The Co-Benefits of Transportation Policies in Asia

アジアにおける交通政策のコベネフィットを探る

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Hayama, Japan
26 June, 2008

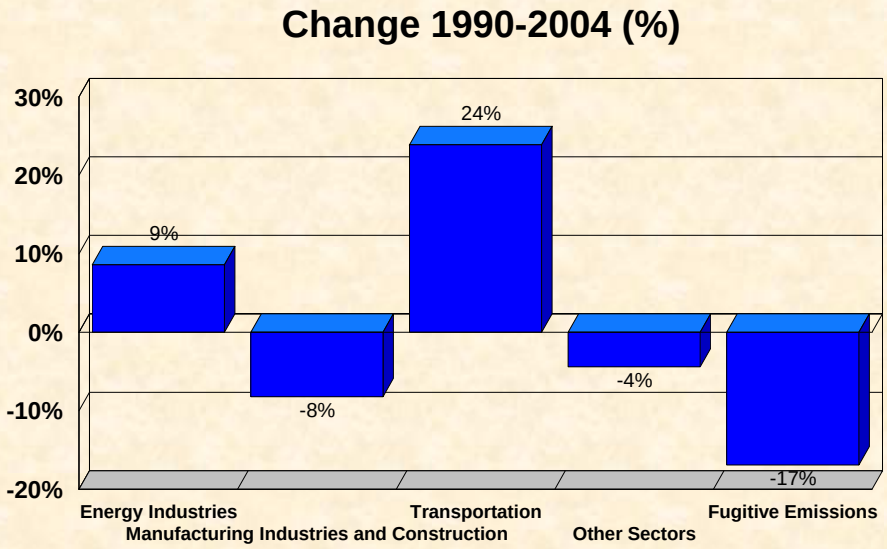
Outline 概要

- Climate, Fuel Consumption, Urban Air Pollution Closely Linked
- Vehicles Are Important for Each
- Must Select Policies/Measures that Provide Co-Benefits or Ancillary Benefits; Not Trading One Problem for the Other
- Clean Fuels/Clean Vehicles Must Play Important Role in Solving Urban Air Pollution AND Climate Problems

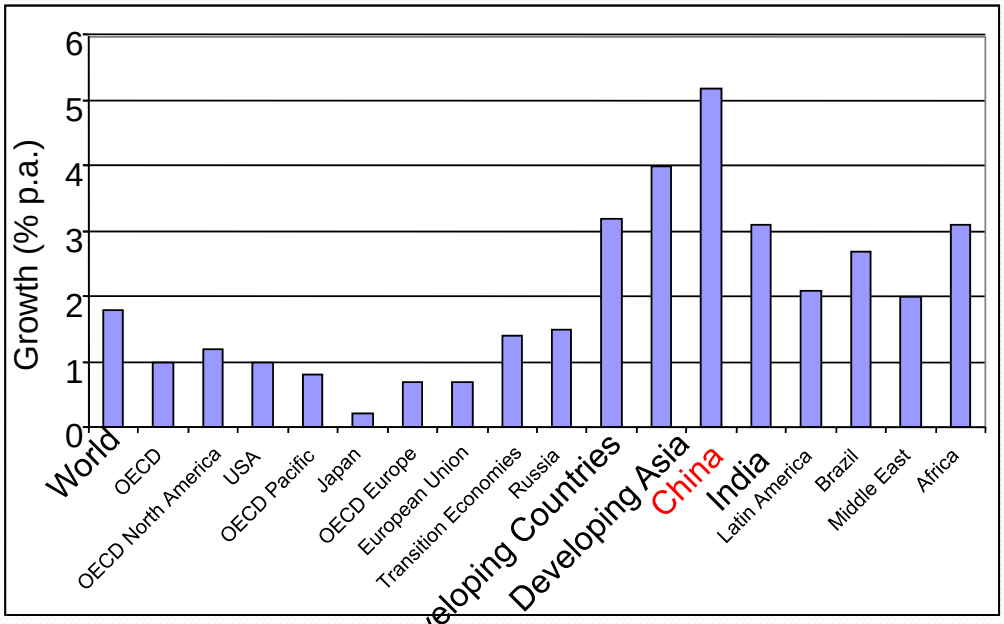
Transportation is Most Rapidly Growing Contributor!

交通部門からの排出量の増加率は最大

Annex 1 Party Greenhouse Gas Emissions in the Energy Sector



- **Energy Demand in the Transport Sector: Annual Average Growth Rate (%) by Region 2004 - 2030**
- 交通部門におけるエネルギー需要：２００４年～２０３０年の各地域の年平均増加率（%）



In 2004, 94 % of transport energy was based on fossil oil.

The share will only slightly decrease to 93 % in 2030.

Source: IEA WEO 2006

Bellagio Principles　ベラージオ原則

- Design Programs & Policies That Reduce Conventional, Toxic, Noise and Greenhouse Emissions in Parallel
- Treat Vehicles and Fuels As A System
- New Vehicle Standards for Greenhouse Emissions & Conventional Pollutants Should Be Fuel Neutral
- Expect & Require Best Technologies and Fuels Worldwide – in Both Industrialized and Developing Countries

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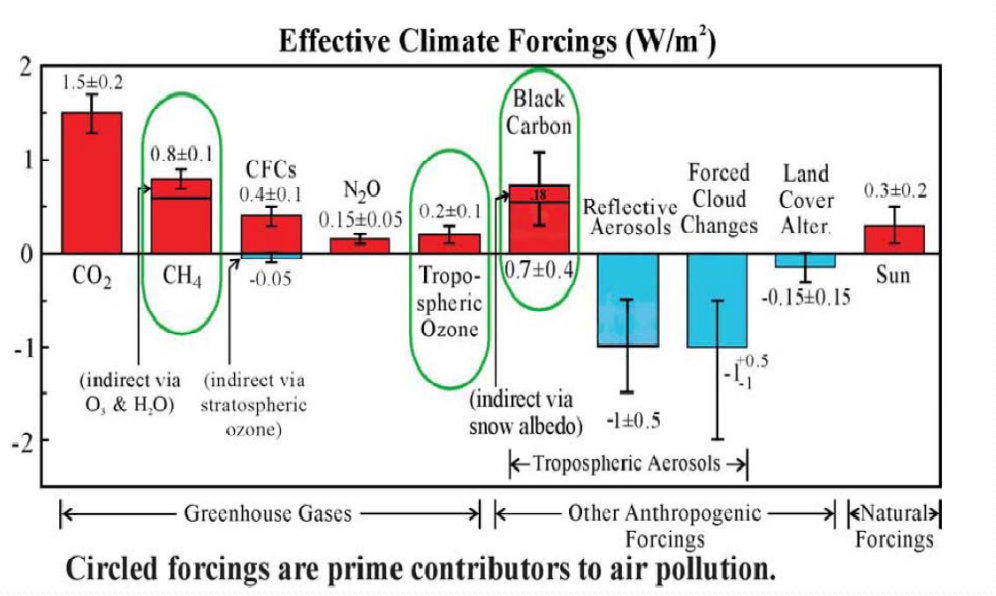
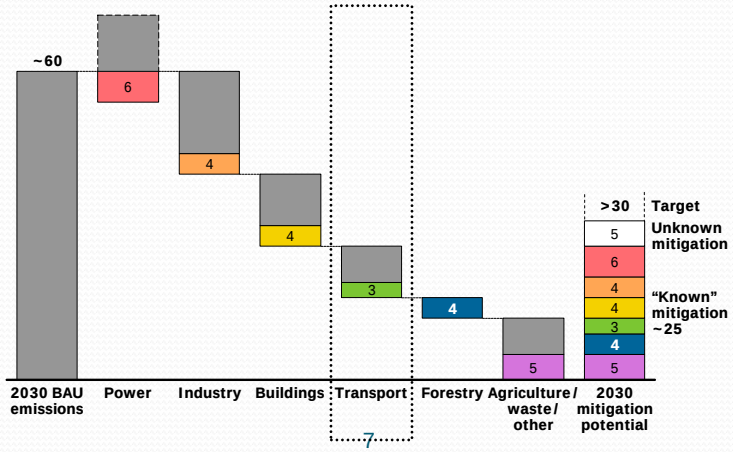
Carbon Dioxide is Not The Whole Story!

二酸化炭素が全てではない！



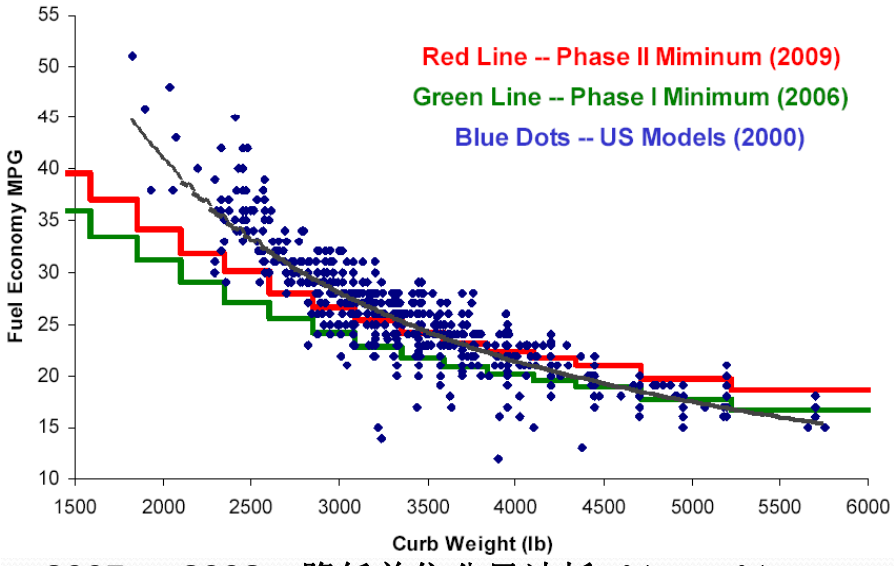
3 key interventions　三つの重要な調整手段

- Low Emissions, Fuel-efficient cars
- Low-carbon fuels
- Reduced vehicle-miles traveled through congestion pricing, Bus Rapid Transit, etc.



Fuel economy standards Phase I and II

燃費基準の2つの段階（第I期および第II期）



Saves Oil, Reduces CO2 and Reduces VOC emissions in Urban Air

2005 to 2008: 降低单位公里油耗5%～10%
reduce per-distance vehicle fuel consumption by 5%~10%

after 2008: 进一步降低15%
further reduced by 15%

Modern Diesel?
モダン ディーゼル車？

Diesel Cars　ディーゼル車

- 20-30% Lower Fuel Consumption Than Comparable Gasoline Fueled Vehicle (Maybe!)
- Outstanding Performance
- Much Cleaner Than in the Past
- But Current Chinese and European Standards Allow
  - Much Higher NOx than From Gasoline Cars
  - Much Higher PM and Black Carbon than Gasoline Cars (Except Where Tax or Other Incentives Encourage Use of PM Filters)
- Clean Diesel Technologies Exist But Are Only Required in the US and Japan to Date

Hong Kong's Approach
香港における取組み

- 1/1/2006 – New Gasoline Cars Meet Euro 4 standards
- 1/1/2006 – New Diesel Cars Meet CA LEV2 standards
- 1/1/2007 – Light Trucks Between 2.5-3.5 tons Meet Euro 4 standards
- 10/1/2006 – New standards will be Introduced for Trucks over 3.5 tons
- ULSD (Maximum 50 PPM) Required; Lower Sulfur Fuels (10 PPM) Encouraged By Tax Policy

Conclusions 結論

- Oil consumption, Climate Change and Urban Air Pollution Are Very Serious Problems
- Transportation is a Major Contributor To Each Problem
- These Problems Are Closely Interrelated
- A Wide Variety of Strategies/Policies Exist which Provide Co-Benefits or Ancillary Benefits
- Or the Opposite
  - Policies Encouraging Diesel Vehicles Can Be Counterproductive Unless Coupled With Stringent Fuel Neutral Emissions Standards
    - Seriously Hurt Urban Air Pollution
    - Undercut Climate Policy with Excess Black Carbon and NOx emissions
  - Low Sulfur Fuels (50 ppm or less) and Strong Government Policies Will Be Required To Obtain "Clean" Diesels