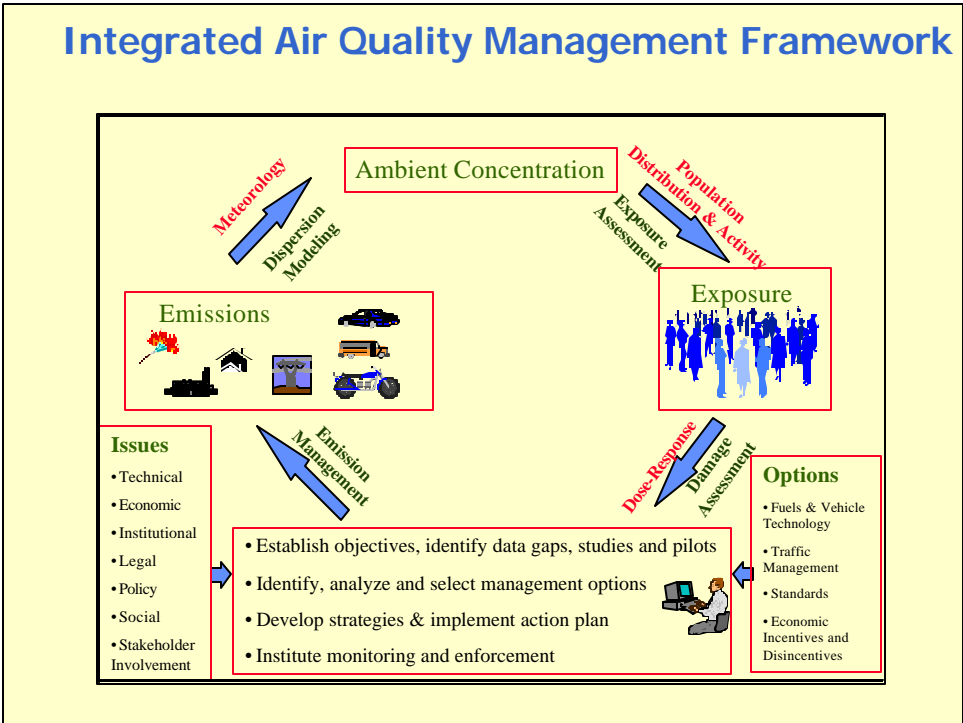
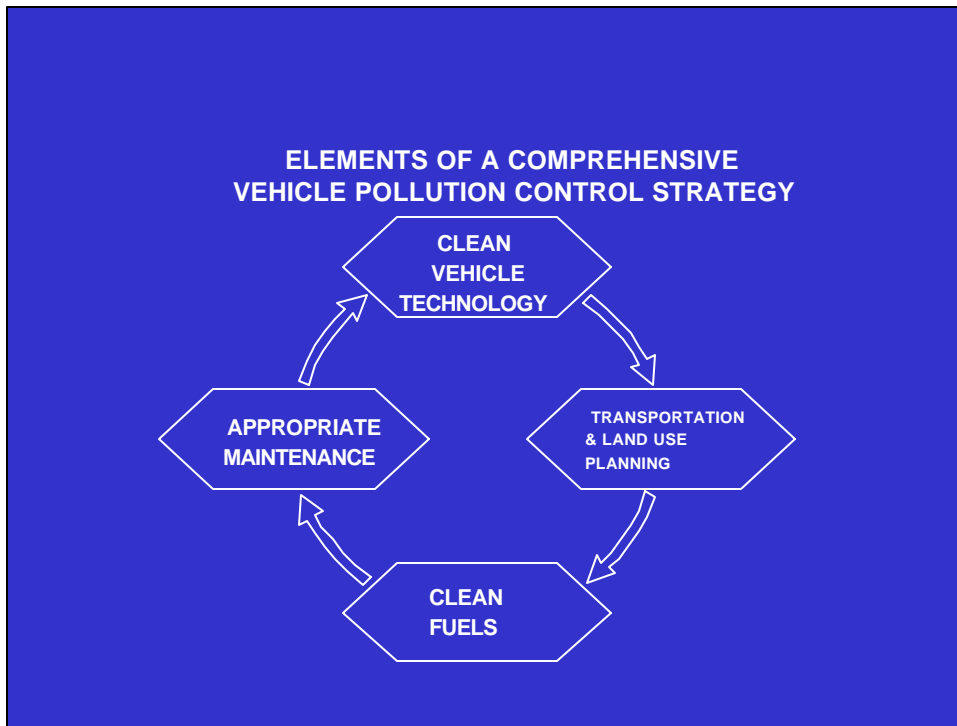


Reducing Emissions From Motor Vehicles in Asia

A Comprehensive Strategy

Concluding Workshop Reducing Vehicle Emissions

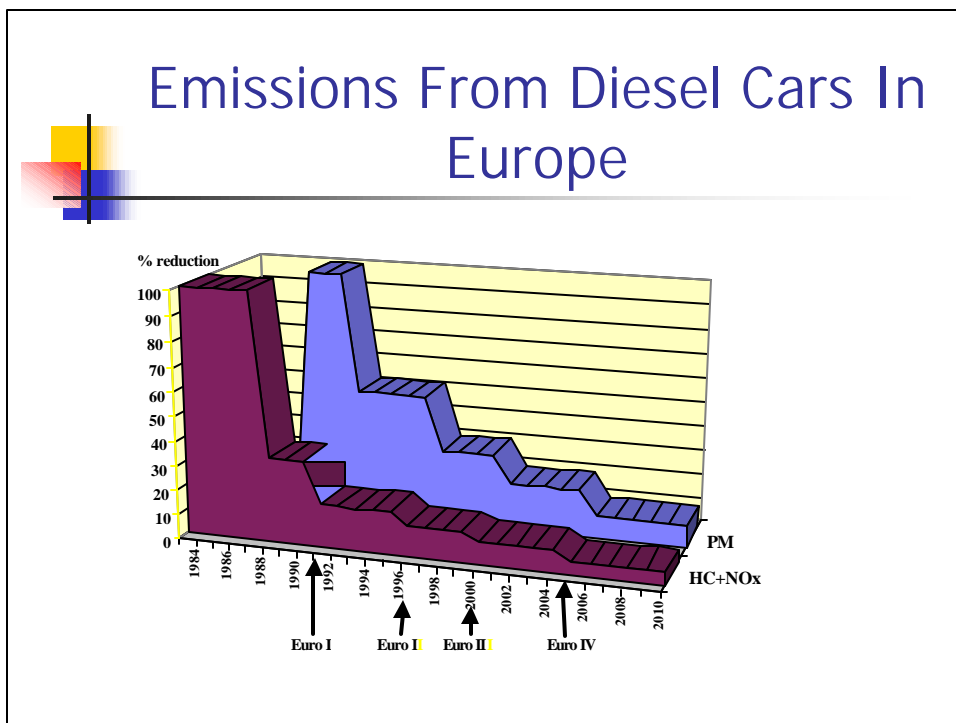
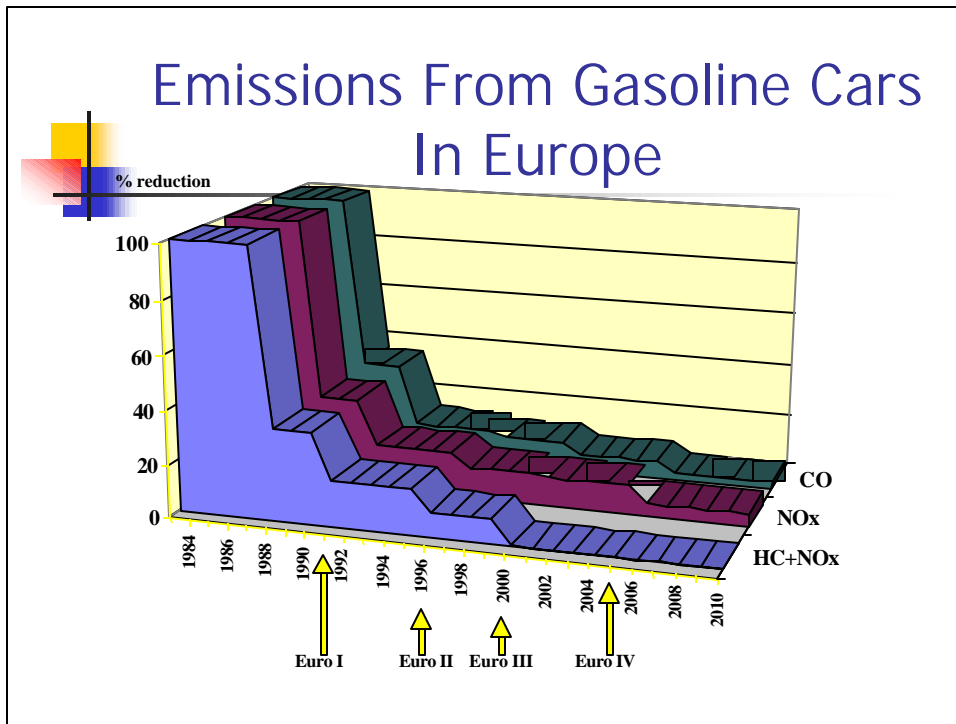


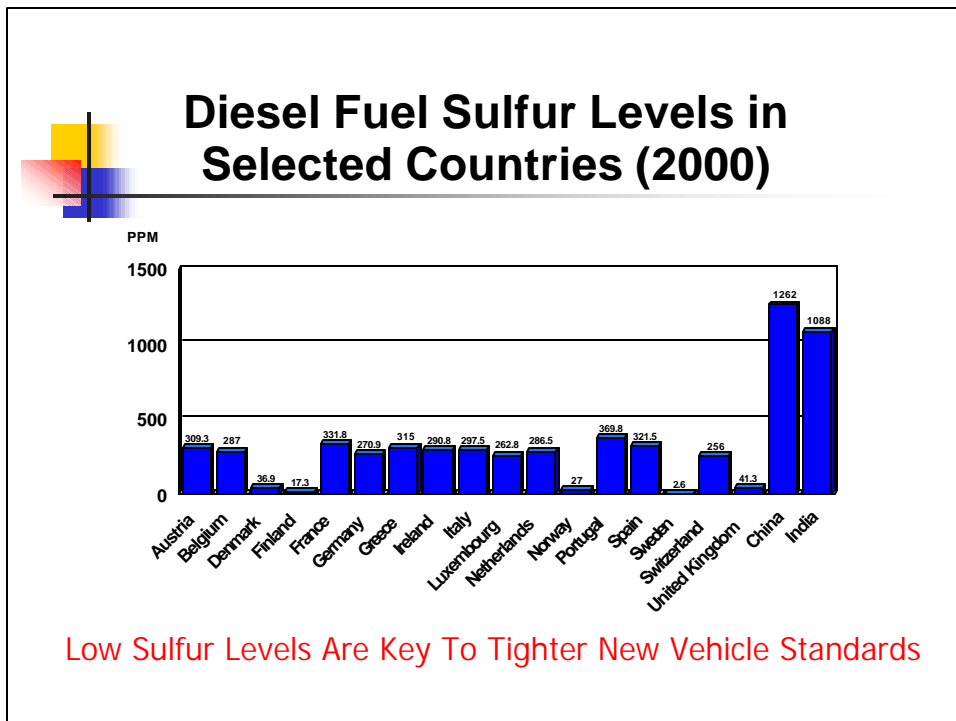
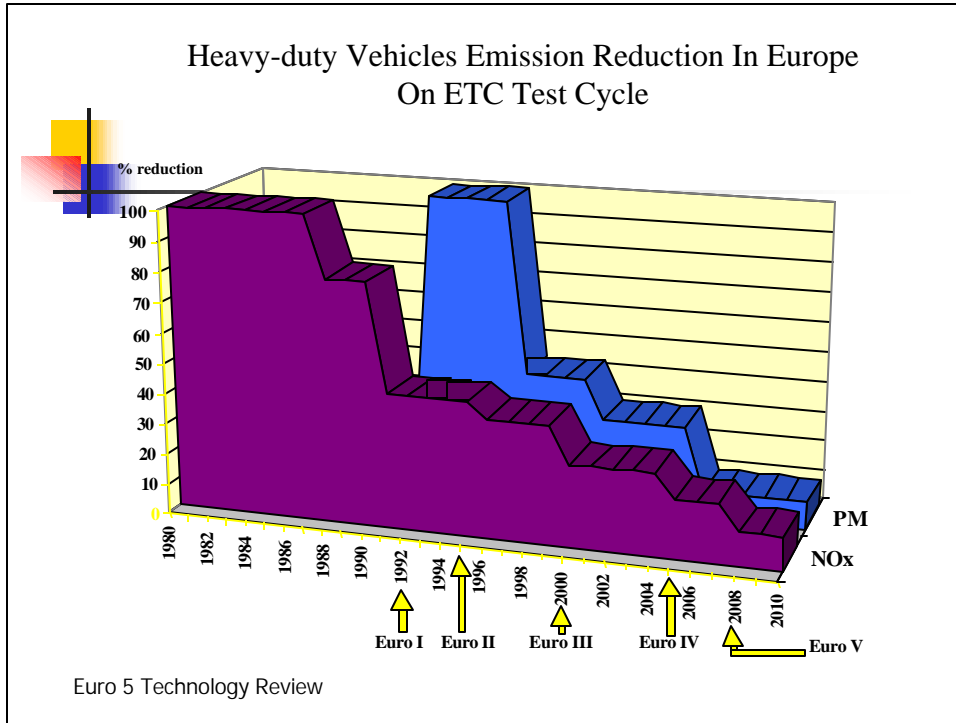


Car Standards in Asia

Car Standards	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10
Bangladesh								Euro 1	proposed							Red = proposed
Cambodia																
Hong Kong	Euro 3						Euro 3									
India	Euro 1	Euro 2				Euro 1	Euro 2	Euro 1		Euro 2	Euro 1	proposed				Euro 3 in 7 Megacities
Indonesia							Euro 1	proposed						Euro 2	proposed	
Malaysia			Euro 1			Euro 2										
Nepal						Euro 1										
Philippines									Euro 1							
PRC						Euro 1				Euro 2						
Singapore	Euro 1						Euro 2									
Sri Lanka																
Taipei, China						US Tier 1				Idle CO & HC/Diesel Smoke Standards						
Thailand		Euro 1				Euro 2			Euro 3						Euro 4	
Viet Nam				Euro 1												

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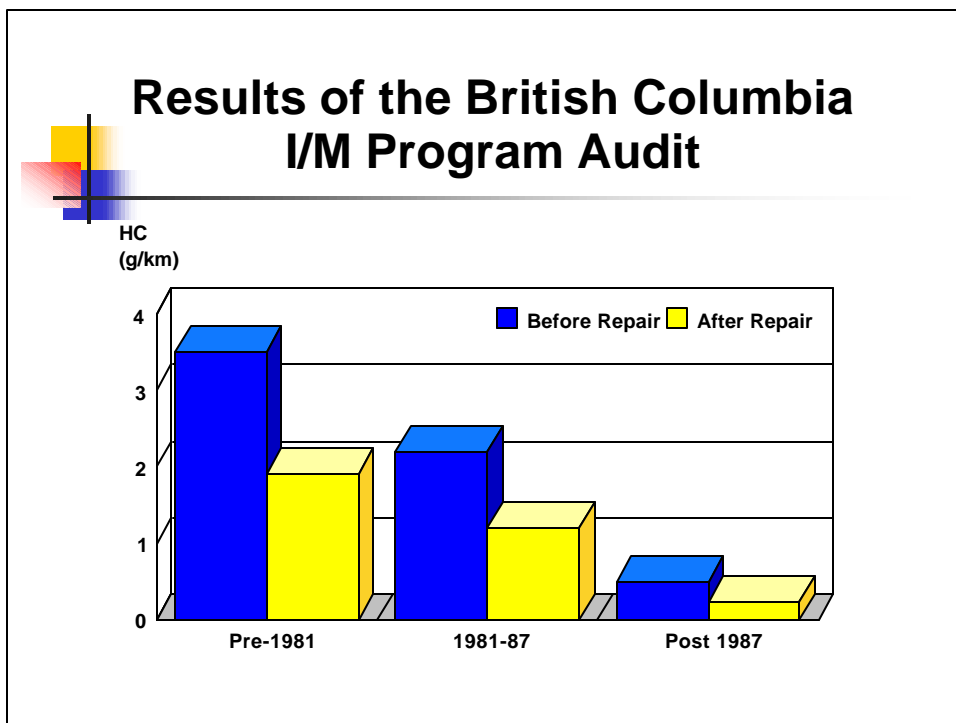
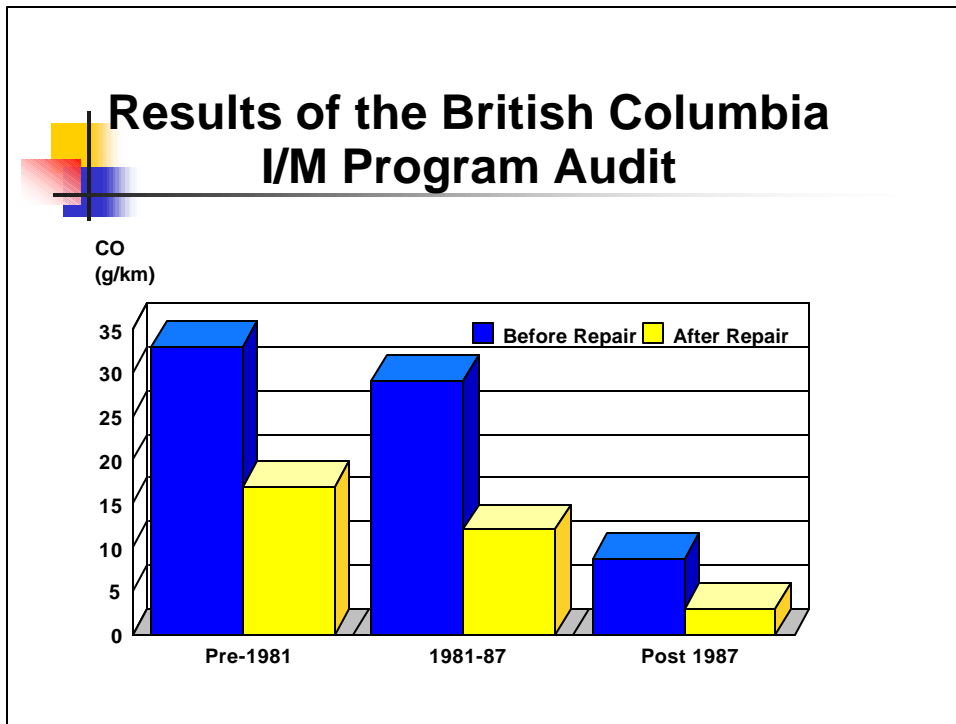
Vehicle Inspection and Maintenance (I/M) Program

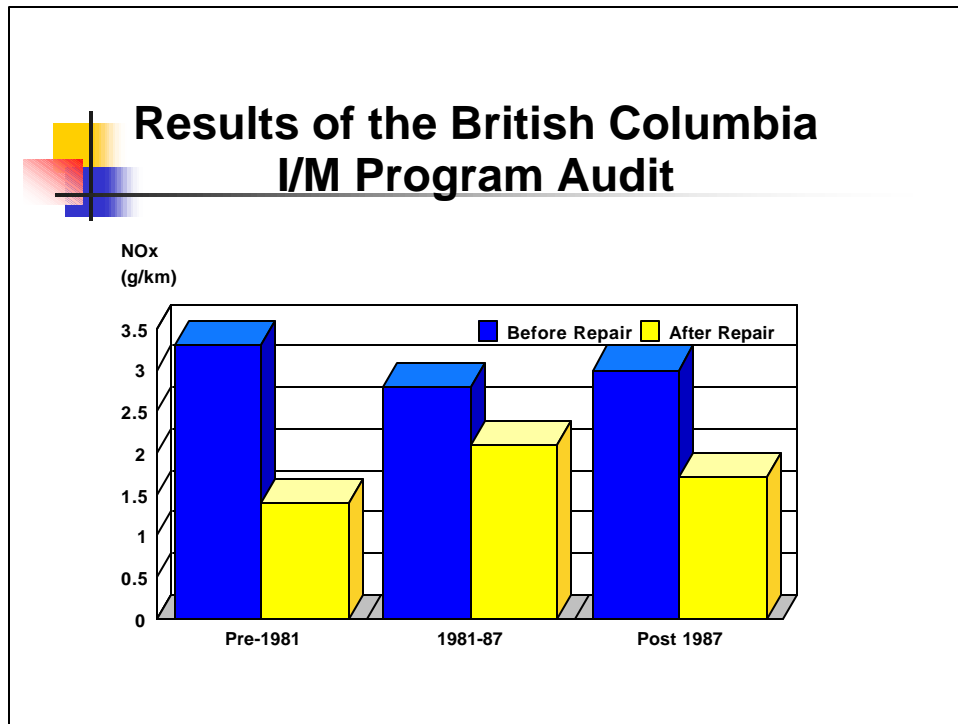
- Purpose:
 - To Assure that vehicle is properly maintained and used
 - Identify Dirtiest Vehicles & Get Them Repaired
- General Attributes:
 - Relatively short
 - Relatively simple
- Types
 - Idle
 - 2-Stage Idle
 - Steady Speed Loaded
 - Transient Loaded



I/M Plays A Critical Role

- Improved Vehicle Maintenance
- Deterrent To Tampering
- Deterrent To Misfueling
- Primary Enforcement Mechanism For Other Strategies
 - ▶ Alternative Fuel Retrofit
 - ▶ Other Retrofit





- ### Transportation Planning & TDM Are Critically Important
- Public Transportation Alternatives
 - Land Use Planning
 - Road Pricing
 - Other



True Success Depends On Process

- Broad Stakeholder Involvement
- Transparency
- Government Commitment
- Public Awareness
- Cost-Effectiveness Assessments



Conclusions

- Successful Program Must Be Comprehensive
- Process Is Critically Important From The Beginning
- Success is Possible and is Already Beginning in Some Countries in the Region