



Some quotations from yesterday

- “The costs of clean diesel are important, particularly in public transport vehicles”
A vehicle manufacturer
- “It is important to look at complete systems - fuel, vehicles and equipment”
An equipment manufacturer
- “If you are going to clean up diesel It will cost you money - you must have a committed source”
A public transport operator
- “the optimal path is probably different for different countries”
A fuel manufacturer



What is agreed

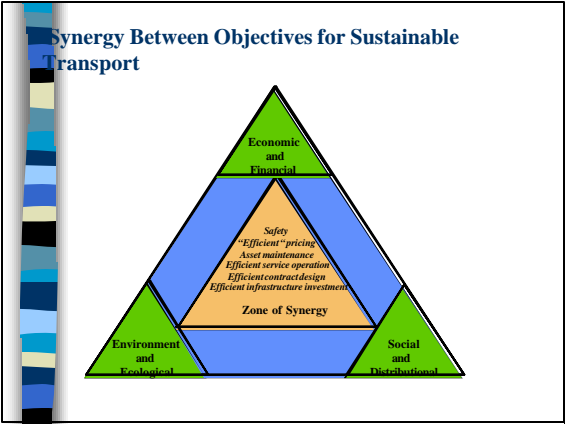
- Urban environments in the developing world have improved in recent years
- New vehicle and fuel technology has contributed to that improvement
- In due course those improvements can be rolled out to developing countries
- Improvement in diesel technology is one of the “low hanging fruit” of environmental gain

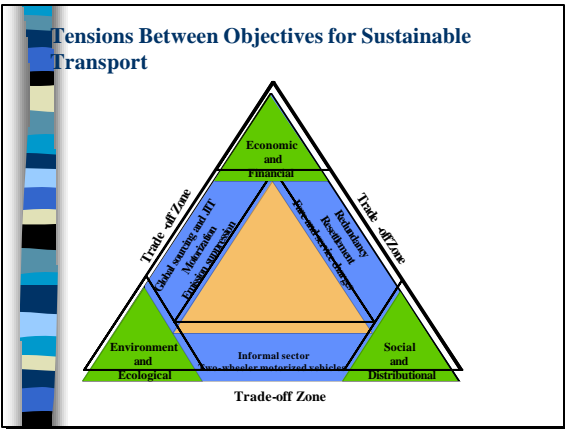


The critical questions

Given that developing countries have only adopted available new technologies slowly:

- How are developing countries different?
- To what extent should developing countries now “leapfrog” to state-of-art standards?
- What are the conditions for the leap?
- How should the transition to new technologies be phased?






How do transport sectors work?

Transport sectors in most countries have some distinguishing features:

- Decisions are very fragmented
- Most actors are commercially motivated


SO

- incentives to change are likely to be either:
 - to comply with enforced standards
 - to advance private interest




How do developing countries differ from industrialized ones?

- Particulate matter the dominant problem
- Lower incomes, poorer resource base
- Old fleets, low replacement rates
- No maintenance culture
- Routine fuel adulteration
- Very low quality fuels
- Poor public sector administrative capability



What would happen if DCs went directly to state of the art emission standards?

- Only a small % of the fleet could benefit from new control technologies
- The incentive to adulterate would increase
- I/M efforts would be discredited
- Informal sector public transport operations would increase
- Return on investments in fuel improvement likely to be very low



But are there any alternatives?

- Emphasis on performance standards
- Evaluation of alternatives
- Investments in other sectors!
- Traffic management to ease flow
- Public transport segregation
- Public transport regulatory reform
- Selective vehicle replacement strategies
- Import control on old vehicles, not new



Conditions for successful transition

- Tightened standards, fleet and fuel developments synchronised
- Prior establishment of a maintenance control regime
- Environment standards consistent with general transport regulation strategy
- Effective traffic management established



So how should transition be phased?

- Target adulteration
- Improve traffic management capability
- Develop maintenance culture by I/M
- Target high polluters for replacement
- New refinery capacity to high standards
- Develop affordable strategy for fiscal incentives
- Progressively tighten emission and fuel standards.
