

# ***Thailand's EST Initiative and Policies***

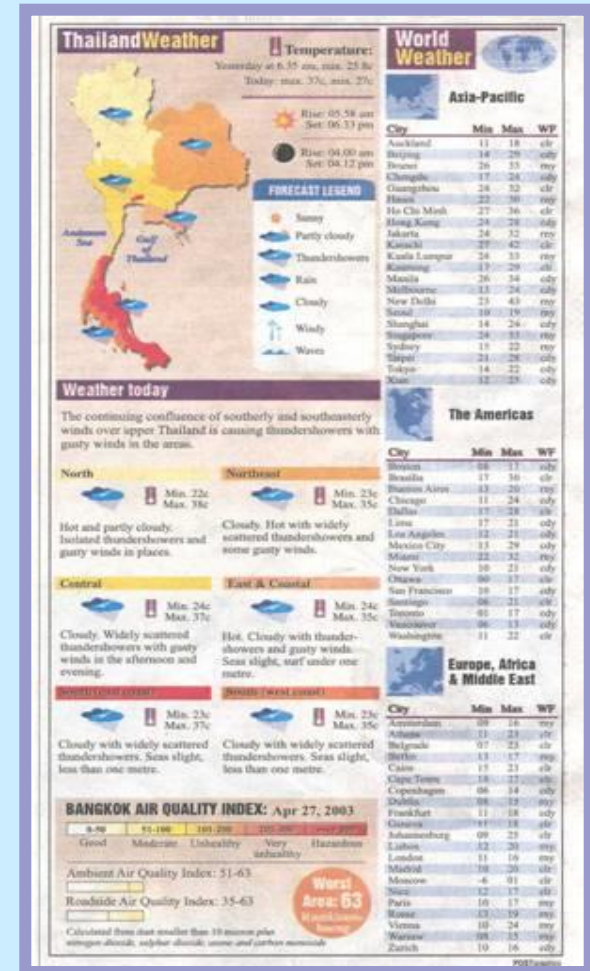
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- **Background Information**
- **Policy Response**
- **Major Achievements**
- **Challenges Ahead**

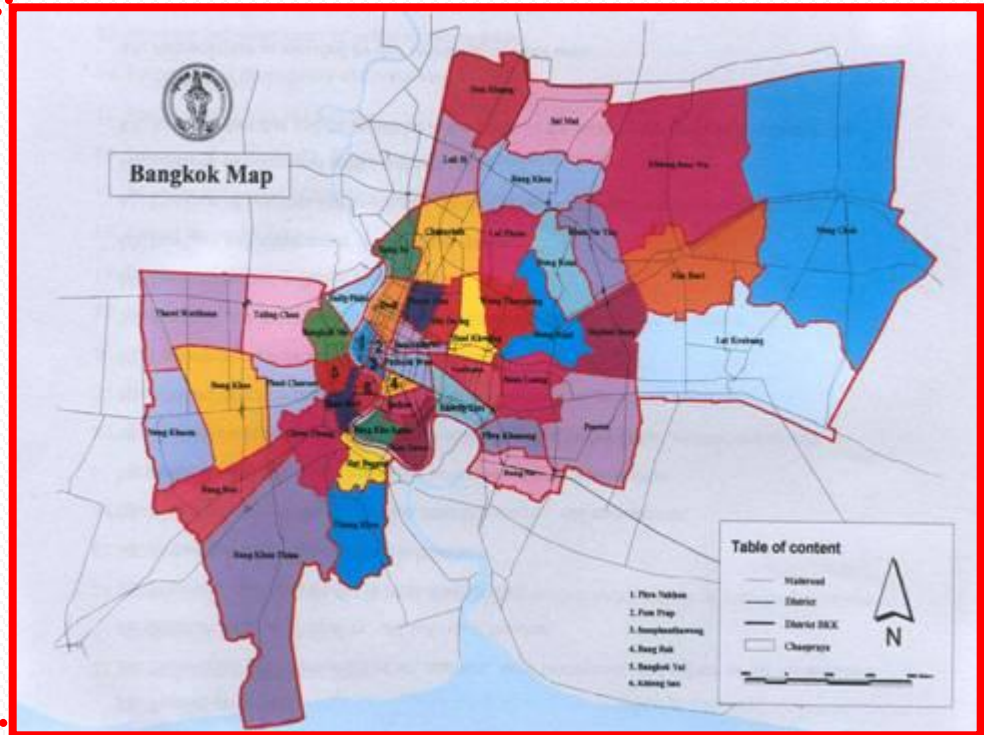


# Background Information



## Thailand

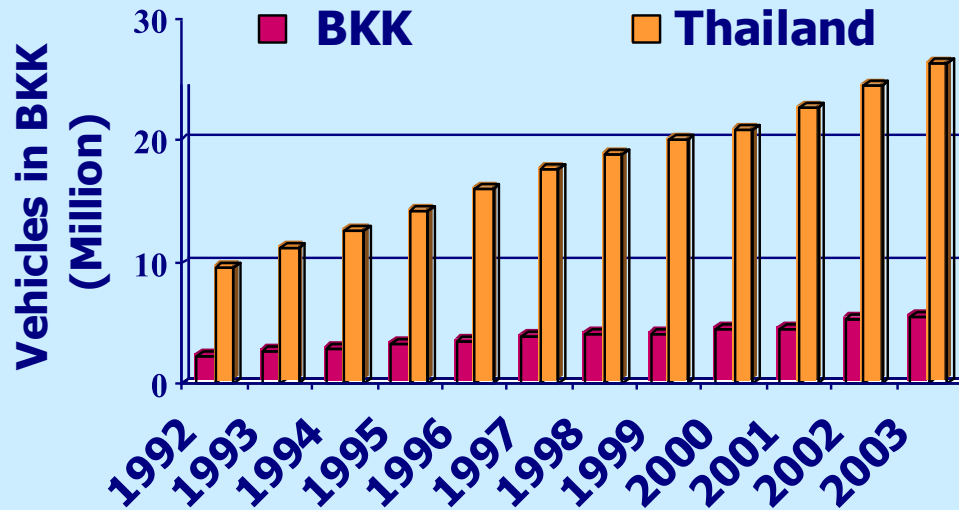
Total Area 544,000 km<sup>2</sup>  
Population in 2006 = 65,300,000  
Population Density = 121/km<sup>2</sup>



## Bangkok

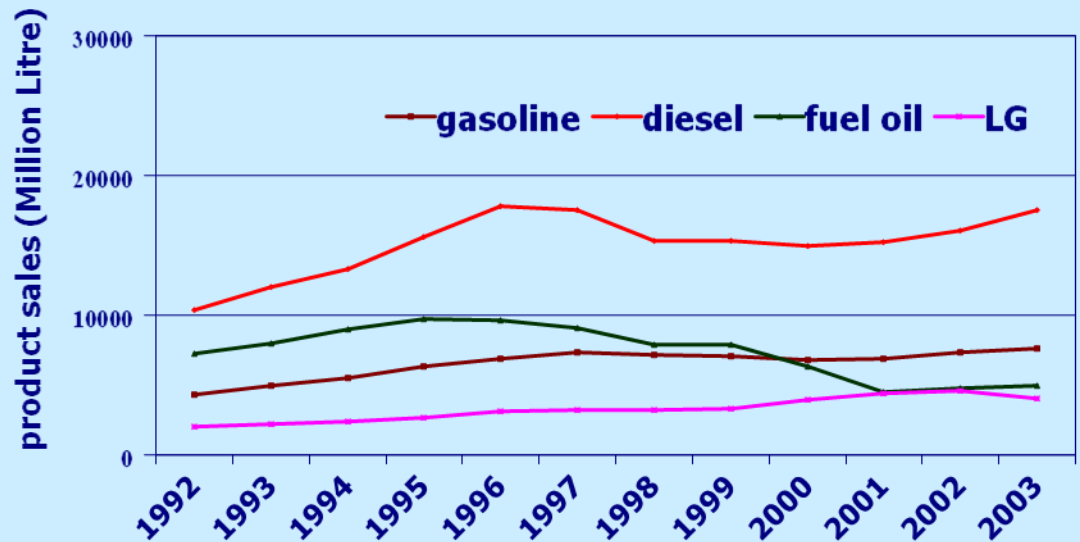
Total Area 1,568 km<sup>2</sup>  
Population in 2006 = 5,600,000  
Population Density = 3,592 /km<sup>2</sup>

# Vehicle Trend & Fuel Consumption



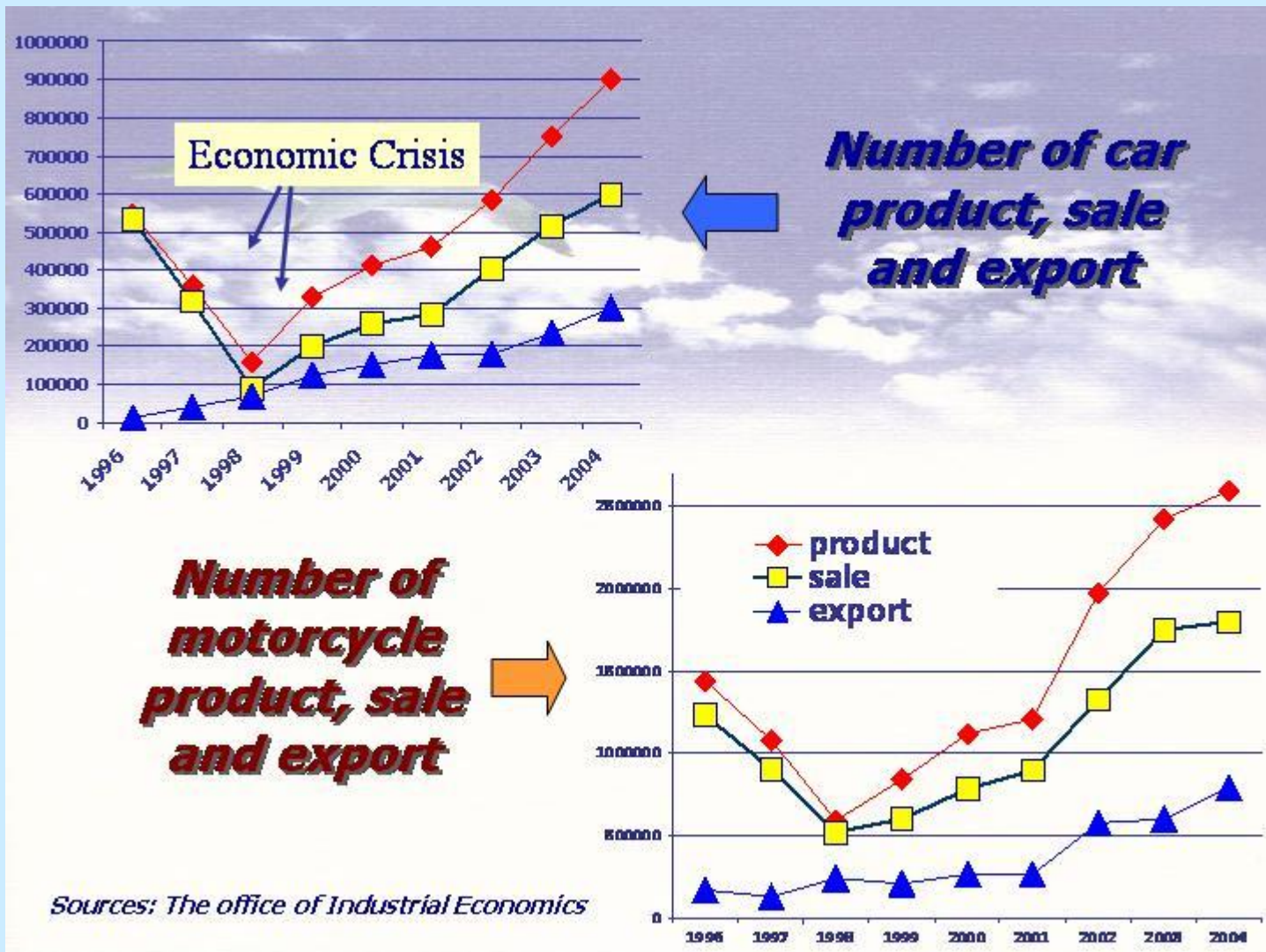
*Trend of  
Vehicle 1992-2003*

*Fuel Product Sales  
1992 - 2003*





# Country Specific Data

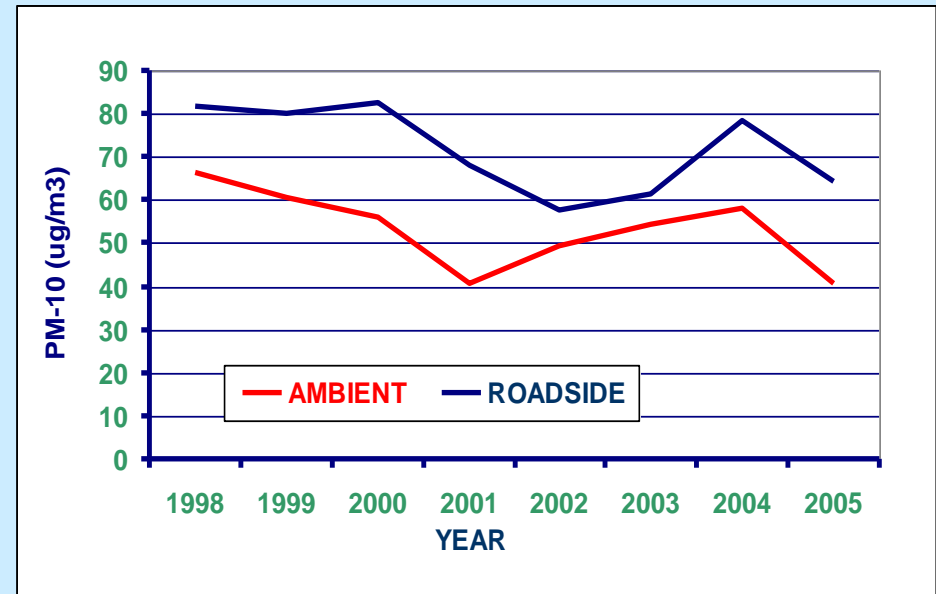


# Air Quality Trends in Bangkok



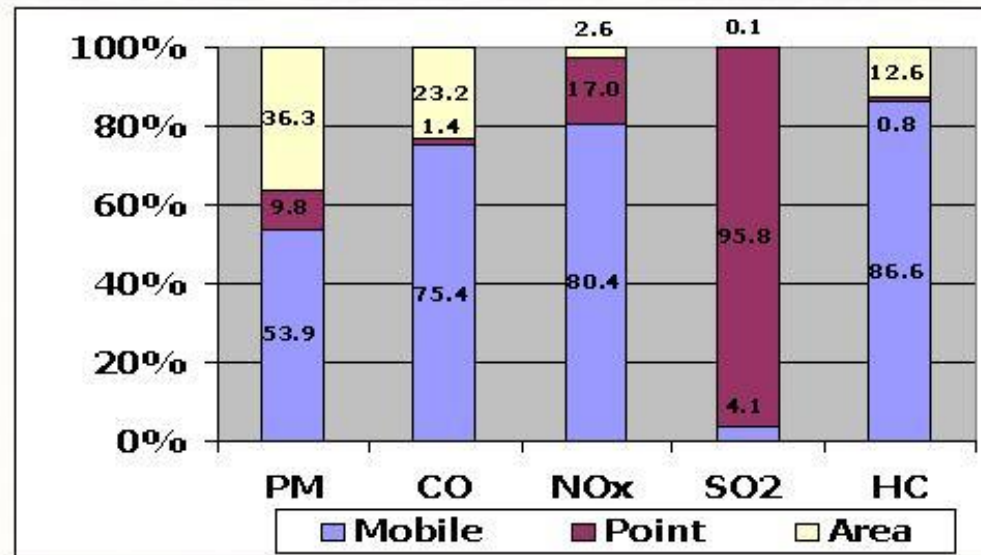
**Bangkok, like other Asian Cities, is facing with air pollution problems, especially Particulate Matter (PM).**

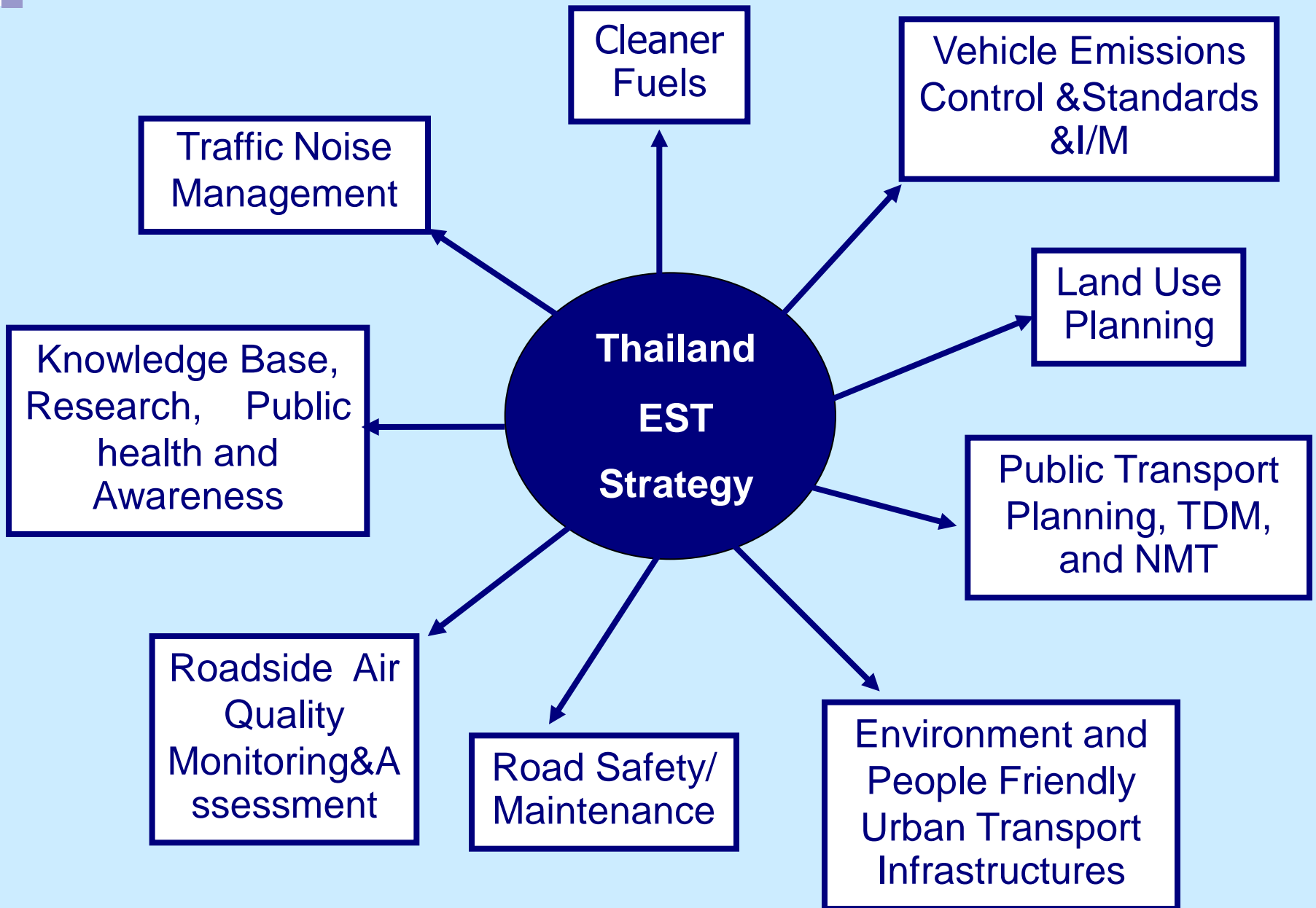
**Monitoring data shows that PM10 concentration is decreasing (both Roadside and Ambient)**



## SOURCE OF AIR POLLUTION BKK (1997)

Source	Emission Load (Ton/Year)				
	PM	CO	NOx	SO2	HC
Mobile Source	20,602	349,771	264,648	9,973	232,973
Point Source	3,735	6,266	56,002	229,859	2,005
Area Source	13,855	107,738	8,511	184	33,904







- *Thailand has the Development of Road Safety Auditing Committee*
- *Thailand Road Safety Action Plan targets to reduce fatality from road accidents from 10% to 5% within 5 years.*

# ***Vehicle Emission Control, Standards, and I/M***

## ***Proposed New Vehicle Standards:***

***- Gasoline vehicle and light duty diesel  
vehicle:***

***EURO IV in 2012***

***- Heavy duty diesel vehicle and motorcycle:  
EURO III in 2007***

## **Target year 2008**

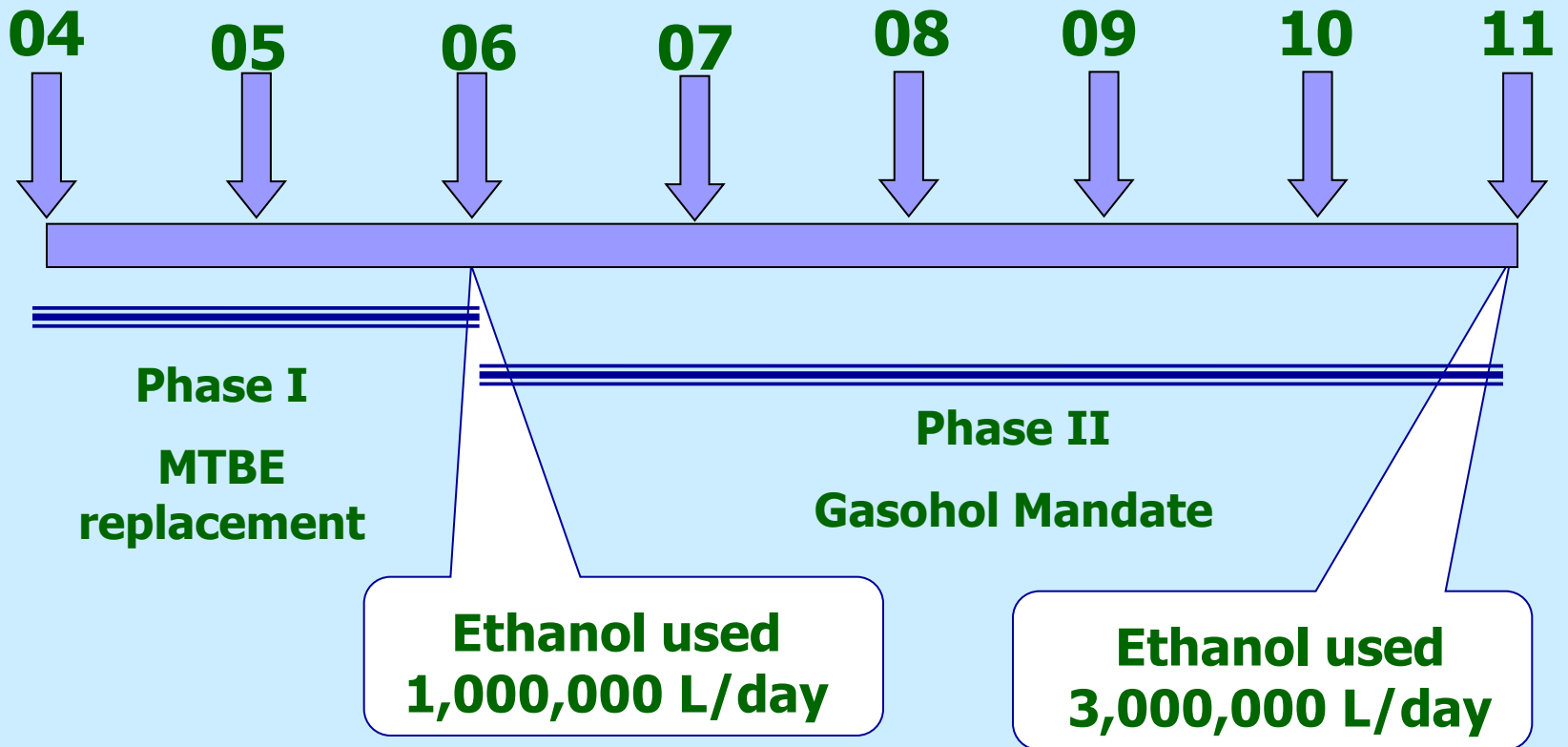
- **Gasoline replacement 10%**  
**Vehicle 139,000 vehicles**
- **Diesel replacement 13%**  
**Vehicle 161,000 vehicles**
- **NGV refueling station 420 station**

## **CNG Targets**

### **Target year 2010**

- **Gasoline replacement 16%**  
**Vehicle 219,000 vehicles**
- **Diesel replacement 13%**  
**Vehicle 281,500 vehicles**
- **NGV refueling station 740 station**

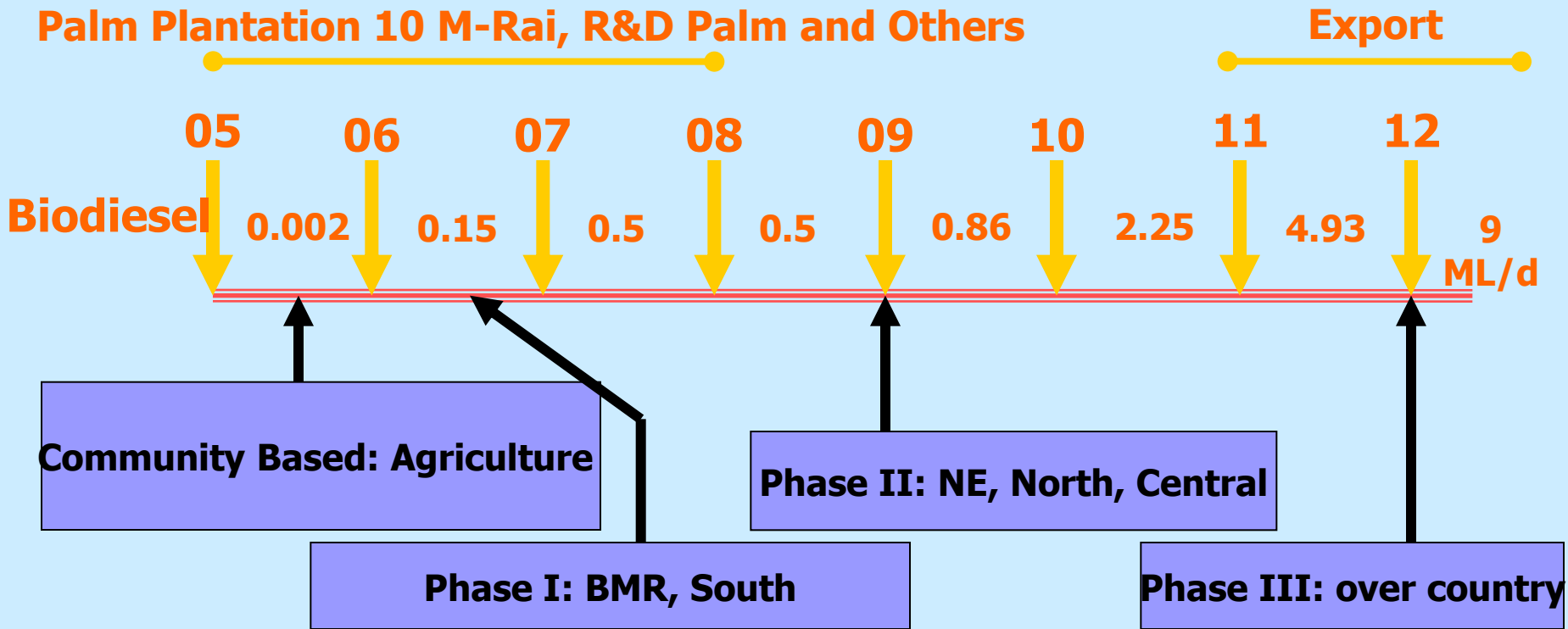
## Gasohol Roadmap



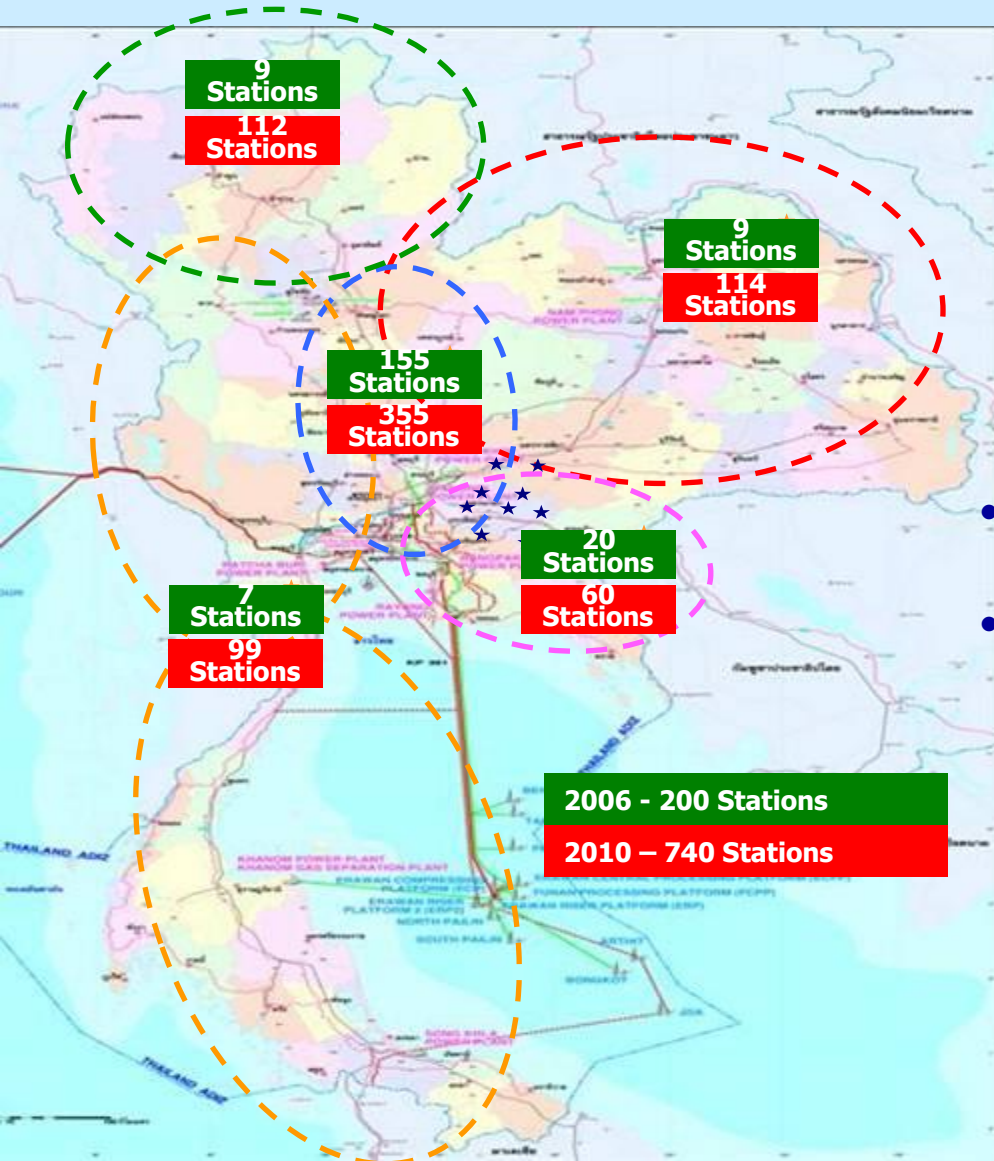


**Goal: B10 in 2012  
(8.5 ML/day)**

**B100, B20 reduce PM for 55%  
and 18% (National Renewable Energy  
Laboratory, USA)**



# Targets in expansion 2006 - 2010



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***Emission Inspection at Land transport department***





# Roadside inspection



**Fine for emission standard violation = 1000 Bath**

แผนที่แสดงการตั้งจุดตรวจสอบ  
ตรวจจับและห้ามใช้รถยนต์ควันดำ  
และสถานที่ยกเลิกค่าสั่งห้ามใช้รถยนต์



- จุดตรวจสอบ ตรวจจับ และห้ามใช้รถยนต์ควันดำ
- ★ สถานที่ยกเลิกค่าสั่งห้ามใช้รถยนต์

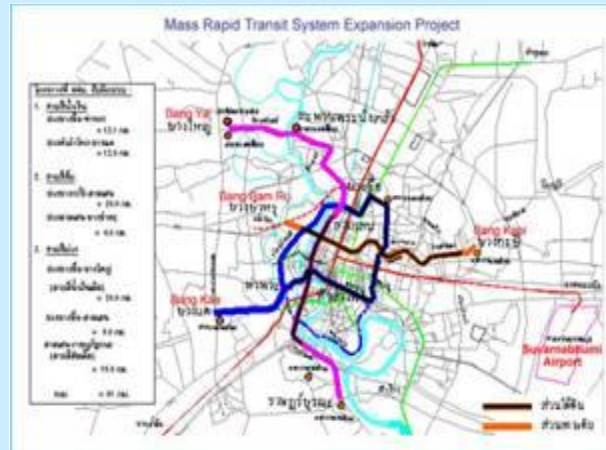


# Transportation management



## minimize number of vehicles on the road

- Expansion of Skytrain and Metro system
- Express way
- Urban planning
- Estimate by using traffic models



# Existing Mass Transit System



## **BTS (Sky Train)**

**BTS**

Distance: 23.7 km.

Station: 24 stations

Passenger: 430,000 per day

Fare 10-40 baht

Ave speed: 35 km/hr

Headway: 3-4 min (rush hour)

5 min

## **MRTA (Subway)**

**MRTA**

Distance: 20.8 km.

Station: 18 stations

Passenger: 200,000 per day

Fare: 12-31 baht

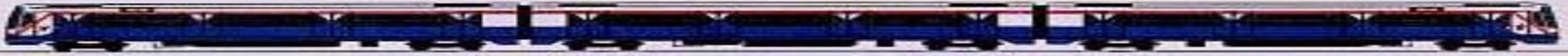
Ave speed: 35 km/hr

Headway: 2-4 min (rush hour)

4-6 min



# BTS - Skytrain



# MRT 5 Lines (1st Phase) 7th November 2006

**Distance 118 Km.  
165,402 Mil.Bath  
Year 2006-2012**

**Rangsit-BangSue-TalingChan  
41 Km. 53,985 Mil.Bath**

**Bang Yai**

**MRTA**

**BangYai-BangSue 23 Km.  
29,160 Mil.Bath**

**SRT**

**SapanMai**

**BMA**

**Kaset**

**Mo Chit-SapanMai 13 Km.  
14,737 Mil.Bath**

**Bang,Sue**

**Mo Chit**

**Taling Chan**

**Bang Sue-Thapra-Bangkae  
and Haulampong-Thapra 27 Km.  
52,581 Mil.Bath**

**Ran Nok**

**Phaya Thai**

**Bangkapi**

**Bang Wa**

**Makkasan**

**Lat-krabang**

**MRTA**

**Hau Lampong**

**On Nut**

**Suwannapoom**

**Bang Kae**

**Tha Pra**

**Hau Lampong**

**Baring**

**Baring-Samutprakran 14 Km.  
14,939 Mil.Bath**

**BangSue-Makkasan 8 Km.  
Design for CT and LD**

**RatBurana**

**BMA**

**Samrong**

**Samutprakran**





# Rail Way Investment Plan in the next 10 years

## Investment

### Increase Capacity (124,193 ลบ.)

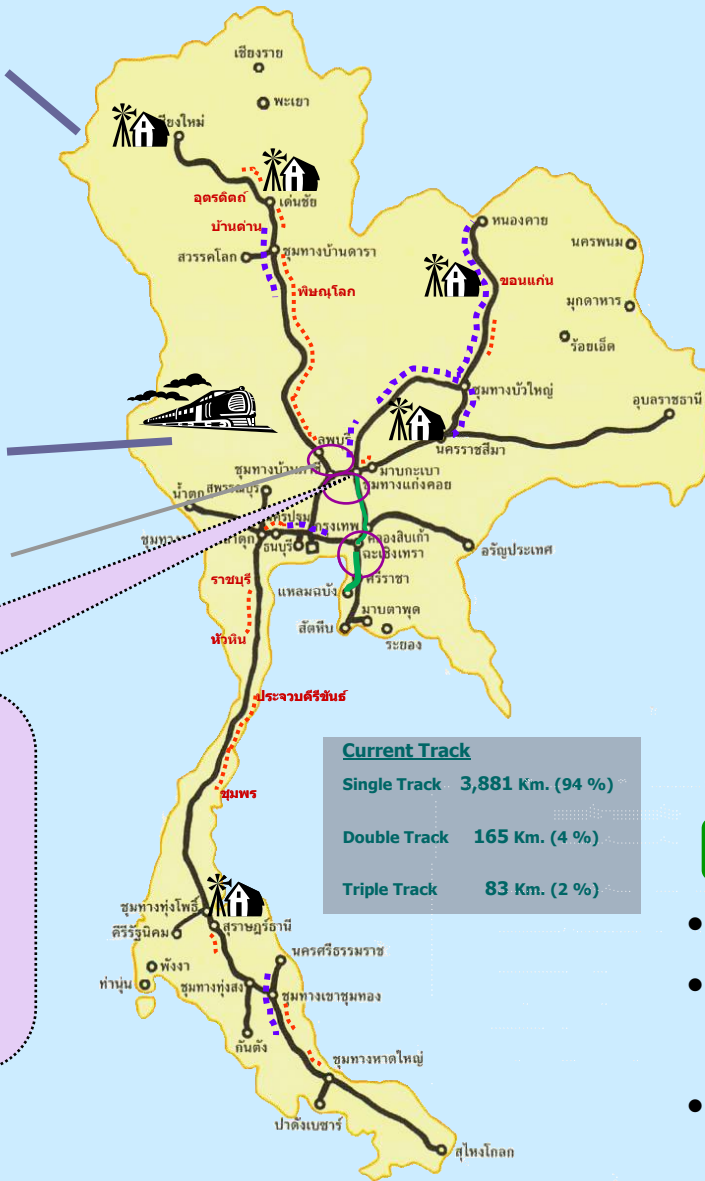
- ทางคู่สายตะวันออก และ Chord Lines
- ทางคู่เป็นช่วงๆ ( Long Loop ) ทั่วประเทศ
- Track Rehabilitation and Signal
- Logistics Facilities (ICD & CY)

### รถจักรและล้อเลื่อน (13,034 ลบ.)

### Airport Rail Link

### Total Main Commuter Line Investment 146,300 million Baht

- รองรับบริการโดยสารเข้า-ออกกรุงเทพฯ เพิ่มจาก 40,000 คนต่อวันเป็นกว่า 350,000 คน/วัน
- ใช้เวลาเดินทางไม่เกิน 90 นาที ในราคาที่รัฐควบคุมได้
- ทางรถไฟใน กทม. ถูกยกระดับหมด



## Target

• ลดใช้พลังงานภาคขนส่ง 38% → 30%

- กลยุทธ์
  - Modal Shift จากถนน สู่อากาศและน้ำ
  - Fuel Shift จากน้ำมันดีเซลเป็นพลังงานทดแทน

เป้าหมายระบบราง : ลดการใช้พลังงาน 263 ล้านลิตร (ประมาณ 6,838 ล้านบาท)

## Outcome

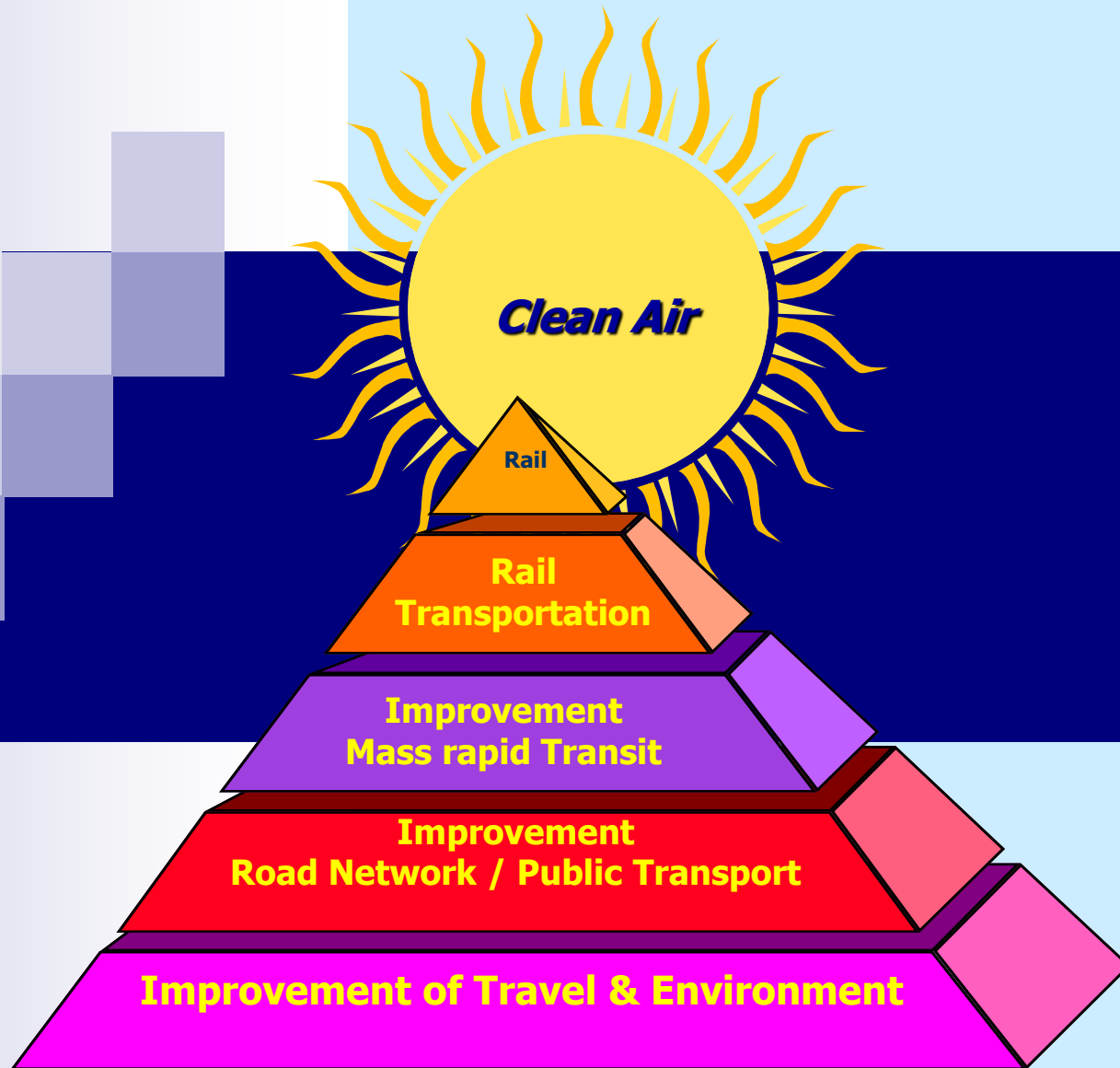
Reduce Oil Consumption ~ 278 million litre/year

## Output

- Double Track 6% to 26%
- Increase Market Share 3% to 15%
- Increase Passenger 15 to 20 million/year

- ***Reduction of Traffic congestion levels***
- ***Improve the quality of public transport***
- ***Low-cost mass transit***
- ***Increase safety for non-motorized transport***
- ***Improve roadside air quality as ambient quality***
- ***Rapidly phasing in strict emission standards for vehicle***



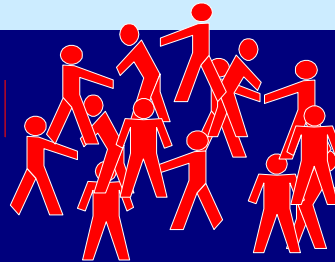


# CONCLUSION

People are  
the primary target

Sustainable transport  
system and  
increase in the  
competitiveness for  
Thailand

Increase in  
quality life



**Service to People**

Convenience, Safety, Modernity,  
Environmental Friendliness, and Fair Price

Public Transportation: Urban Mass Transit (Rail),  
Metro Bus, Metro Boat, etc.



An aerial photograph of a city skyline, likely San Francisco, featuring a large stadium in the foreground and numerous skyscrapers in the background under a blue sky with scattered clouds. The text "Thank you for your Attention" is overlaid in a bold, italicized, blue font with a black outline.

***Thank you for your  
Attention***