Green Transport

EC-LINK 中欧生态城

Case Study

Case 1:
Travel Demand Management

Problem to resolve: High level of Green House Gas emissions caused by all means of transport contribute to Climate Change and Globa Warming

Strategy: Starting from the Objective of GHG reduction by planning and implementing a more ecological transportation Policy, different intervention opportunities are compared as a guideline for public authorities and policy makers in China

Primary Tools: →Tool GT 1 →Tool GT 3, →Tool GT 4

Secondary Tools:

- Public transit service improvements
- Walking and cycling improvements (non-motorised transport)
- Corporate Mobility Management programmes
- Parking management and pricing
- Efficient road pricing
- Vehicle restrictions
- Smart growth land use policies

Example for a transport demand management strategy proposed by MoHURD	
	**Promote joint development of transport and land use** (A) Planning should take the lead in coordinating resource allocation and land use in order to improve urban spatial and industrial structure, such that necessary trips can be significantly reduced. (B) Implement ToD, in order to lead the clustering of urban functions at transit corridor or hubs, as well as encourage residents to use bicycle for short-distance trips.

CASE STUDY

Sustainable Transport Programme. In China, transport accounts for a significant share of total carbon emissions, representing a significant challenge to sustainable development. Recognising the challenges of rapid urbanization and motorization, China has committed to limit the growth of its green house gas (GHG) emissions. Through the implementation of green transport policies, China is aiming to improve urban air quality, reduced congestions, and improved road safety. Applying the Avoid-Shift-Improve approach, China promotes alternative mobility solutions and develops sustainable modern transport systems in its public transport.[1] Among these are underground metro systems, guided rapid bus transit (BRT) systems, innovations in motor vehicles, and non-motorized transport networks (for instance for bicycles).[2] In international comparison, Transport policies in China are considered as strong and well oriented due to their commitment to green growth and heavy investment, as the Asian Green Cities index study has found out. [3]

Transport Demand Management - travel impacts and relevance for Chinese cities[4]

	Sustainable Urban Transport Policies	Travel impacts and GHG reduction	Relevance to Chinese cities
Pull	**Public transit service improvements**	Increases modal share of public transit and reduces car-driving for all travel purposes GHG reduction most effective, if implemented city-wide	Almost all Chinese cities upgrade their public transit systems. But in many of them, the overall travel-chain from-door-to-door does still not provide high levels of convenience.
Pull	**Walking and cycling improvements (non-motorised transport)**	Increases modal share of walking and cycling for short distance trips (up to 5 km) and reduces car-driving for all travel purposes GHG reduction especially high, if implemented in mixed-use city quarters or as feeder to public transit	Traditionally non-motorised modes were strong in China. Currently walking and cycling lack a positive image in society and infrastructure for bikes has been reduced. However, it is still better than in many other countries and there is a strong trend toward electric bikes.
Pull	**Corporate Mobility Management programmes**	Reduces automobile travel especially for commuting GHG reduction especially high, if major employers participate	Many employers in China do not yet apply corporate mobility programmes. A growing number of Chinese companies develop environmental or sustainability strategies.
Push	**Parking management and pricing**	Reduces automobile travel GHG reduction most effective, if implemented city-wide and high quality public transit systems are in place	Parking is a key challenge in many Chinese cities. First steps have been taken but it still is a long way to comprehensive parking strategies. The growing numbers of automobiles require urgent action.
Push	**Efficient road pricing**	Reduces urban-peak automobile travel, especially for commuting GHG reduction highly depending on zone where applied	Congestion pricing is so far not implemented in Chinese cities. There might be some potential in very congested areas, especially if combined with vehicle restrictions.
Push	**Vehicle restrictions**	Reduces automobile travel in certain times or areas GHG reduction highly depending on time when or zone where applied	Many Chinese cities have experience with vehicle restrictions that are increasingly connected to fuel types (e.g. exemptions for EVs)
Smart growth land use policies		Shifts modes and reduces vehicle travel (VKT) simultaneously GHG reduction especially high in a long-term perspective of more than 10 years	Many Chinese cities are auto-oriented and separate living and working. Considering the rapid growth of urbanization (up to 15M people move to cities every year) such strategies are of utmost importance.

Credentials:

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Sources and further reading:

[1] Mehndiratta, S. and Salzberg, A. Improving Public Transport in Chinese Cities: Elements of an Action Plan, in: Baeumler, A., Ijjasz.Vasquez, Mehndiratte, S. (Eds.). 2012. *Sustainable Low-Carbon City Development in China*, Directions in Development – Countries and Regions. World Bank. Washington. pp. 269-298.

[2] Mehndiratta, S. Cycling and Walking: Preserving a heritage, Regaining Lost Ground, in: Baeumler, A., Ijjasz.Vasquez, Mehndiratte, S. (Eds.). 2012. *Sustainable Low-Carbon City Development in China*, Directions in Development – Countries and Regions. World Bank. Washington. pp. 243-268.

[3] Asian Green Cities Index-presentation of final results. Singapore, Jan Friedrich, head of Research Asian Green Cities Index, Senior Consultant, Economic Intelligence Unit.
http://www.siemens.com/press/pool/de/events/2011/corporate/2011-02-asia/asian-gci-presentation-results-e.pdf

[4] Source: Strompen, F., Bongardt , D., & Litman, T. 2012. *Reducing Carbon Emissions through Transport Demand Management*. GIZ. Beijing. http://sustainabletransport.org/reducing-carbon-emissions-through-tdm-strategies/