



CDM and the Transport Sector

Paul Procee
Environmental Specialist
Latin America Department
The World Bank

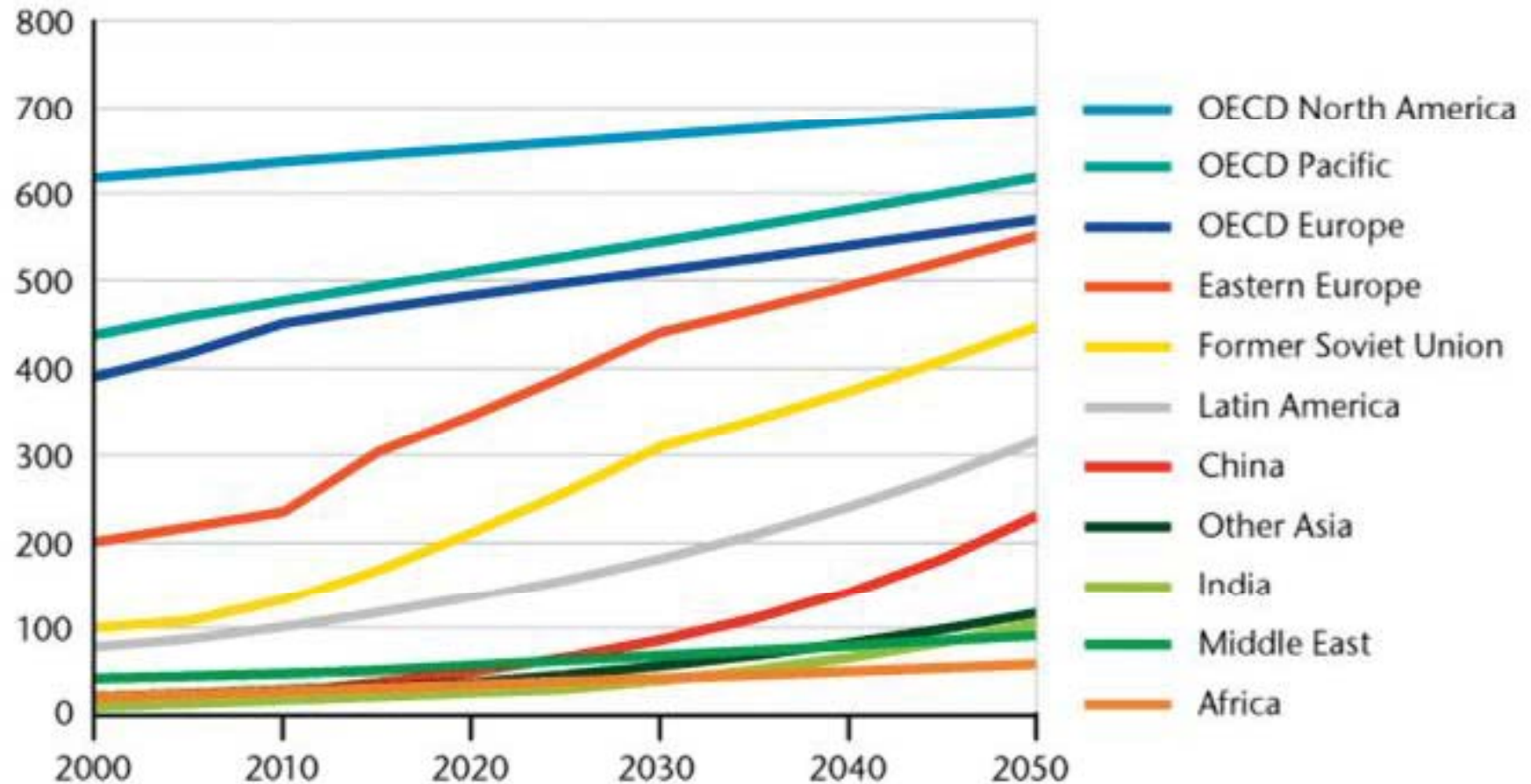


Transport and Climate Change

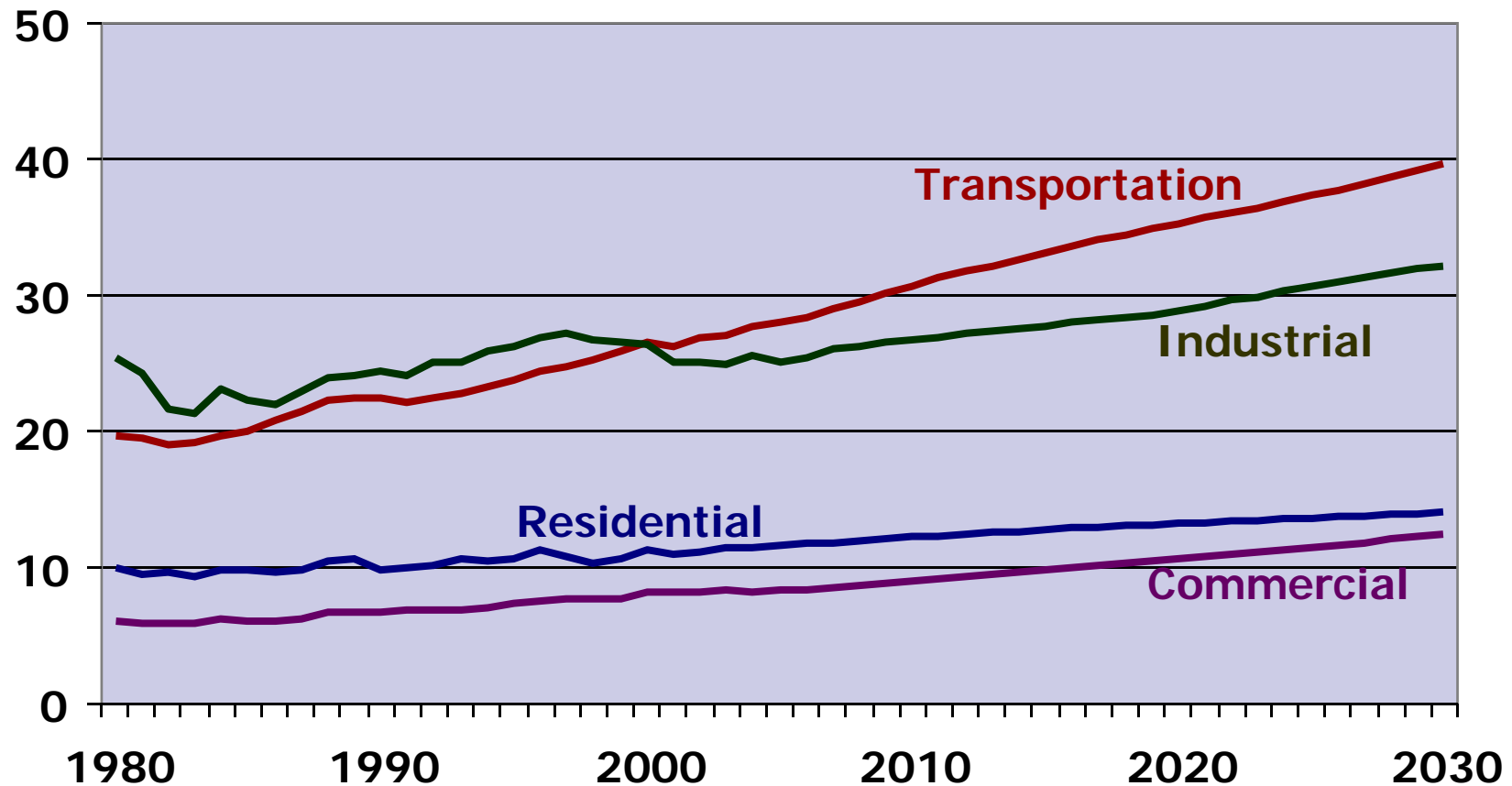
- 787 million vehicles in 2002, of which 73% are private motor vehicles
- 1.5 Billion tons of CO_{2eq} (almost ¼ of all anthropogenic emissions)
- Transport sector has the largest growth:
 - 2.1% a year globally
 - 3.5% a year in developing countries
- CO₂ emissions from transport in developing countries will double by 2025
- Great opportunities for co-benefits with air pollution
 - Respiratory disease 3rd leading cause of deaths worldwide (WHO, 2007)

Rapid Increase in Vehicle Numbers

Light Duty Vehicles / 1,000 people



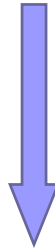
Delivered Energy Consumption by Sector (quadrillion Btu)



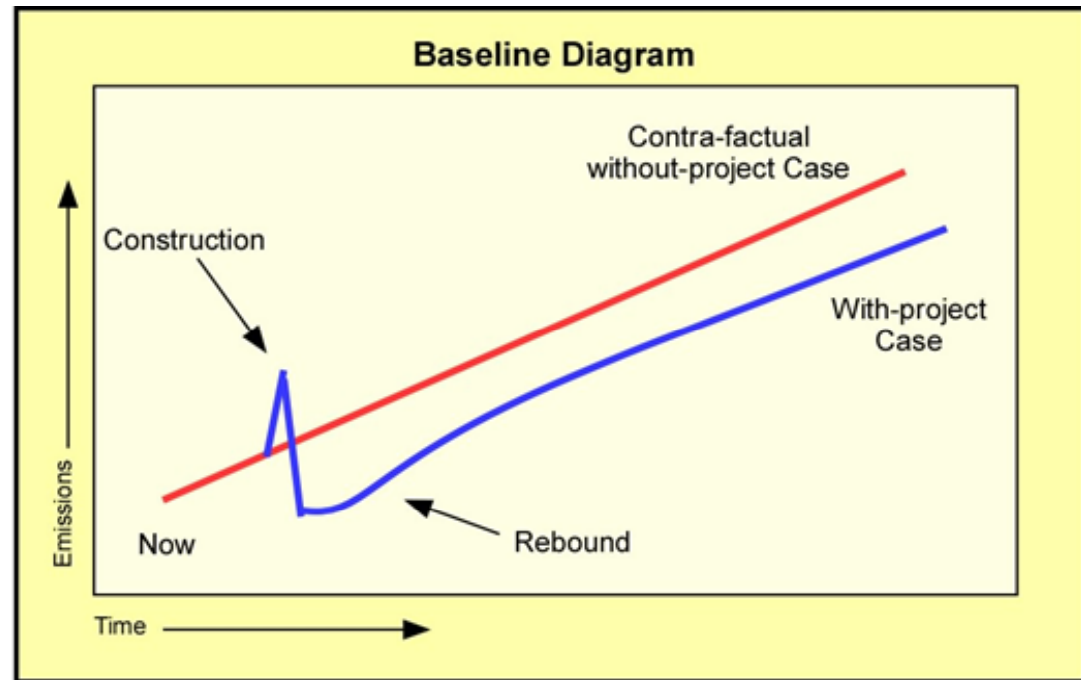
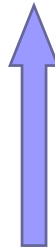
Transport responsible for 60% of GHG emissions increase between 2002 - 2025

Dynamic Baseline

Efficiency effects:
CO_{2e} emissions
Per unit



Development/
Growth effect:
output



Baseline needs to include growth:

Without the project, activity levels will grow at a similar rate



Dynamic Activity of Baseline

- New baseline cannot be easily adapted from a dynamic baseline based on historic data:
 - Calculate pass km traveled based on population growth
 - Calculate veh km traveled based on growth of vehicle population and usage
 - Characteristics of fleet measured in year “n”
 - Therefore in year “n”, difference between baseline and the project activity is:
 - “Rebound” / induced trips
 - Modal shift / changes in routes

Leakage

- Additional emissions
 - Construction of system
 - Fleet renewal (including “scrappage”)
 - Indirect consumption of fuels (fuel transportation)
 - Vehicle manufacturing
- Change in occupancy levels of other vehicles as a result of the project
- Impacts on traffic flow within area of influence of the project:
 - Reduction in congestion – higher average speed and increased number of vehicles?



Implementation Challenges

■ Project Boundaries/Limits

- Which gases?
e.g. CO₂, N₂O, CH₄, CFCs
- Direct and indirect emissions?
- Leakage?

■ Monitoring

- Project focusing on new technologies
 - Fuel consumption/sales or calculate through veh km traveled and efficiency
- Transport Demand Management and Modal Shift:
 - Study veh km traveled and modal split
 - Limitation in scope and monitoring frequency
 - Influence of “other” policies/projects on collected data



Implementation Challenges


■ Costs

- CER funds are limited (compared to investments)
- Monitoring can be costly
- All benefits should be considered (GEE, air quality, time savings, safety, economic development, etc.)

■ Other barriers

- Financing (long term)
- Institutional and political support
- Technology





Next Steps (Pragmatic)

- Develop better assessment methodologies (study financed by CF-Assist)
- Built on opportunities with approved methodologies (Transmilenio)
- Look for captive fleet projects (technology, fuel substitution) which are less complex and easier to monitor
- Focus on projects with secure financing available (CDM normally small portion – to fill gap – of total finance necessary)
- Carbon finance can be important to gain political support and address key barriers (regulatory, institutional, political, etc.)



Vision for the future...

- More comprehensive sector-wide approach (urban & country level)
- Focus on barrier removal and not on direct emission reductions (usually small)
- Integration with other sectors:
 - Energy
 - Urban development
 - Air pollution & health
 - Traffic security