Developing Integrated Emission Strategies for Existing Land Transport (DIESEL)

Status Report

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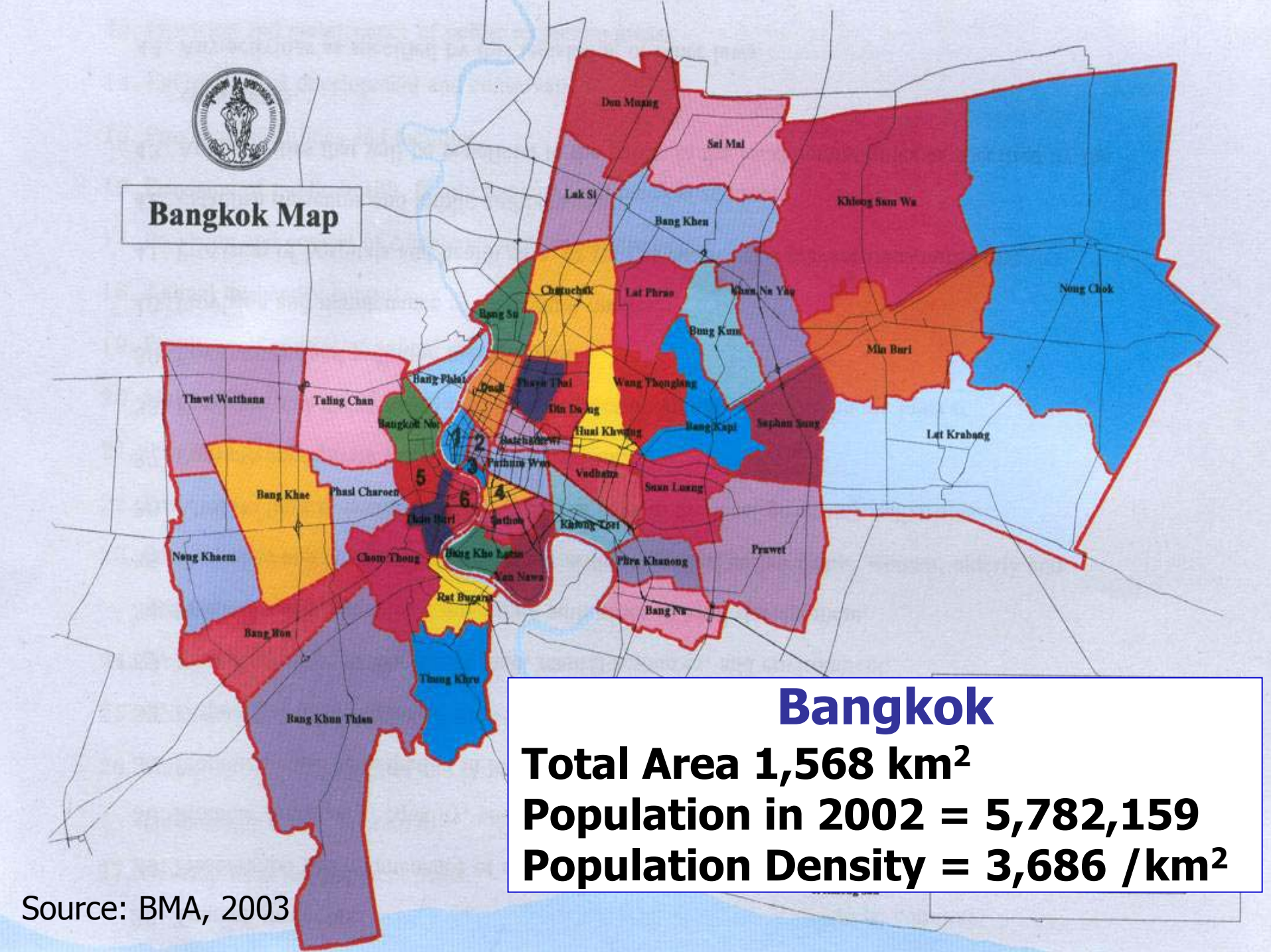
Timetable of Component 1

ACTIVITIES	MONTH					
	AUG 03	SEP 03	OCT 03	NOV 03	DEC 03	JAN 04
• Ambient PM2.5						
PM2.5 data	●	—	—	—	—	●
Meteorological data	●	—	—	—	—	●
Monitoring Method				●	—	●
• Existing Diesel Vehicle						
Diesel Vehicle Information	●	—	—	—	—	→
Stratified Survey				●	—	→
Vehicle Data					●	●
• Current Policy Framework						
Transport Policy	●	—	—	●		
Fuel	●	—	●			
Taxation	●	—	●			



Bangkok

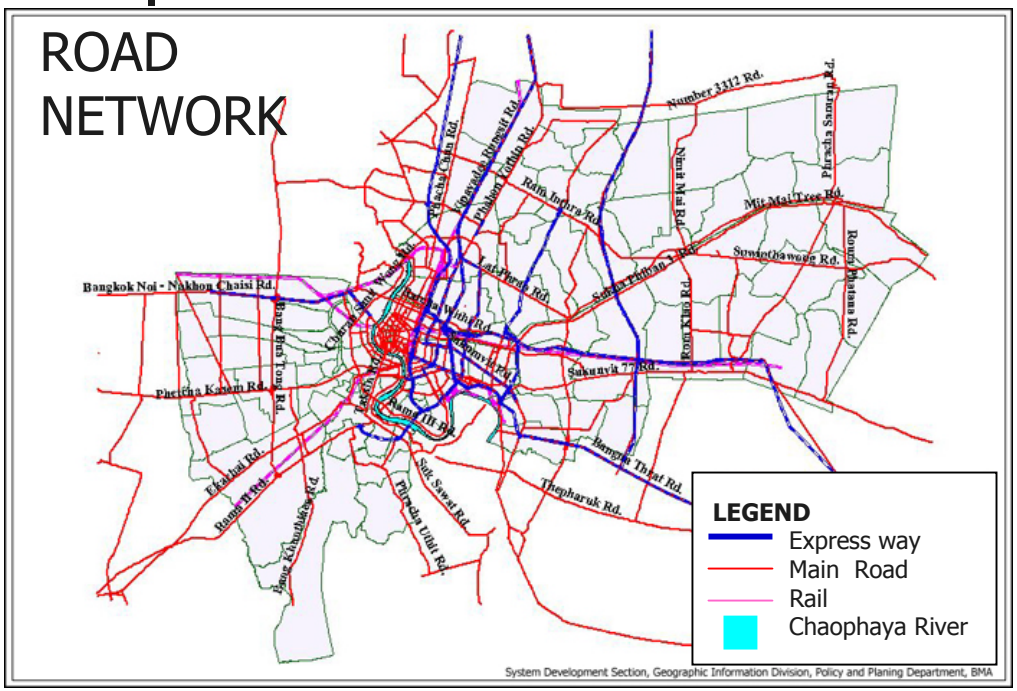
Total Area 1,568 km^2

Population in 2002 = 5,782,159

Population Density = 3,686 /km^2

Source: BMA, 2003

Transport Information



No. of In-use diesel vehicles

- Around 1,000,000 for LDDV
- Around 70,000 for LDDT
- Around 46,000 for HDDV

Vehicle Mile Travel

- 10,000 – 12,755 mile/year for LDDV
- 4,500 – 20,140 mile/year for LDDT
- 3,800 – 18,211 mile/year for HDDV

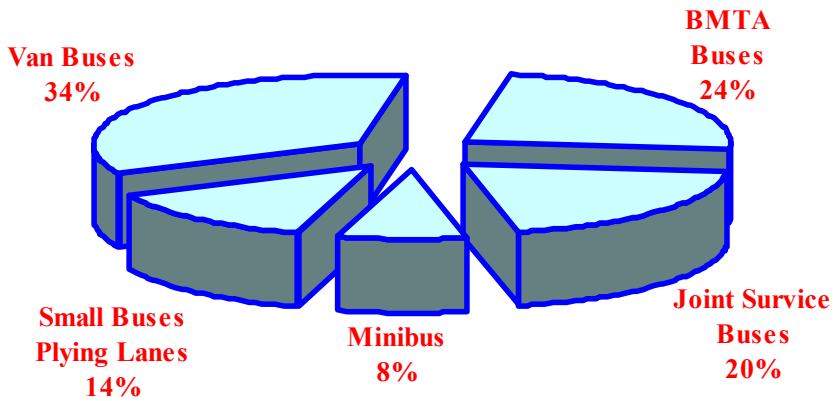
Stratified Survey (on-going activity)

- Collect information on Vehicle Kilometer Travel (VKT)
- Collect information on the use and maintenance

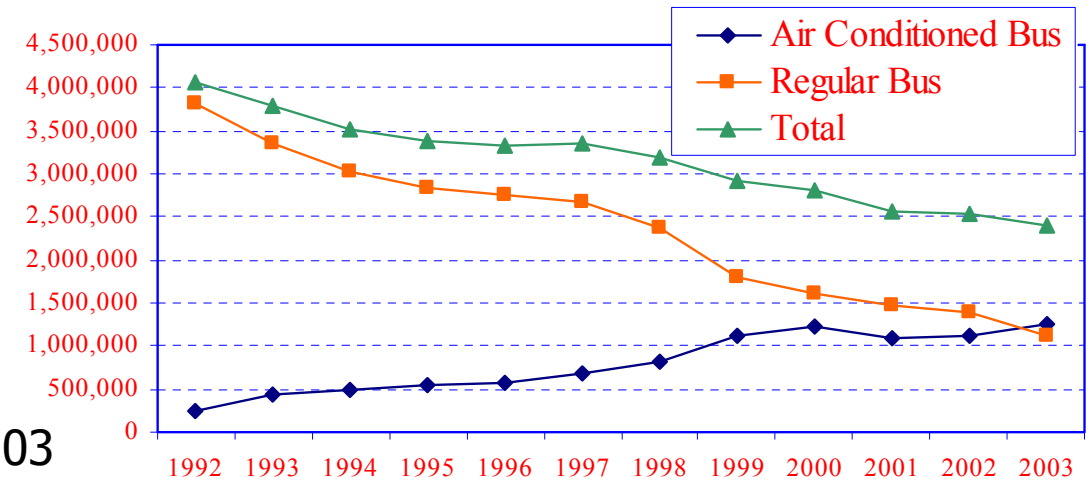
Bangkok Mass Transit Authority

No. of Buses in July 2002

- 3,609 for BMTA Buses
- 3,136 for Joint Service Buses
- 2,069 for Small Buses Plying Lanes
- 5,331 for Van Buses



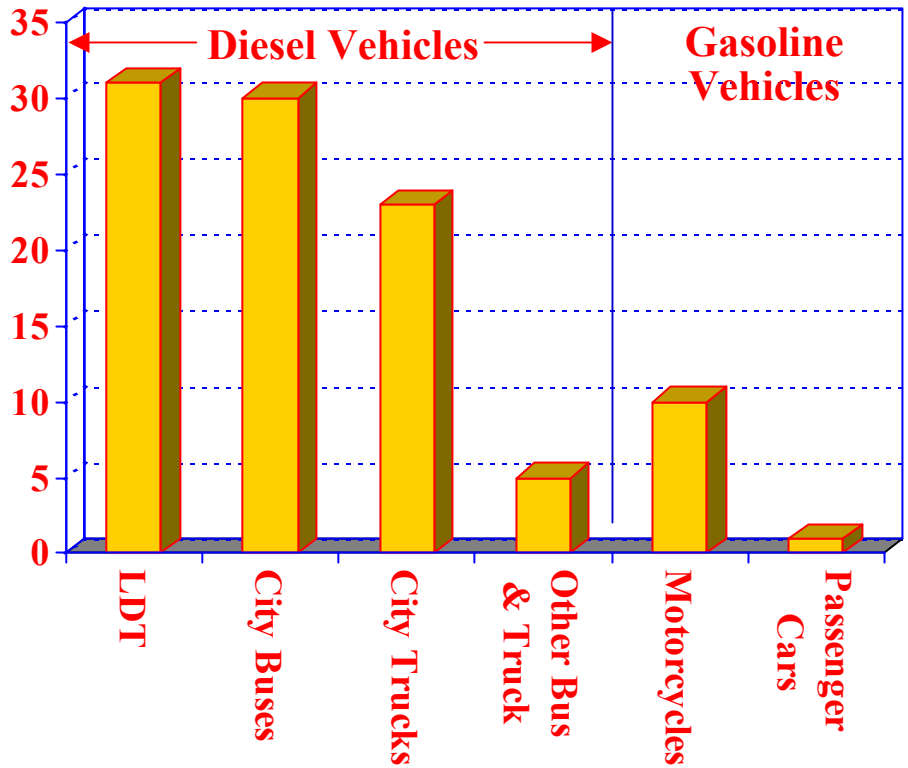
No. of Passenger per Day



Source: BMTA, 2003

Diesel Vehicles VS Fine Particulate Matter Concentrations

Percent of PM10 emitted from Diesel and Gasoline Vehicles



Source: PCD, 2000

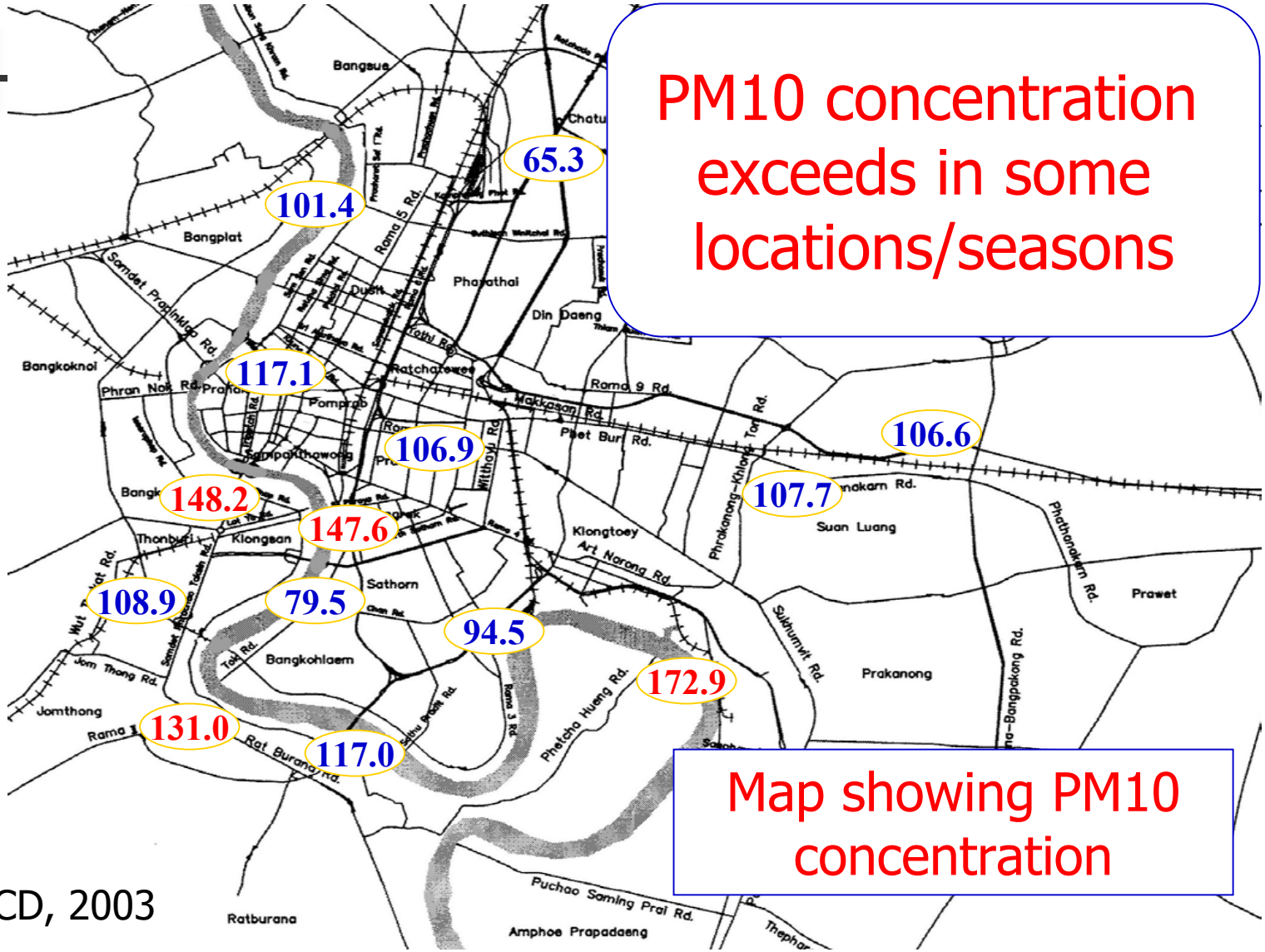
Bangkok, year 2000

- **Diesel vehicles ~ 25% of Bangkok fleet**
- **Emitted ~ 89% of PM10 emission from mobile sources**

PM10 → PM2.5

- **PM2.5 → more harmful to human health**
- **Emission (~ 90%) from diesel vehicles is smaller than PM2.5**

Ambient Fine Particulate Matter Concentration in Bangkok

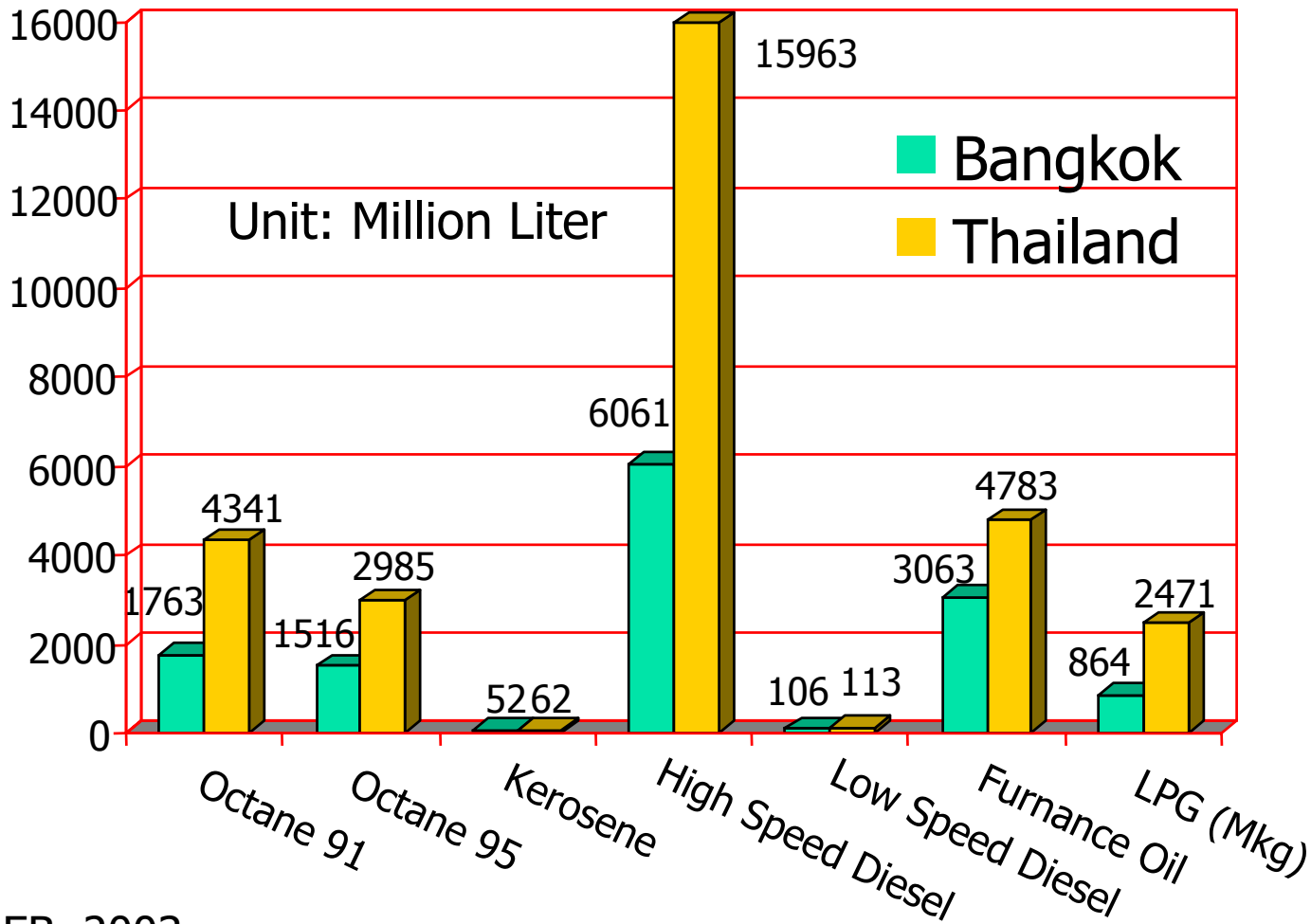


PM10 concentration exceeds in some locations/seasons

Map showing PM10 concentration

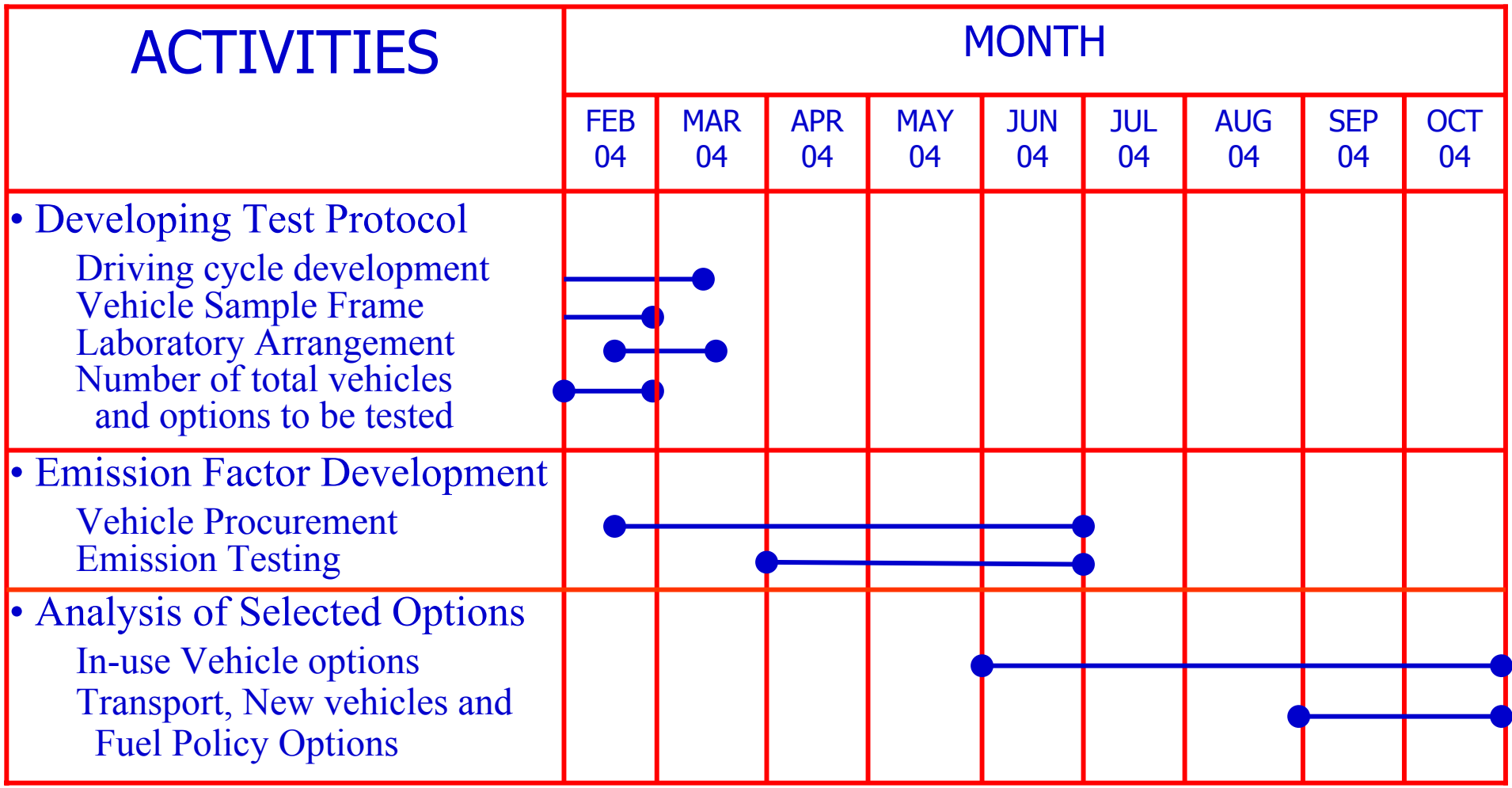
Source: PCD, 2003

Fuel Consumption (in 2002)



Source: DOEB, 2003

The Uses of Data

- Update information for IDEAS model
  - Simply model to guide decision maker to decide solutions for the cities
- Update information for designing the second component
  - Total Sample vehicles
  - Technical and Policy Test Options

Timeframe for the Second Component