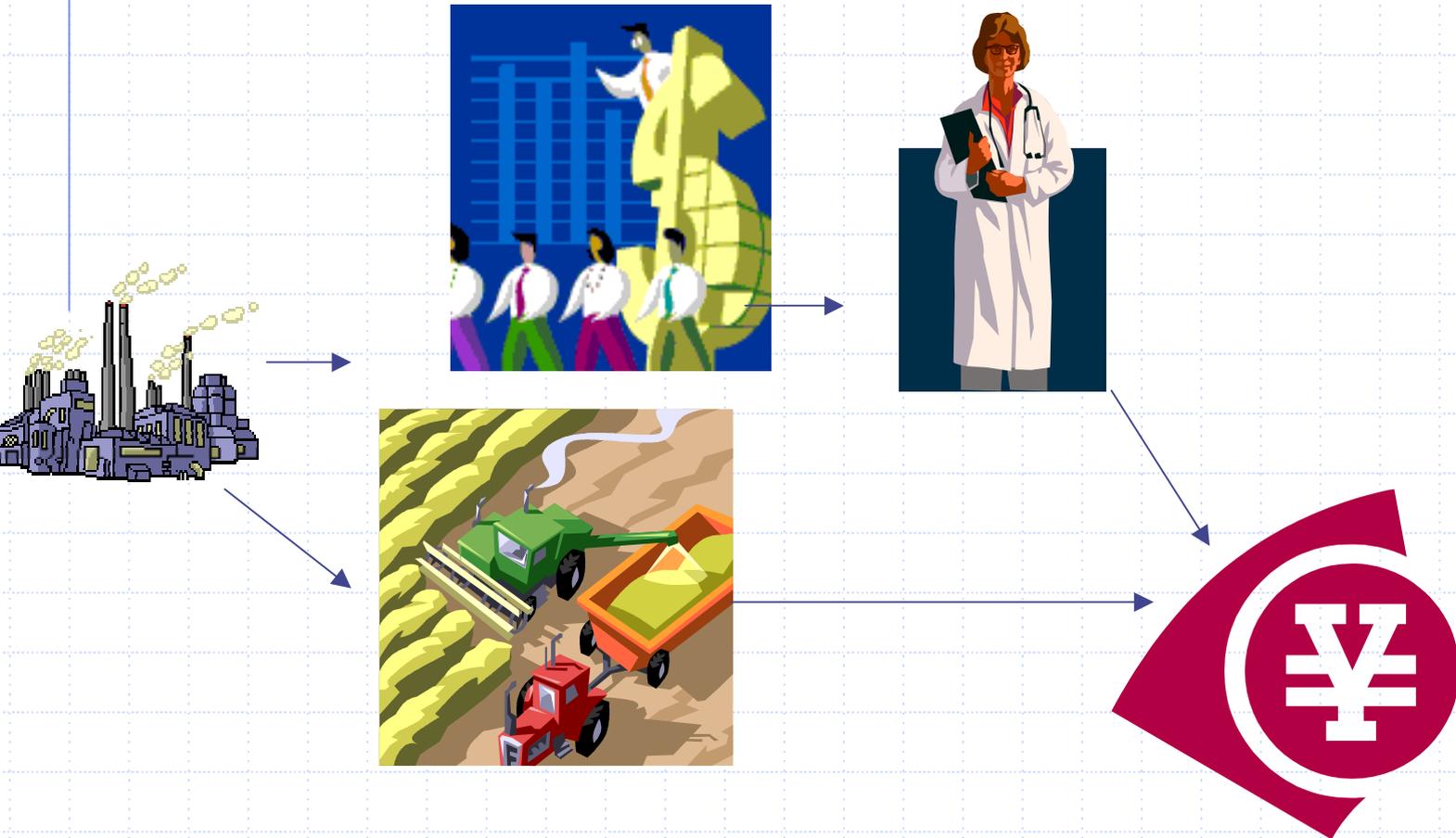
Outline of presentation

- ◆ Review of co-benefits
 - Health and Vegetation
 - Carbon
- ◆ Introduction to policies of China
 - Local air pollution control policy
 - GHGs reduction policy
- ◆ Challenges and opportunities for China
 - Climate change policy
 - Air pollution control policy
 - Joint policy
- ◆ Conclusion

Review of co-benefits

- ◆ Local air quality benefits of GHGs reduction efforts
 - Health benefit
 - Vegetation
 - Others
- ◆ Global benefits of air pollution control efforts
 - Carbon reduction
 - Others

Logic Framework



Review of co-benefits

◆ IES Project

- Beijing case study by Prof. He Kebin's group
 - ◆ In 2030, active policies (clean energy consumption (CEC)+industry structure transformation (IST)+energy efficiency program (EEP)+green transportation (GRE)) can mitigate
 - 185 kt SO₂, 415 kt NO_x, 56 kt PM₁₀
 - 781 deaths and
 - 1.38 billion RMB worth of health benefits
 - 25.9 Million TCE energy demands and carbon reduction

Review of co-benefits

◆ IES Project

- Shanghai case study Prof. Chen Changhong's group
 - ◆ avoided premature deaths due to change in PM_{10} concentrations will be 647~5,472 in 2010 and 1,265~11,130 in 2020, respectively
 - ◆ Estimated Social Benefits of PM_{10} Reductions will be 113~950 million U.S. dollars in 2010 and 327-2,884 million U.S. dollars in 2020

Review of co-benefits

- ◆ Estimation by ECON, CICERO and PRCEE
 - Bottom-up model
 - Taiyuan City, Shanxi Province
 - Health Impacts
 - Vegetation
- ◆ Results of Estimation
 - 1-6 million tons SO₂ per year
 - 9,000 – 48,000 life annually saving
 - 30 billion RMB Yuan annually
 - Carbon reduction being re-calculated

Introduction to Air pollution control policy

- ◆ Total emission control (TEC) for industries
 - 3 air pollutants emission caps for local regions
 - Pilot phase of SO₂ emission trading scheme
 - What to do next?

Introduction to GHGs reduction policy

- ◆ No reduction commitment according to UNFCCC and Kyoto Protocol, if KP is still alive
- ◆ Agenda 21, Sustainable Development Strategy
- ◆ Demonstration pilot CDM projects in selected regions with Annex I countries
- ◆ International cooperation with GEF, UNDP, WB, ADB etc
- ◆ Volunteer-based GHGs reductions in the prioritized fields: energy efficiency, new and renewable energy, as well as reforestation
- ◆ What else are win-win situation?

Challenges and opportunities for National Policies

◆ Climate change policy

- CDM
- Baseline

◆ Pollution control policy

- More active air pollution control program
- Incremental costs paying

◆ Joint policy

- co-control

Challenges and opportunities: GHGs reduction policy

◆ CDM policy

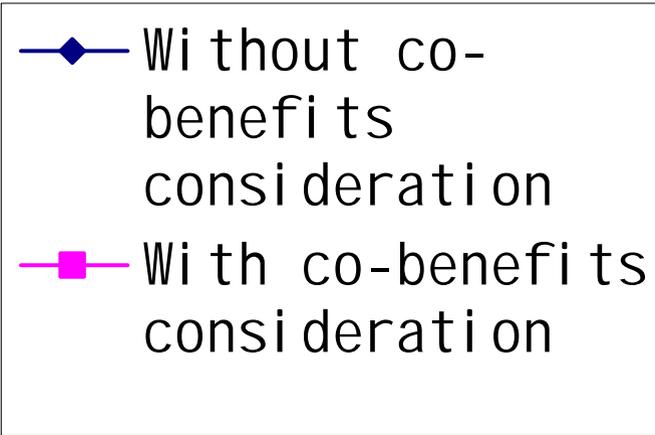
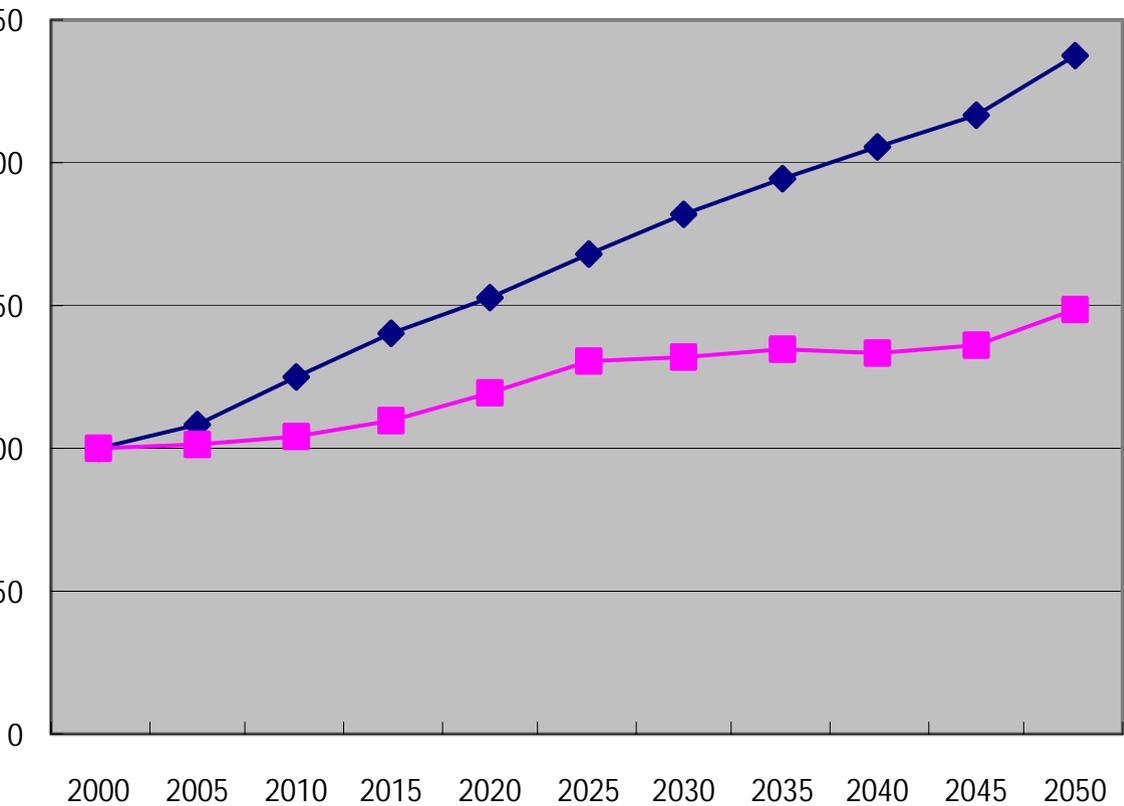
- To support CDM mechanism stronger
- To have more feasible CDM projects
 - ◆ If doing project evaluation of CDM projects with and without co-benefits, obviously more feasible additional conditions for CDM projects, if considering co-benefit of CDM projects
- To have one more tool to encourage local governments and enterprises to implement CDM projects with low CERs price

Challenges and opportunities: GHGs reduction policy

◆ Baseline

- contribution of GHGs reduction by current local efforts, including air pollution control projects (such as total emission control) and other environmental improvements
- Does it change the baseline of China's emission?

mission



Challenges and opportunities: GHGs reduction policy

◆ Baseline

■ Carbon contributions

- ◆ Multiple: GEF
- ◆ Bilateral: CDM
- ◆ NGOs
- ◆ Reserved as CERs
- ◆ How to deal with the deficit of carbon contributions?

Challenges and opportunities: Pollution control policy

- ◆ To have an earlier air pollution clean up program than planned, when having additional funding for GHGs reduction contributions
- ◆ To have more feasible air pollution projects, if incremental costs of projects were paid
- ◆ Beijing case
- ◆ Shanghai case

Challenges and opportunities: Joint policy

◆ Contribution of TEC policy

- Carbon reduction contributions
- Health improvement contribution
- Co-control of CO₂ and SO₂, NO_x, TSP
- Win GHGs reduction and win local benefits

Conclusion

- ◆ Co-benefits for China are very significant and shouldn't be ignored
- ◆ Co-benefit is the priority of SEPA in the field of climate change, indicated by Minister Zhu.
- ◆ Environmental improvement, as same as energy saving and new and renewable energy development, should be put into the priority list of GHGs reduction of China



THANKS!!!

To OECC and AGO