



JAKARTA LOCAL GOVERNMENT

“Jakarta Urban Transport Problems and Their Environmental Impacts”

**International Climate Change Workshop on Research
Priorities
and Policy Development**

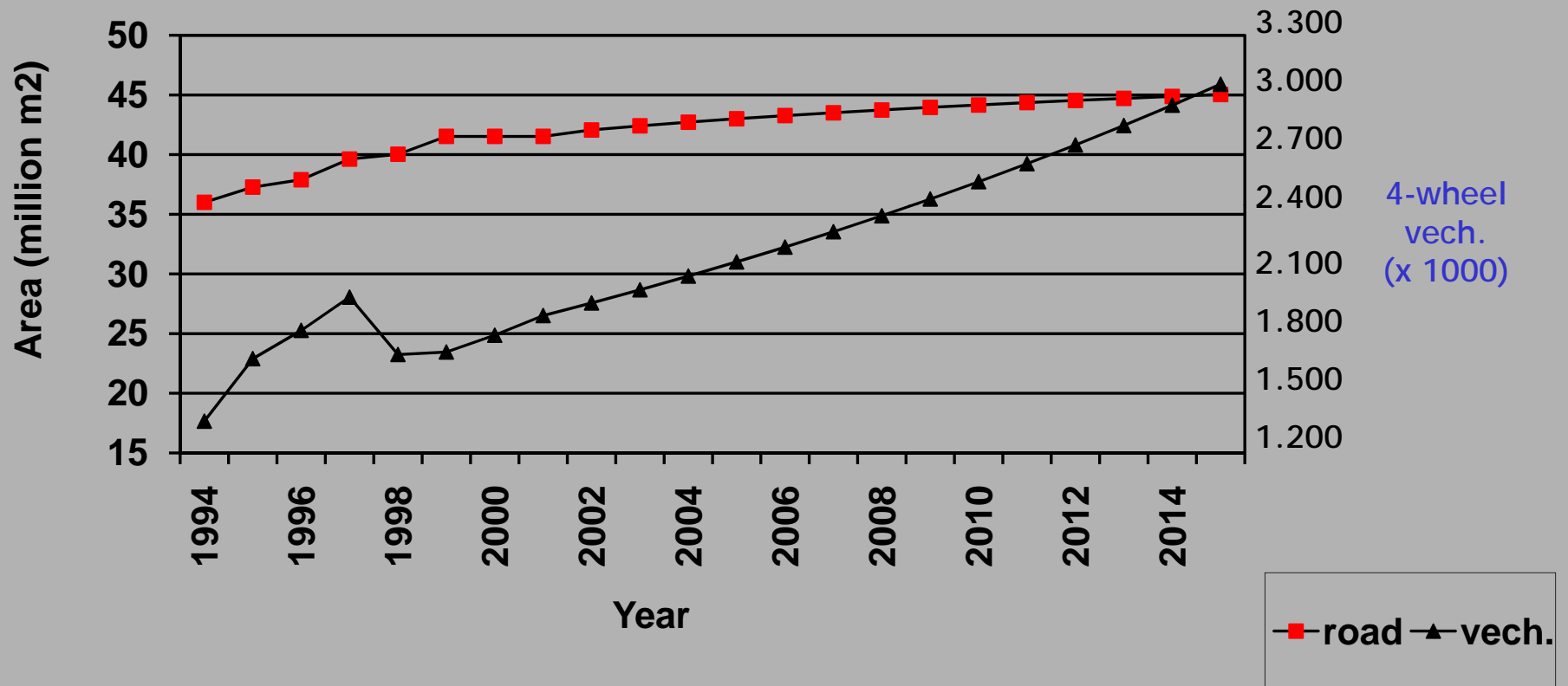


TRANSPORTATION CONDITION IN JAKARTA

- Number of motorized vehicles \pm 5.5 million, consist of 98% private vehicles serving 44% trips and 2% public transport vehicles serving 56% trips.
- Average annual growth was about 9.5% in the last 5 years.
- Total road length is 7,650 km with the road area is 40.1 km² (6.2% of total area of the city).
- Annual average growth of road length was about 0.01%.
- Total demand for public transport in DKI Jakarta has reached 17.1 million trips/day
- The total lost of traffic congestion estimated Rp 12.8 Triliun/year (Time value, fuel consumption, health cost)

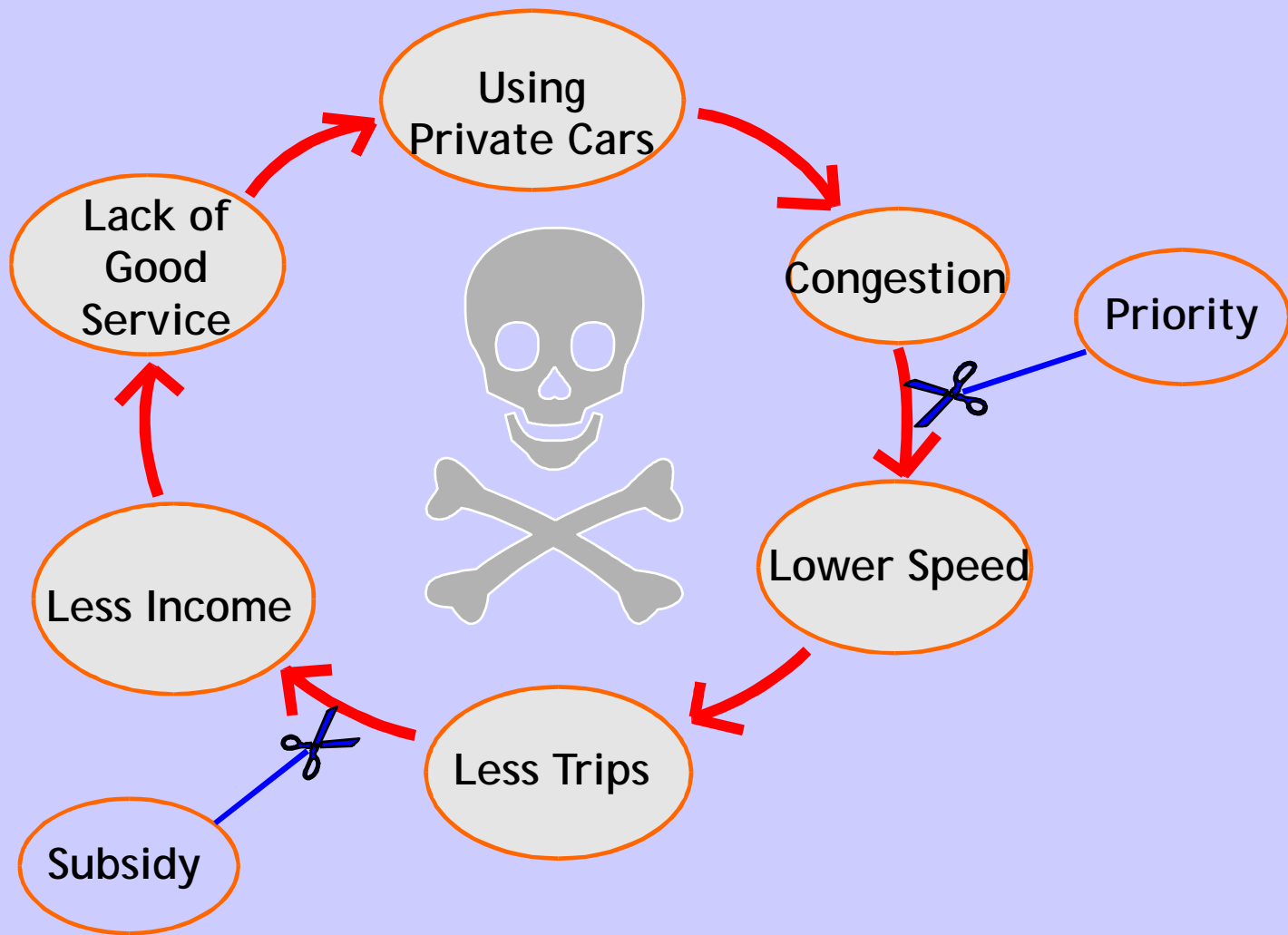
PRELIMINARY PREDICTION

Comparison between Utilization of Vehicles
with Total Road Area in Jakarta



**Uncontrolled private vehicles using will cause saturated traffic
congestion in Jakarta at 2014**

“PROBLEMS” DUE TO THE INEFFECTIVE PERFORMANCE OF TRANSPORTATION SYSTEM





PORTRAIT OF TRANSPORTATION PROBLEMS IN JAKARTA



THREE STRATEGIES IN JAKARTA TRANSPORTATION MASTERPLAN

JAKARTA TRANSPORTATION MASTERPLAN

**PUBLIC
TRANSPORT
DEVELOPMENT**

MRT / Subway

LRT / Monorail

BRT / Busway

Waterways

**TRAFFIC
RESTRAINT**

3 in 1

Road Pricing

Parking Restraint

**NETWORK
CAPACITY
IMPROVEMENT**

Park and Ride

Road Network

Pedestrianisasi/NMV

ATCS / ITS

FIRST STRATEGY : Public Transport Development - Development of 4 Modes of Transportation

1. Mass Rapid Transit (Subway)
2. Light Rail Transit (Monorail)
3. Bus Rapid Transit (Busway)
4. Waterways



FIRST STRATEGY IMPLEMENTATION : BUS RAPID TRANSIT DEVELOPMENT (BUSWAY)



SECOND STRATEGY : TRAFFIC RESTRAINT

- 1. Traffic Restraint Zone (3 in 1)**
- 2. Electronic Road Pricing (ERP)**
- 3. Parking Control and Pricing**
- 4. Park & Ride Development**

GOVERNMENT'S PLAN FOR TRAFFIC DEMAND MANAGEMENT

1. Applying stronger TDM by upgrading 3 in 1 to ERP
2. Selecting suitable technology that concerns with public acceptance, willingness to pay, and ability to pay
3. Complement the BRT plans
4. Develop in line with land use planning and control

THIRD STRATEGY : NETWORK CAPACITY IMPROVEMENT

1. Area Traffic Control System (ATCS) Development
2. Road Maintenance and Improvement
3. Flyover and Underpass Development
4. Toll Road Development
5. Pedestrian Facility Improvement

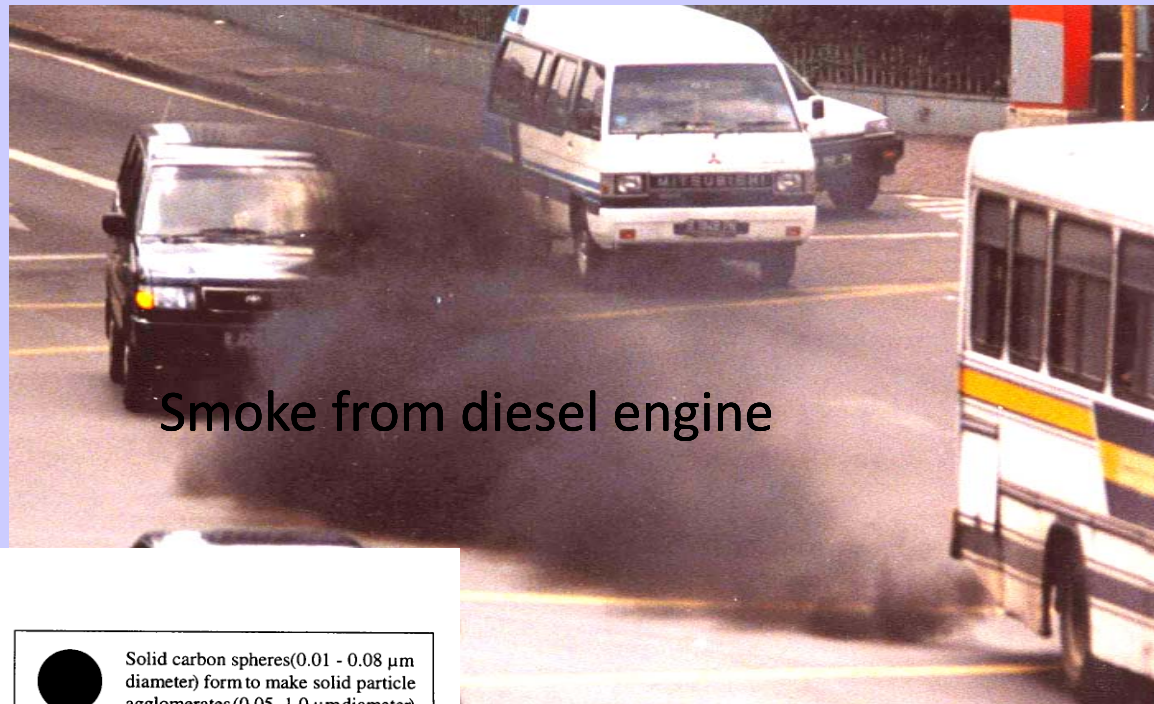
INTELLEAGENT TRANSPORTATION SYSTEMS IMPLEMENTATION

1. Area Traffic Control System (ATCS)
2. Electronic Road Pricing (ERP)
3. Traffic Management Center (TMC)
4. Bus Rapid Transit (BRT) Automation

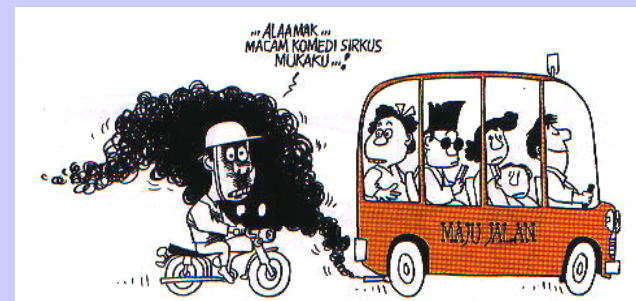
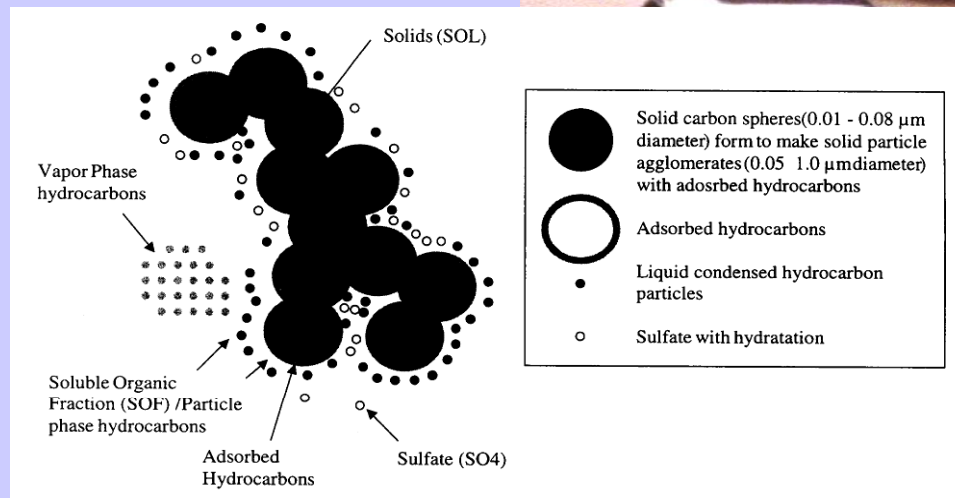
MOTORIZED VEHICLES AND EMISSIONS

Emissions from Motorized Vehicles

High TSP Rate
Making Jakarta The
World's Third Most
Polluted City after
Mexico City and
Bangkok



Smoke from diesel engine



MOTORIZED VEHICLES AND EMISSIONS

Mobile Source Emission Control Policy

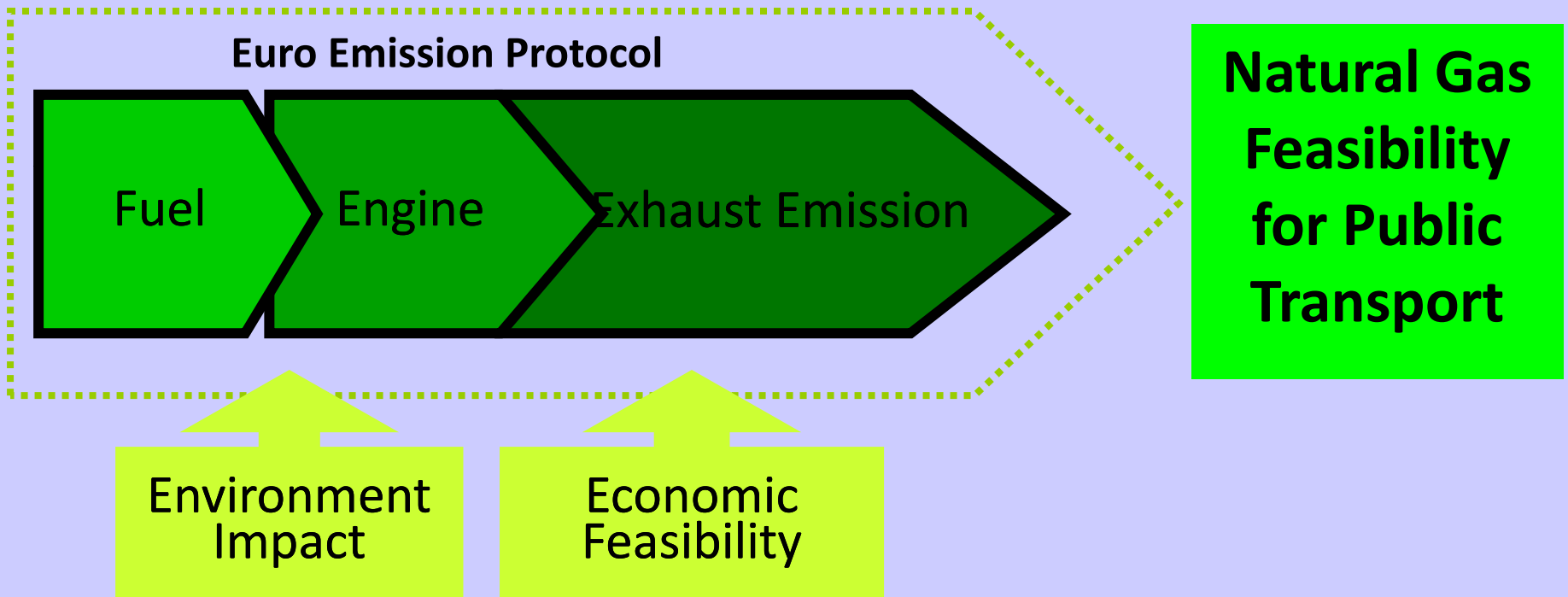
- 1. Local Regulation No.2 Year 2005 Section VI About Air Pollution Alleviation**
- 2. Local Regulation No.2 Year 2005 Section VI Article 3 Air Pollution Alleviation for Mobile Source**

Mobile Source Emission Control Management

- 1. Fuel; Fuel Source, Fuel Plant, Fuel Characteristics, Infrastructure, and Natural Gas Distribution**
- 2. Engine ; Diesel Engine, Gasoline Engine, CNG/NGV Engine, and SOP for CNG Engine**
- 3. Emission; Emission Classification, Emission Standard (Euro)**
- 4. Environment & Health Impact**
- 5. Economic Feasibility**

MOTORIZED VEHICLES AND EMISSIONS

Logical Framework Air Pollution Alleviation for Mobile Source



FACTS OF BUSWAY IMPLEMENTATION IN JAKARTA

1. 14% of busway's user was private vehicles user (based on JICA study at 2004)
2. The passengers are significantly increased. By the 2010, busway has served 307 million trips.
3. The result of study done by ITDP (*Institute for Transportation and Development Policy*), that busway implementation has reduced :
 - a. emission of NO_x, 155 ton per year
 - b. particles, 23 ton per year
 - c. emission of CO₂ 20.000 ton per year
4. Busway in Jakarta has the longest bus lane in the world, stretched from 1st to 8th corridor for 143,35 km in 2010.
5. In 2006, the Government of City of Jakarta has awarded the Air Quality Management Champion Award from Clean Air Initiative for Asian Cities for the use of CNG Buses to support environment sustainability program.
6. Transjakarta Busway has become the reference for International seminar as an example of public transport reform using environmental friendly technology to support sustainability transport program.

FACTS OF BUSWAY IMPLEMENTATION IN JAKARTA

7. During 2001-2006, USAID (US Aid for International Development), is supporting the Technical Assistance for Busway improvement through Institute for Transportation and Development Policy (ITDP).
8. UNEP (United Nation Environment Program) acknowledged that Busway has been supported the reduction of emission. Therefore, the technical assistance for busway development has been lengthened up to 2011.

MOTORIZED VEHICLES AND EMISSIONS

Benefits of Natural Gas Fuel Consumption

- 1. Reduce Carbon monoxide (CO) about 70 %**
- 2. Reduce Non-methane organic gas (NMOG) about 87 %**
- 3. Reduce Nitrogen oxides (NOx) about 87 %**
- 4. Lower Carbon dioxide (CO₂) rate than gasoline**
- 5. Low SPM Rate (Suspended Particulate Matter)**
- 6. More Safety than Gasoline and LPG**

THANK YOU