

Transport and Climate Change Week: SUSTAINABLE URBAN TRANSPORT DEVELOPMENT IN INDONESIA

Ikhwan Hakim
Director of Transportation
Ministry of National Development Planning Indonesia

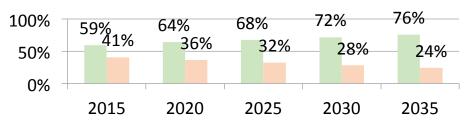
Presented at Transport and Climate Change Week Berlin, 18-20 September 2017



Sustainability Issues in Urban Development (1/2)

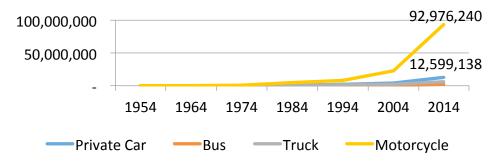


High Urbanisation Rate



■ Urban Population ■ Rural Population In 2015: Indonesia (2.69%), India (2.38%), China (2.3%)

Rapid Motorization



High Traffic Fatality

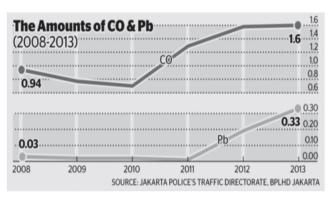
- Traffic fatality in 2016 was almost 26.000.
- In 2016, 72% of traffic accidents involve motorcycles.

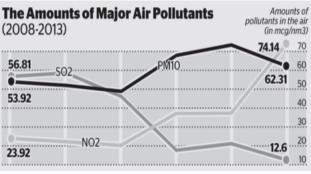
Environmental Impacts

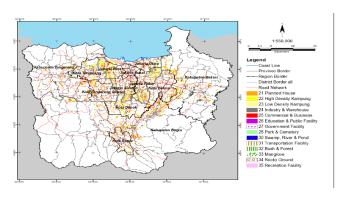
- The transport sector accounts for 27% of CO₂ emissions. In developing countries, CO₂ emissions from transportation will increase by two times in the period 1980 - 2030.
- In DKI Jakarta (2008-2013) indicators of urban air quality such as PM₁₀ increased by 20%, CO increased 70%, and NO₂ increased by 350%.

Massive Urban Land Conversion

- Rapid changes of low density areas into high densities. Agricultural land and green areas turned into residential areas.
- In Jakarta Metropolitan Area, within 1985-2002, the residential land use increased from 11% to 22% (2 times) and industrial land use increased from 4.75% to 7.5%. While, agricultural land use decreased from 45% to 24%.







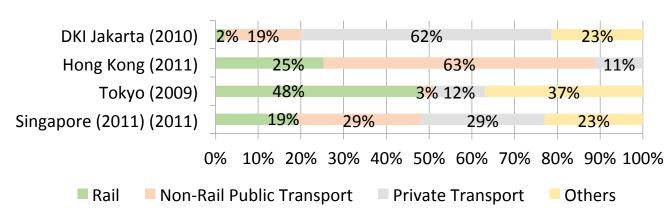




Sustainability Issues in Urban Development (2/2)



<u>Deterioration of Urban Public Transport</u> (current share is around 20%)

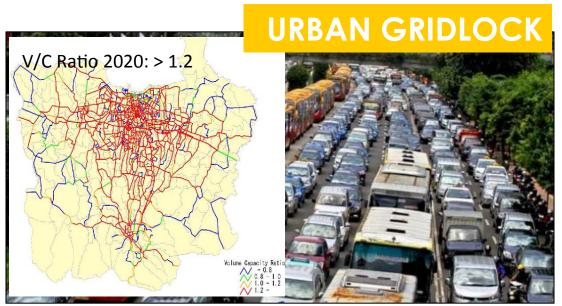


Severe Traffic Congestion

- Economic losses due to traffic congestion in Jakarta reach USD 3 billion in 2016. (Source: World Bank)
- In 2020, most network in Jakarta Metropolitan will reach V/C Ratio > 1.2
- The current ratio of roads in Jakarta is 6% and decreasing which is not proportional to the number of private vehicles.

Lack of Modern Mass Public Transport System

- Urban public transport system has relied on traditional mini, medium, and large buses (with renting system and poor management and operation)
- BRT was introduced in 2004 in Jakarta and some major cities (not full BRT).
- Among 11 large cities, 15 medium cities and 52 small cities in Indonesia, only 5 cities have urban railway system (developed in colonial era). Jakarta MRT and Palembang LRT are still under construction.





UNRELIABLE PUBLIC TRANSPORT



Towards Modernized Mass Transport System



Existing

<u>Current Efforts</u>



- Individual ownership
- License system
- Rent system
- Poor management: individually managed.
- Poor service: no timetable, low capacity, no fixed rate, no segregated lane and no designated stop.
- Low ridership due to poor service -> unreliable public transport mode.
- Compete among others.





- Railway Commuter Line (Jakarta Metropolitan)
 - Currently up to 1 million passenger / day.
 - Issue: network developed in colonial era, only 1 station serves CBD.
- BRT Jakarta (2004) and some major cities
 - ➤ BRT Jakarta heavily subsidized, not all lane are segregated, no newly developed lane (except corridor 13), currently 400 thousand passenger / day.
 - Other cities are mostly semi-BRT, not segregated.
 - Central Government provide bus fleet to some cities to support BRT system.
 - Many cities are not ready in terms of institution and financial scheme to support BRT.

Modernized Transport



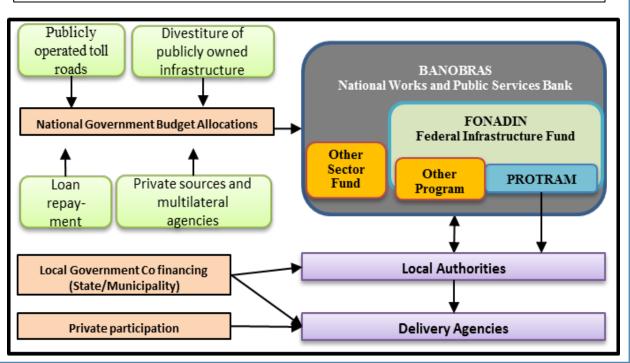
- MRT Jakarta Phase I (operation in 2019):
 - > 15.7 km, with 13 stations (6 stations serving the CBD).
 - Project investment: 1.1 billion USD
 - Funding scheme of MRT Jakarta: 49% central government, 51% local government (no private sector funding).
- Palembang LRT (operation in 2018):
 - Project investment: 750 million USD
 - 100% central government funding
- Proposals from other cities for 100% support from central government to develop LRT: Medan, Batam, Surabaya, Makassar, Bandung.
- No established framework for central government to support urban mass transport system development (currently unequal treatment.



Strategy: Institution Financing and Support Framework



BEST PRACTICE (EXAMPLE MEXICO)



- Pool of Fund (source: donor, grant, and loan);
- Criteria: City form, technology mode, planning;
- Central Government support not include operations;
- Maximum fund sharing from central government, minimum sharing from municipal government and private sector.

Source: World Bank, 2017

NATIONAL PROGRAM FOR URBAN TRANSPORT DEVELOPMENT

Beneficiary Criteria

- Economic (GDP contribution, fiscal capacity);
- Regional regulation (Transport and Spatial Plan);
- City Size (population, density, geography);
- Share of existing public and private transportation.

Selection of Mode of Transportation

- Technology and Type of Transport Mode
- Integrated planning with Existing Transportation and Transit Oriented Development Facility (TOD).

Funding and Institutional Framework

- Minimum funding share from local government and private sector;
- Regional transportation institutional framework.



THANK YOU

ikhwan.hakim@gmail.com