

# Jakarta, Indonesia

## First step towards a bicycle friendly future

A short-distance bicycle lane along 1.5 km of road in South Jakarta may not be an ample amount to cater for approximately 6000 cyclists in DKI Jakarta. Nevertheless, the project has been a catalytic pilot to encourage further bicycle lane development in Jakarta. It is the first step in DKI Jakarta to encourage bicycle use across the city, as espoused in the new 'Master Plan for Bicycle Lane'.

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### Abstract

The bicycle is an environmentally friendly transport mode and a viable alternative commuting option for urban dwellers, allowing them to avoid the traffic congestion associated with daily urban life. The promotion of bicycle use as an alternative transport option may not be the panacea in solving the issue of traffic congestion; but can be part of addressing the city of Jakarta's needs to vary commuting options for its citizens. EcoMobility can be a means of diverting the majority of modal share away from motorized vehicles.

In DKI Jakarta, planning for bicycle infrastructure does not yet attract major attention within the overall urban transport policy but it has already become an optional mode of transportation for some urban dwellers and commuters. In order to mainstream bicycle use, the 'Master Plan for Bicycle Lane' was developed in 2010 and the first bicycle lane was established in Jakarta along 1.5 km of road. It is a pilot project aimed at promoting bicycle use in the city. South Jakarta is the first municipality in DKI Jakarta to develop a bicycle lane. It was built within the context of the overall DKI Jakarta Master Plan for Bicycle Lane and involved successful citizen participation in partnership with local authorities. Its key objective is to trigger incentives for urban dwellers to use the bicycle as a means of transport while simultaneously acting as a catalyst to implement the comprehensive Master Plan for Bicycle Lane.

### Importance of EcoMobility

The significance of the bicycle as a clean and equitable form of transport has now been introduced worldwide as one of the key solutions to reduce greenhouse gas emissions in the transportation sector. Other arguments for supporting bicycle use in cities include a reduction in traffic congestion, increased roadway cost savings, reduced parking problems and equitable transport choices. It can be combined most effectively with creating livable and compact cities, a reduction in urban sprawl and an increased efficiency of land use. Thus, many local governments have long adopted the concept of cycling inclusive planning to reshape their urban transport systems as part of a general transition towards more sustainable cities.



#### Population / Land area

~ 9.2 million (2009)  
66,233 km<sup>2</sup>

#### Municipal budget

IDR 19,371,835,500 million  
US\$ 2.1 billion (2009)

## Case Study



Launch of the bicycle lane in South Jakarta by Governor, Dr. Ing. Fauzi Bowo 22 May 2011.

### City context

Jakarta is the capital city of Indonesia, known as "Special Capital Territory of Jakarta", abbreviated as DKI Jakarta. It is divided into five municipalities: Central Jakarta, South Jakarta, West Jakarta, East Jakarta, North Jakarta, and one regency Thousand Islands, (a string of 105 islands stretching 45 kilometers north in Jakarta Bay).

DKI Jakarta is the political and economic center of Indonesia. It is also the cultural and social hub. The city accounts for 16 per cent of Indonesia's Gross Domestic Product. Population density in 2010 reached 13,900 people per/km<sup>2</sup> with a total population of 9.22 million.

The urban area is located in a lowland area, approximately 7 meters above sea level. Accordingly, the provision of bicycle infrastructure should not encounter any specific topographical difficulties in the area, however, proper infrastructure to support bicycle use and ensure its safety is still inadequate.

Traffic congestion is a chronic problem in Jakarta. The economic loss caused by traffic congestion in Jakarta and surrounding areas is estimated to be approximately US\$ 68 million per year, and this estimation excludes the impacts of

traffic congestion and pollution on human health. The problem is exacerbated by the fact that road space in Jakarta increases 0.9 per cent a year, while vehicle use increases 9 per cent a year. Approximately, 70 per cent of the people in Jakarta use private vehicles as their primary means of transport. To revitalize the urban transport system, one of the many efforts made by the Jakarta Provincial Government was to finalize the Master Plan for Bicycle Lane in November 2009 and the subsequent enactment of the DKI Jakarta Governor Decree No. 680/2011 which was crucial to the construction of the new bicycle lane.

### Master Plan for Bicycle: Framework for bicycle infrastructure development through multi-stakeholder partnership.

In order to anticipate the problems that will arise as a result of traffic congestion in 2014 and plan accordingly, DKI Jakarta implemented the Integrated Macro Transport Pattern (based on the DKI Jakarta Governor Decree No. 84 of 2004) the main focus of which is on mass public transport provision or improvement (e.g. Mass Rapid Transit and Bus Rapid Transit), Transport Demand Management (Electronic Road Price System) and the new toll roads development project. Political and financial support also concentrated on motorized forms of transport. Hence, DKI Jakarta's local budgeting allocation had not established priority funding for bicycle infrastructure development and generally, bicycle infrastructure development remained a minor issue until the establishment of the Master Plan for Bicycle Lane in 2010.

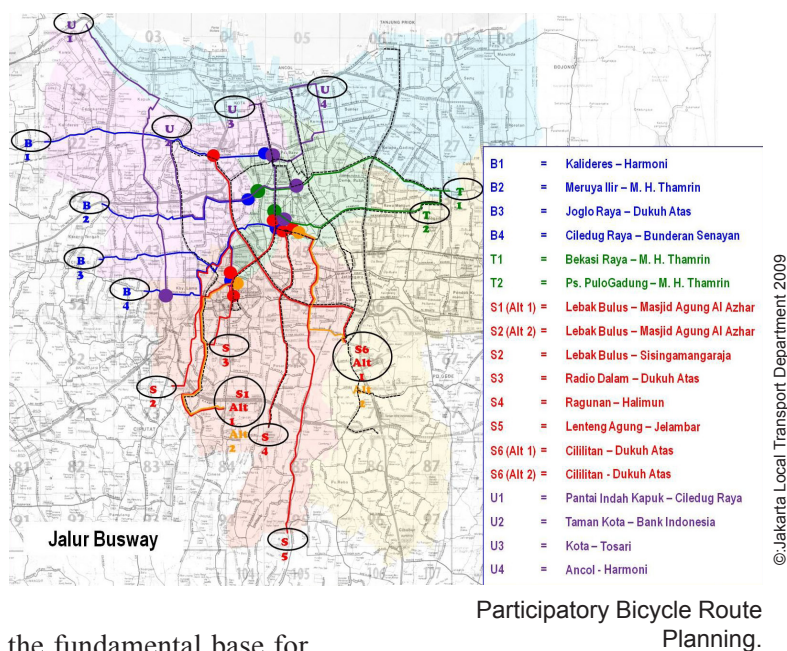


**Promoting bicycle use.** Although developing infrastructure for bicycle use has not yet become a priority, raising awareness in support of bicycle use in Jakarta is thriving. There has been an increase in the number of bicycle communities and bicycle campaigns. This awareness raising also includes 'Car Free Days' which results in a growing public interest in EcoMobility modes of transport. Furthermore, after persistent efforts and years of promoting bicycle use through campaigns and various bicycle community outlets, it became possible to develop the strong social base needed to realize the bicycle lane project in South Jakarta.

**Strong multi-stakeholder partnership.** A needs analysis and assessment for bicycle lane development in specific areas was undertaken through a series of Focus Group Discussions (FGD), which provided the fundamental base for the preparation of the master plan. The FGD was conducted by the DKI Jakarta Transport Department, the Jakarta Transportation Council (DTKJ) and the Institute of Transportation and Development Policies (ITDP). It also involved consultation with the various bicycle communities. A key priority of the plan emphasizes that bicycle use should be planned as a prospective feeder transport for the Bus Rapid Transit system. Therefore, the ITDP, as the BRT's main research organization, played a crucial role in providing technical assistance in the preparation of the bicycle master plan and its integration with the BRT network, which was essential to ensure a complimentary transport system where multiple modes may be used in a single journey. This would be achieved by locating bicycle infrastructure at public transit stations, as well as providing an integrated ticket system that allows bicycles to be taken on other transport modes i.e. trains and buses.

**South Jakarta established the first bicycle lane** at provincial level and is now considered to be the municipality with the highest commitment in implementing the bicycle lane scheme. The lane came into operation in May 2011 with strong support from its mayor, who is also the chairman of the Indonesia Cycling Committee. The first launch of the bicycle lane in South Jakarta was also utilized by the provincial government to promote a fundamental bicycle-related policy initiative (DKI Jakarta Governor Decree No. 680/2011).

The 1.5 km bicycle lane is the first bicycle lane to be established at municipal level and it is now a pilot project to catalyze more political interest and garner a wider range of public attention and support. Bicycle lanes are highlighted by a green-painted road marking along the 1.5 km route. It is envisaged that the bicycle lane will be extended to reach the areas listed in the master plan which encompasses five municipalities and involves objectives for connecting periphery areas to the Central Business District. This is a good starting point within the wider commitment in the bicycle master plan to promote bicycle use in Jakarta. The bicycle route recommended by the master plan has already included other factors to integrate bicycle use into the local public transport network. The realization of the 1.5 km pilot project is an initial breakthrough to ensure that the promotion of bicycle use gets the necessary political attention.



Bicycle lane, South Jakarta.



Bicycle as feeder transport.

## Results

**Bicycle lane development in long-term spatial design guidelines.** The Master Plan for Bicycle Lane is included in the 2010-2030 DKI Jakarta long-term spatial design planning guidelines. To compliment bicycle lane development, the government has also suggested that all offices (both private and public sector) in South Jakarta immediately provide bike parking facilities and shower rooms to cater for the requirements of bicycle users.

**Domino effect of the bicycle project.** The second phase of bicycle lane development involves extending the pilot route by adding a route from Iskandarsyah road to reach Prapanca road in Jakarta. Further assessments of the need for bicycle lanes in other municipalities have also been conducted. In East Jakarta, development of bicycle lanes are planned along the East Flood Canal. While in North Jakarta, bicycle lanes are planned to connect 12 coastal tourism spots.

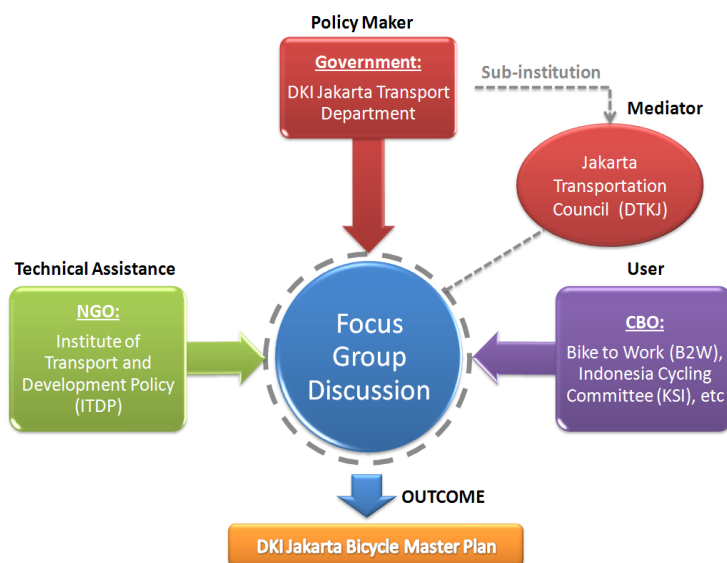
**Providing bicycle facilities.** Bicycle parking slots are available for cyclists in several spots along the 1.5 km bicycle lane. In order to protect cyclists from conflicts with motorized vehicles, teams of security officers were deployed to enforce order. A team of enforcement officers consists of six people, of which two are from the civil service police force (Satpol PP), two from South Jakarta Transport Department, and two from the Bike to Work community.

**High-prospect of becoming feeder transport.** In the long run, bicycle use in DKI Jakarta is intended to act as a mode to reach public transport transit points such as the BRT. Approximately 200 out of 6000 active members now use the bicycle as a complimentary means of travel with public transport. Bicycle parking facilities have been available free of charge across the Central Business District and in several crucial locations with a high rate of transport modal change. The bicycle parking facilities have been provided both by private sector/landlords and the public sector.

## Lesson Learned

**Multi-stakeholder Partnership.** Cooperation among stakeholders will result in a favorable outcome if communication is well-managed and institutionalized. Community Based Organization (CBOs) and Non-Governmental Organizations (NGOs) participated significantly in the development of the DKI Jakarta Master Plan for Bicycle Lane. ITDP Indonesia is competent in providing technical assistance and capacity development, while the CBOs namely Bike to Work (B2W) and Indonesia Cycling Committee (KSI), were needed to help assess cyclist requirements in terms of bicycle route planning and the provision of park and ride facilities on the ground.

In order to bridge the multi-stakeholder discussions, the Jakarta Transportation Council (DTKJ) plays an important role in mediating coordination between civil society and local government. Most importantly, the local government through its Local Transport Department is in charge of policy making, formulating legal instruments and implementing the overall project.



Multistakeholder partnership in master plan Development



**Local leaders set a strong example.** In order to encourage urban dwellers in South Jakarta to start cycling, the local mayor sets an example by cycling to work every Tuesday and Friday. High-commitment and strong support from local leadership is essential to promote the use of the bicycle at the local level.

**Alternative funding mechanism.** The budget allocation for bicycle infrastructure is considerably less than the funding for other projects, especially when compared to a mega project like 'Mass Rapid Transit' or the 'Toll Road Development'. Although limitations in local budgeting for bicycle infrastructure should not be a critical barrier in the development of bicycle infrastructure, financial support can be gained through cooperation with international/multilateral organizations engaged in sustainable development or through fundraising among bicycle communities.

**Increasing awareness.** In the first month following the launch of the bicycle lane, informal public transport models like Bajaj (three-wheeled motorized vehicles) were still occupying the bicycle lane for parking space. To remedy this problem, it is believed that enforcing the regulation on the spot may not be the most viable option; instead a wide range of awareness raising campaigns in media outlets regarding the proper use of bicycle lanes is seen as the most suitable method of providing the public with information about future bicycle lane developments.



Setting an example: South Jakarta Mayor, leading the way.

## Replication

In Indonesia, the bicycle lane project has been implemented in other cities like Yogyakarta, Bali, Balikpapan, and Palembang. One of the pioneering cases, Yogyakarta has begun an incremental approach to the development of bicycle lanes with a partnership consisting of the local research institute, bicycle communities, and the local transport department. Local policies like 'Bike to Work and School' (Sego Segawe) plays a crucial role in encouraging the use of the bicycle and increasing bicycle communities, as well as introducing the bicycle as a key cultural asset. In the case of Yogyakarta, financial support for bicycle lane development is provided by the city.

Bicycles can generally be used only within a maximum distance of 10km. Therefore, bicycle lanes should be established in a way that enables integration with existing public transport links. This allows the cyclist to combine transport modes. Further expansion of bicycle lanes can be replicated in other areas listed in the Master Plan for Bicycle Lane and the wider hinterland areas around Jakarta.

## Budget & Finances

Despite the fact that there is no specific budget allocation for bicycle lane development in DKI Jakarta, significant financial support still came from the Bicycle Committee.

The total budget reached approximately US\$ 120,000 (or IDR 1 billion). Financial support is driven through fund raising activities by Indonesia Cycling Committee (KSI). However, it is envisaged that future bicycle lane projects will be funded by the city.

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