IMPROVING SUSTAINABILITY OF URBAN TRANSPORTATION:
Experiences from Indonesia

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Board, Indonesia Infrastructure Initiative (IndII)
Board of Director, The Eastern Asia Society for Transportation Studies (EASTS)
Chairman, The International Forum for Rural Transport and Development (IFRTD)
Rapid urbanization and high economic growth pose alarming challenges for urban transport in Indonesia.

Despite of existing policy framework and ongoing initiatives in sustainable urban transport, fundamental shift to more stringent policy with consistent practice is still required for Indonesia to achieve its goal to develop sustainable transport in its urban areas.
OUTLINE

- Challenges from rapid urbanization and motorization
- Existing policy framework
- Major ongoing initiatives
- The needs for shifting gear
- Way forward
URBAN TRANSPORT CHALLENGES IN INDONESIA

Rapid urbanization and motorization
- Urban population
- Private vehicle growth (BPS, Jutpi, Japtrapis, SUTIP 4 cities)

Deteriorating service and share of public transport
- Unprofitable public transport industry
- Occupancy rate (SUTIP), share in Jabodetabek/greater Jakarta (Jutpi)

Disconnected freight transport and inter-modality
- Tanjung Priok port dwelling time is increasing → 8 days
- Freight truck ban entering city road network in 2010

Poor urban transport management:
- Transport engineering
- Policing of traffic regulation violation (intersection, illegal parking, etc)
RAPID URBANIZATION AND FAST GROWING LARGE AND MID-SIZED CITIES

Increase urban population and economic activity creates high demand in urban transport

*Urban and Rural Population Trend in Indonesia*

Source: MGI, 2012
RAPID MOTORIZATION AND VEHICLE OWNERSHIP

Shift from motorcycle to car due to increasing income

Growth of Vehicle number 2000-2011

Motor Vehicle Ownership 2000-2011

Source: Indonesian Central Statistic Agency, 2013
DIMINISHING PUBLIC TRANSPORT SHARE

Dilapidating Public transport share and stigmatized as mode just for poor

Change of Mode Share, 2002 - 2010

Mode Share by Income 2010

Source: JUTPI, 2010
Source: JAPTrapis 2011
INEFFICIENT URBAN FREIGHT AND INTER-MODALITY

Low competitiveness of freight transport caused by poor inter-modality in urban area as major trade hub

3.24.16 Dwell time in selected countries

- Singapore: 1.1 days
- Hong Kong, China: 2 days
- France: 3 days
- Australia, New Zealand: 3 days
- United Kingdom, Los Angeles (USA): 4 days
- Malaysia (Port Klang): 4 days
- Thailand: 5 days
- Tanjung Priok: 6.7 days

Note: Dwell time is the number of days a cargo container averagely stays in a port.

# POOR URBAN TRANSPORT MANAGEMENT

Low vehicle ownership but severe traffic congestion

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<tr>
<th>City</th>
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<td>Palembang</td>
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<td>Metro city</td>
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*Source: Indonesian Ministry of Transportation, 2013*
POLICY FRAMEWORK FOR SUSTAINABLE URBAN TRANSPORT

Sector Development framework:

- Law No 22/2009
- RPJMN (Government’s Medium Term Development Plan)
- Grand Design
- National Action Plan/Local Action Plan (RAN/RAD)
  Green House Gases Mitigation and Adaptation

Financial framework:

- Local Grant (IndII),
- Mitigation Grant – MoF
- Supporting NAMA FACILITY
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<td>JICA for Jakarta SNCF for Bandung WB for Surabaya ADB for Medan</td>
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<td>(Jakarta, Bandung, Surabaya, and Medan)</td>
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<td>(MRT and Monorail) by not later than the year 2014.</td>
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PUBLIC TRANSPORT IMPROVEMENT

- Regulation: development of Service Quality Standard (SPM) of BRT for Indonesian Cities (MOT) → Indonesia Ministry of Transportation’s Act 10/2012 About Minimum Standard of Quality for Mass Transportation
- Institutional Improvement (BLU-BUMD Transjakarta,)
- Management Improvement (BUMD Transjakarta)
- Fleet management (Shift system Bogor, Kopaja)
- Fuel quality: CNG bus (Transjakarta and Bajaj) Biodiesel B20 (TransPakuan)
- Financing scheme: buy the service (TransJogja), cost recover-subsidy (Transjakarta), PPP (transMusi)
- Infrastructure (IndII – Solo & Palembang)
- Inter-modal facility (BTS Solo)
NMT DEVELOPMENT

- City wide pedestrian - Surabaya Local Government
- Water front pedestrian – Makassar (Local Government)
- CBD pedestrian - Pakanbaru ((Indonesia Ministry of Transportation)
- Sidewalks & Intermodal pedestrian – Bogor (SUTIP) – Bogor, Nyi Raja Permas
  http://www.youtube.com/watch?v=rsFL74nHSrg
- Sidewalks improvement in Purwosari railway station area – Solo (Indonesia Ministry of Transportation)
- Bike sharing facility – UGM
DEMAND MANAGEMENT

Parking Management –
- Jakarta on street parking enforcement
- Palembang, restriction for on-street parking in national road (Sudirman Rd.) and increasing parking fee in some CBDs
- Bogor, increasing parking fee in Surya Kencana CBD
- Solo, increasing parking fee in some CBDs

ITS – Solo city

ERP Preparation – Jakarta

TOD – Sukaresmi Bogor, in cooperation with PT KAI
Central government intervention on metropolitan transport planning and management → OTJ – Jabodetabek Transport Authority

Public transport Institutional reform → BUMD Transjakarta and BUMD angkutan kota (non-transjakarta buses)
FINANCIAL

- Urban Transport DAK (Decentralized Funds)
- Climate finance competition for local governments for related sectors in RAD GRK
- Fuel subsidy reduction: decentralized effort to reduce fuel subsidy (local govt action) → sensitivity
- LCGC: incentive for higher fuel economy → trigger national controversy
- TAC/IMO/PSO Urban Rail system: KRL Jabodetabek (Greater Jakarta)
- PPP for urban transport system: MRT and Monorail
Elastic MC demand for small price increase, but inelastic demand for significant price hike.

Fuel Price debates and impacts on motorization: Indonesia

FUEL PRICE AND MOTORCYCLE SALES, 1990 - 2011
INFRASTRUCTURE

- Urban rail: Jakarta, Surabaya, Bandung, Makassar
- Multi modal facility: Kuala namu Airport rail, KA Bandara Jakarta, Pramex Rail Airport Joga and Solo, Kalibaru toll
- TOD: Manggarai rail station, Senen rail station, and Sudirman multi mode terminal (commuter rail, monorail, MRT, BRT)
URBAN AIR POLLUTION

- Fuel quality standard (sulfur content) → new oil refinery
- Vehicle fuel economy → LCLG and beyond
STUDY ON TRANSPORT GHG FOR ASEAN REGION:
Lessons learned

Initiated by ITPS Japan
Looking at 2050 Transport GHG emission profile in a do-minimum and target oriented policies
Employing back-casting approach, using UNFCCC recommendation
Propose Long Term Transport Policies to realize CO2 emission reduction of 50% in 2050 for ASEAN countries, but NOT compromising the preferred economic growth
GREEN HOUSE GAS (GHG) EMISSION FROM TRANSPORT SECTOR

- We are required to reduce GHG emissions globally by at least 50%.

- However, global GHG emissions from transport are estimated to be double! (IEA:2009)

- Especially in ASEAN countries, it is estimated to be 8 times! (CAA:2010*)

*In the report of the precedent study of ITPS
PER CAPITA Emission
BAU and RAN-GRK Improved

RPJMN, RPJP and MP3EI

27 Oktober 2013

UNESCAP
TESTING OF SCENARIO
TOTAL TRANSPORT EMISSION
(Mio Kg eCO2/year)
TESTING OF SCENARIO (Ton eCO2/per Capita-year)

CO- BENEFITS
WAY FORWARD

- Over-aching policy: mode mix for Indonesian urban area → not yet available, learning from other (Asian) countries
- Approach: More action to avoid demand → more complex inter-institutional cooperation
- Institutional: Urban transport planning institution and public transport Institutional reform
- Finance: Subsidy, finance mechanism, and PPP for urban transport infrastructure and operation
- Urban Air pollution: fuel quality standard (sulphur content) and vehicle fuel economy
- Infrastructure: Urban rail, multi modal facility, and TOD