



THE STATE OF ASIAN CITIES 2010/11



CASE STUDIES

TRANSPORTATION

POSITIVE CHANGE IS WITHIN REACH

Transportation generates at least one third of greenhouse gas emissions in urban areas, but positive change is within reach, and much more easily than some policymakers might think.

Cycle rickshaws remain a policy blind spot

The cycle rickshaw remains widely popular in Asian cities and is a sustainable urban transport for short-distance trips (1-5 km). It can also complement and integrate very effectively as a low-cost feeder service to public transport systems, providing point-to-point service (i.e., from home to a bus stop). According to estimates, over seven million passenger/goods cycle rickshaws are in operation in various Indian cities (including some 600,000 in India's National Capital Region) where they are used by substantial numbers of low- and middle-income commuters as well as tourists, and even goods or materials.

Still, for all its popularity and benefits, this non-polluting type of transport is largely ignored by policymakers and transport planners. Recently in Delhi, a ban on cycle rickshaws resulted in additional traffic problems as people turned to 'auto' (i.e., motorized) rickshaws instead. The ban met with public outcry and opposition from many civil society groups. In a landmark decision in February 2010, the Delhi High Court ruled that the Municipal Corporation's ban on cycle rickshaws was unconstitutional.

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Delhi's conversion to natural gas and solar power

In 1998 and at the request of India's non-governmental Centre for Science and Environment, the country's Supreme Court directed the Delhi Government to convert all public transport and para-transit vehicles from diesel or petrol engines to compressed natural gas (CNG). In the process, the Court also paved the way for stricter environmental norms and ordered the phasing out of old, highly polluting commercial vehicles.

Subsequent conversion to gas and introduction of low-sulphur fuel demonstrated that major change could occur on a large scale, as long as appropriate policies were deployed and enforced (although, in the case of Delhi, the judiciary had to step in and tell public authorities what to do).

However, the benefits arising from the introduction of compressed natural gas are diminishing due to the rapidly increasing numbers of private vehicles that run on petrol. More recently (October 2008), 'eco-friendly' hybrid rickshaws have been introduced in the Indian capital. Known as 'solekshaws', these vehicles are fuelled by solar-generated electric power which is produced and distributed by a dedicated facility located in central Delhi.

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6
5
4
3
2
1
0
(World Population in Billions)



This first-ever State of Asian Cities Report 2010/11 is a collaborative effort between UN-HABITAT and the UN Economic and Social Commission for Asia and the Pacific (ESCAP), the UN Environment Programme (UNEP), and the United Cities and Local Governments – Asia-Pacific Regional Section (UCLG-ASPAC)

China promotes electric bikes and scooters

Electric two-wheelers have become popular in Chinese cities, providing an inexpensive, effortless alternative to public transport or conventional bikes. Many local authorities are promoting them on account of low energy consumption and zero tail-pipe emissions, which are ideal features for China's congested urban areas. 'E-bikes', as they are known, include two-wheel bicycles propelled by pedals and supplemented by electrical power from a storage battery, as well as low-speed electric scooters (with perfunctory pedals to meet legal specifications). They are gaining increasing shares of two-wheeled transport modes across the country, and in some cities like Chengdu and Suzhou they have even surpassed conventional bicycles. In fact, the electric bike market has expanded more rapidly than any other mode in China, with production soaring from nearly 40,000 in 1998 to over 10 million in 2005.

Three major reasons have contributed to the expanding market share of e-bikes in China: (i) technical progress (improvements in battery and motor technology), (ii) economic factors, namely, a concomitance of rising incomes, the declining costs attached to mass production, and the rising costs of gasoline, and (iii) policy factors, such as the Road Transportation and Safety Law which classifies e-bikes as non-motorized vehicles.

State of Asian Cities Report 2010/11, Ch. 4, Box 4.18