Development of a Rapid Assessment Tool for Urban Mobility for Cities with Data Scarcity

Alvin Mejia
Clean Air Asia

Better Air Quality Workshop 2012
Hong Kong, SAR
Car owners expected to travel more in the future

Infrastructure for cars to meet the demand

higher level of service

Car owners travel more
Objective

to orient key municipal stakeholders, including city mayors, municipal authorities and decision-makers on time-effective ways to tackle pressing mobility issues and ways to efficiently operationalize poverty reduction through the transport sector.
Guiding concepts

- Rapid participatory appraisal approaches
- Focus on urban transport system pro-poor characteristics/lack of
- Review of mobility modes (including energy and emissions)
- Focus on “data-scarce” cities
- Guidance on synthesis, analysis and utilization of data → policy aid
Framework

Current state

Participatory approach
- City government meetings
- Focus group discussions
- Household survey

Interventions
- Short
- Medium
- Long

Sustainable Transport
Project Outputs

- Quick guide: Rapid Assessment of Urban Mobility
- Data input form
- Tool for Rapid Assessment of Mobility (analytical spreadsheet tool)
- Application Results (1 medium-size Indian City)
Steps

Step 1: Meeting with the city government/stakeholders
- Establish early coordination with the city
- Collect city-level data
- Identify areas where detailed data collection will be conducted in

Step 2: Data collection at the selected neighbourhoods
- Gather detailed data in the selected neighbourhoods through focus group discussions and individual interviews

Step 3: Survey Data encoding
- Transform, store and collate the data gathered from the surveys into an organized, electronic form through a survey data input file

Step 4: Evaluation of current state of mobility
- Summary statistics and knowledge gained from the FGDs and city meetings will be used to provide a picture of the current state of mobility in the city

Step 5: Rapid assessment of intervention impacts
- Use data and knowledge gathered from the data collection activities in order to rapidly assess the potential impacts of transportation interventions (e.g. emissions, fuel consumption, time spent, income spent on transport, safety)
Project Outputs
- Guidebook
- TRAM Excel File
- Data encoding forms
- Application to 1 city
Analysis tool will be built from the TEEMP and TEEMP City Model structures and features.

**Box 1: TEEMP City**
The TEEMP City Model, developed by CAI-Asia and ITDP and funded by the Veolia Environnement Institute, has been designed to look at long-term city-wide impacts of a combination of project interventions and policies with many transferable default values so it can be applied in cities with sparse existing data. This allows comparison of business-as-usual trends against one or more alternative project and plan scenarios that specify generalized investment types, such as building new bus rapid transit lines vs. building new highways.

The tool is based on the Activity Structure Intensity Fuel (ASIF) (Schipper, 2001) framework and although originally designed to measure environmental impacts, it is also able to quantify the current and future impacts of different transport interventions. The other impacts such as PM, NOX, fuel consumption, traffic fatalities are also quantified.
## Transport Project Investments Analysis: Emissions Impacts Calculator (2)

Vary the parameters for the original set of planned projects to see difference in the scale of impacts.

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<th>Project Timeline</th>
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## CO2 Emissions (ton)

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