



GEF-World Bank-UNDP supported

## Introduction

### Urban Transport in India

#### Growing need for Sustainable Urban Transport

India's surging economic growth and consequent urbanization over the last decade has led to an inevitable rise in ownership and use of motorized vehicles across cities and towns. It has been projected that an investment of Rs.4,35,380 Crores (2008-2027) will be required for making improvements in the Urban Transport sector for 87 cities (Wilbur Smith Report, 2008).

National Urban Transport Policy (NUTP) was launched in 2006 by the Ministry of Urban Development (MoUD). The policy emphasizes the need of the majority of the population using public transport and non motorized modes. Effective implementation of NUTP calls for clear understanding of the very concept of sustainability at all levels of governance. Keeping this need in mind, the Sustainable Urban Transport Project (SUTP) has been initiated by Government of India, in partnership with Global Environment Facility (GEF), The World Bank and United Nations Development Programme (UNDP).

GEF-SUTP, a Rs. 1400 crores (\$ 300 million) project, aims to encourage implementation of National Urban Transport Policy (NUTP) and achieve a paradigm shift in urban transport systems in favour of sustainable development. The project strives to achieve its objectives through two main approaches:

- Building the nation's capacity in the field of Urban Transport planning by imparting education and training at individual levels and strengthening capacity at institutional levels in the areas of planning, financing, implementing, operating and managing sustainable urban transport systems.
- Demonstrating 'green' or 'sustainable' transport planning practices by actually implementing certain Urban Transport projects in selected cities.

The project is being implemented by Ministry of Urban Development (Government of India) through a Project Management Unit (PMU) at the national level, under overall guidance of a Steering Committee (under the chairmanship of Secretary Urban Development, Ministry of Urban Development). The Project Management Unit is assisted by a Project Management Consultant (M/s Mott MacDonald Pvt. Ltd.) and is required to oversee and guide the implementation by the Implementing Agencies (cities).

#### Project Overview

The project consists of three components as follows:

- Component -1: National Capacity Development Initiatives
- Component -2: Implementation of Demonstration Projects in Selected Cities
- Component -3: Project Management

Component 1 is further divided in the following two components:

**Component 1A:** Capacity Building of Institutions and Individuals.

**Component 1B:** Technical Assistance to the MoUD to improve the National, State and Local Capacity to implement National Urban Transport Policy.

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**Component 2:** This Component will catalyze high profile demonstration projects in selected cities that will create models of sustainable transport solutions for other Indian cities to replicate. Currently five cities are participating as given below:

### **Naya Raipur**

Naya Raipur Development Authority (NRDA) has proposed a BRT system (BRTS) as well as bikeways for all major arterial routes of the city spanning over the year 2031. GEF supports the physical investments for the initial BRT corridors and for bikeways in Naya Raipur, and provides technical assistance of a Transit Oriented Development study.

Contact person in Naya Raipur Development Authority (NRDA) for SUTP:  
Mr L.K. Panigrahi, email: lk\_panigrahi@yahoo.com

### **Pimpri Chinchwad**

The demonstration project in Pimpri Chinchwad includes construction of two new road-cum-BRT corridors (19 km). Passenger access to BRT stations that is, over- and underpasses and improved at-grade crossings, GPS system to control BRT operations, three bus terminals., assistance to build up the proposed BRT cell and training for PCMC staff.

Contact person in Pimpri Chinchwad Municipal Corporation (PCMC) for SUTP:  
Mr. E. Ugile, email: cityengg@pcmcindia.gov.in

### **Indore**

The demonstration project supports the usage of public transport and supports the BRTS which is under construction. Two projects are envisaged under GEF SUTP, namely Traffic Signal Prioritization and Automatic Fare Collection.

Contact person in Atal Indore City Transport Service Limited (ACTSL) for SUTP:  
Mr Vivek Shrotiya, email: ceo@citybusindore.com

### **Mysore**

The demonstration project supports the CDP in promoting a sustainable urban transport in Mysore. Subprojects include an Intelligent Transport System (ITS) to improve bus operations and provide the commuters with 'on line' information.

Contact person in Karnataka State Road Transport Corporation (KSRTC) for SUTP:  
Mr. CG Anand, email: cme@ksrtc.org

### **Pune**

The demonstration project supports both non-motorized transport by infrastructure improvement, primarily on side streets of major mass transit corridors, and public transport improvement.

Contact person in Pune Municipal Corporation (PMC) for SUTP:  
Mr. Vivek Kharwadkar, email: vivek.kharwadkar@punecorporation.org

New Cities with NUTP compliant projects can be added through out the project period.

### **Other events held under SUTP**

- Peering program by Embarq
- Launch Workshop 9 -10 June, 2010
- Training Needs Assessment (TNA) Workshop 29 - 31 August, 2010
- Study Tour 26 September – 5 October, 2010
- Interim Mission 25 October - 3 November, 2010
- Urban Mobility India conference cum expo, New Delhi 3 - 5 December, 2010 where the Project PMU and PMC team participated and set up a stall to disseminate information regarding the project.

## Launch Workshop 9<sup>th</sup>-10<sup>th</sup> June, 2010

The project was formally launched in a Launch workshop held on 9<sup>th</sup> and 10<sup>th</sup> June at Vigyan Bhavan, New Delhi. It was inaugurated by the Hon'ble Minister for Urban Development Shri S. Jaipal Reddy. Also present on the occasion were Hon'ble Minister of State for Urban Development Prof Saugata Roy, Resident Representative, UNDP Mr. Patrice Coeur-Bizot, Country Director India, World Bank Dr. Roberto Zaghera, and Secretary, Ministry of Urban Development Dr. M. Ramachandran, Other participants included senior officials and procurement and finance managers from cities participating in GEF-SUTP, and officials from UNDP and the World Bank.



The inaugural session began with a welcome address by Shri S.K. Lohia, OSD (UT) and National Project Director, GEF-SUTP. This was followed by very interesting and informative addresses by Mr Patrice Coeur-Bizot, Dr. Roberto Zaghera, Dr. M. Ramachandran, Prof Saugata Roy and capped up by a lively talk by Shri Jaipal Reddy.



Mr. Asheesh Sharma, Municipal Commissioner, Pimpri-Chinchwad Municipal Corporation (PCMC) made a presentation of the proposals under consideration of PCMC in the field of sustainable urban transportation.

The workshop was formally inaugurated thereafter by Shri Jaipal Reddy, Hon'ble Minister for Urban Transport by lighting a lamp and opening the GEF-SUTP Website, [www.sutpindia.com](http://www.sutpindia.com).

The inaugural session was followed by an interactive session with senior officials from the participating cities and their financial and procurement managers. National Project Manager-GEF-SUTP, Mr. A.K. Jain explained the salient features of financial management, procurement management and environmental and social safeguards in the context of GEF-SUTP.

The second and last day of the Launch Workshop was devoted to discussing the Procurement Management procedures of The World Bank. Experts from the Bank, Mr. Yash Gupta and Ms. Payal Malik-Madan anchored the programme, explained the procedures and clarified all questions raised by the delegates.

## Workshop on Urban Transport Capacity Building Needs Assessment

29 - 31 August 2010

**SUTP is essentially for capacity building. To start with a stakeholders' workshop was organised to assess capacity gaps.**

The objective of the workshop was for a small group of about 30 participants to brainstorm on what are the skill gaps that need to be covered and what manuals and toolkits need to be developed. The participants were selected to represent policy makers at senior levels in the State Government, officers at the field level involved with projects, consultants working on urban transport projects and the Institute of Urban Transport. It was essentially a workshop comprising of practitioners who are best placed to advice as to what is most needed. The discussions were held in an informal and friendly setting that was most conducive to brain storming.

The basic idea of the workshop was to put our heads together to identify the gaps in the field of training modules and toolkits and see how to bridge them. The delegates were divided into four sub-groups. All the groups were given a format on "Capacity Building" in which they were required to give their output by filling in collectively the following information and then making a presentation of the same.

- (i) 'Levels' in which the target audience (for capacity building) is to be divided.
- (ii) The 'Topics' that each level of audience should get exposed to.
- (iii) The likely number of persons in each 'Level'.
- (iv) The 'Methodology' to be deployed for conveying the desired information to each 'Level' of the target audience.

The presentations made by the four groups were summarized by Mott MacDonald Pvt. Ltd., the Project Management Consultants and accepted unanimously by the delegates.

A second format was distributed indicating 15 topics for preparation of tool-kits.

The workshop was designed such that it did not have multiple presentations or long lectures, but devoted most of the time to brainstorming in small groups.

Based on the discussions in the workshop the topics for preparation of manuals and toolkits were short listed, together with their brief description. This is to be followed by a gap analysis to examine the material already available internationally and locally. A list of topics will then be finalised and preparation of manuals and toolkits entrusted to a consultant.

The Workshop ended with a vote of thanks by OSD (UT) Sh. S. K. Lohia / National Project Director (NPD) who also gave away the group photograph (given below) taken on the occasion to all the participants who attended the workshop.



## SUTP Events

### World Bank Interim Mission

World Bank Interim Mission was scheduled from 25 Oct -3 Nov 2010. The main objective of the mission was to meet the representatives from cities under GEF-SUTP and review the progress made by the cities to date.

### SEEING IS BELIEVING

#### International Study Tour on Sustainable Urban Transport

Following the principle that 'SEEING IS BELIEVING', a study tour covering three cities – London, Bogota and Mexico City was organized as part of the project. Key objective of the study tour was to experience, learn and understand the transport systems and mechanisms adopted by the three cities, which have been at the forefront of many innovations in sustainable transport, where emphasis was placed on the creation of efficient mass transit systems, pedestrian and cycling infrastructure and systems integration.

The tour management was supported by the World Bank through EMBARQ: The World Resources Institute (WRI) Centre for Sustainable Transport India (EMBARQ India).



Prof. Saugata Roy, Union Minister leading the delegation

The 29 member delegation for this study tour mostly consisted of senior government officials from different departments including Urban Local Bodies, Road Transport Corporation, State Governments, as well as officials from the Ministry of Urban Development, Government of India. The delegation was led by Prof. Saugata Roy, Hon. Minister of State for Urban Development, Government of India.

#### What the Delegates Saw:

##### London:

In London, the delegation studied the London Bus Systems, London rail systems, including the London Underground, Docklands Light Rail and the Heathrow Express. The focus was on experiencing the infrastructure for various facilities, including softer aspects like furniture, signage, lighting, etc. The delegation also visited the Paddington Station, where they got to witness the seamless integration of the local metro rail with the national railway system.

The delegates also rode on the London buses, where they were exposed to various



Red route – London

features of the bus system, like low-floor buses, double-decker buses, dedicated bus lanes, bus-stop design, signage, ticketing system, etc. The delegation also studied in detail the functioning of Transport for London (TfL). Officials of TfL gave a detailed presentation on various topics like transport scheme development, congestion pricing, integrated ticketing system (Oyster Cards) and interchange management.

While at London the tour delegates were exposed to, and in many cases had first-hand experience of:

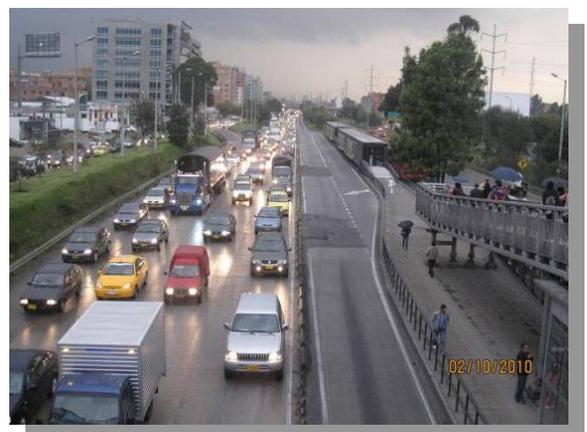
- London's multi-modal fare collection card – Oyster Card
- High quality implementation of subway, which allows London to transport 3.5 million passengers through the tube system.
- The LRT system, used in the London's integrated transport system and access between the tube and LRT stations and multimodal access
- Development of intermodal terminal at Stratford station which houses transfers from inter-city trains, the tube and the bus terminal.
- The Mayor's Transport Strategy giving Mayor's transport vision for the next 20 years of making the London's transport system excel among those of world cities.
- London's Central Business District (CBD)'s congestion pricing system, resulting in Transport for London (TfL) making around 150 million pounds each year through congestion pricing and more than 92% commuters taking Public Transport in CBD. Pricing can be used as an effective strategy for not only reducing congestion, but also for creating funds for improving public transport.
- Funding and efficient management of Interchange points
- London BRT, which principally consists of a separate lane but with no physical segregation.
- Personal Rapid Transit (PRT) System at the Heathrow Airport which was expected to be commissioned the following week. The PRT allows travel of about 4 people from the various terminals to the long-term parking.

### **Bogota:**

In Bogota, the delegation was accompanied by Mr. Dario Hidalgo, Sr. Transportation Engineer (EMBARQ), who explained the finer nuances of TransMilenio Bus Rapid Transit (BRT) system. Colombian Transport Ministry presented the BRT Vision for the country to the delegates. A presentation was also made by TransMilenio officials on their BRT system. The delegation took a guided tour of the system, which included visits to the TransMilenio Control Room, ride on the articulated buses, and visit to the TransMilenio bus depot. Delegates were also taken on a study walk, where they got to experience the pedestrian and cycling infrastructure in Bogota.

The participants had good exposure to:

- Identification and appreciation of public spaces and their interaction with transport system.
- Presentation on BRT systems in six cities in Colombia and their characteristics
- Bogota BRT system, which works on PPP mode with all operations being completely private. There are 7 operators with operations length of 84 Km, 107 bus stations, 7 head stations and 7 technical support areas. The system today transports 1.7 million passengers/day, with a PPHPD of 45,000. Considering the importance of last mile connectivity, TransMilenio runs an efficient feeder service network and offers free ridership to the feeder service to the BRT.



**BRT – Bagota**

## Mexico City:

The delegates attended the International Congress on Sustainable Transport in Mexico City which was organized by CTS Mexico, which is a part of the EMBARQ network. The Congress is an annual event that brings together leading minds in academia, government and the private sector, with the purpose of exchanging knowledge on sustainable transport. Prof. Saugata Roy, Hon. Minister of State for Urban Development, Government of India, delivered a Key Note address at the Congress, where he spoke upon the initiatives made by the Central, State and Local Governments in India in spearheading the urban development of the country. Mr. Amit Bhatt, Senior Transportation Specialist with EMBARQ India participated in the Panel Discussion on Urban Transport Financing, where he shared the experience of Bus Operations under PPP format in Indore and also explained the details of financing of rolling stocks under JNNURM.



Metro Bus - Mexico

Another highlight was a presentation by the visionary of modern BRT, the ex City of Curitiba Mayor, Jaime Lerner. The presentation brought out that:

- City is not a problem - City is a solution and how well designed cities can provide the citizens a great place to live.
- Political will can transform problems into solutions.
- Automobile is a selfish mode and should be discouraged in cities.
- Integrated mobility that includes buses, subway and other PT modes that are complimentary are needed for any city.
- Importance of Public Spaces in city planning.

The delegation visited the Metro bus BRT system in Mexico City, where they got to experience the articulated buses operations along with design of bus-stations, dedicated lanes, bus depot, etc on a system carrying 11,000 passengers in single lanes on arterial corridors with multiple signals. They were also taken on a guided tour of the metro rail and the trolley bus system. Finally, the delegation was taken on a study walk around downtown Mexico City, where they were able to witness the broad pathways and street furniture created for the benefit of the walking public.

## What were the key learnings?

- An appreciation of “Interchanges” – designing of public transport stations & terminals to create seamless transfers between various modes (metro, bus, cycle, walking, car, etc.) to accommodate public transport traveller needs to travel from their home to their work-place and back.
- The importance of the common fare card in increasing the public transport mode share and reducing congestion. The challenges in implementing and the need for getting it “right the first-day” through extensive planning which helped make oyster card get the confidence of public. They also learnt about subsidizing the card over cash-payments to increase the card’s usage.
- An understanding of the design, planning and implementation details of the world renowned London’s congestion pricing. The need for strong enforcement, and limited exclusions to the congestion pricing (even London mayor has to pay) was specially noted by the delegates.

- The cycle lanes, London's BRT schemes, Dockland Light Rail System, Personal Rapid Transit (PRT) and tube system showed the need of multiple transport modes working together to create the needed mobility for the city's commuters.
- BRT can provide metro-like ridership at much lower costs as seen at Bogota. The pedestrian malls and the prioritization of BRT in congested roads were also learning taken away by delegates from Bogota.
- A well organized feeder system to BRT is the key to create a highly-successful BRT system, as in Bogota.
- In Mexico City, the delegates saw BRT system carrying 11,000 passengers in single lanes on arterial corridors with multiple signals and noted that a well designed BRT system does not necessarily require wide roads, but can be created even with road widths of 3.5 mts. They also learnt that Mexico was able to get public opinion sway towards BRT through education programs.



Group photo of the delegation at Bogota

**Contact details:**

Shri A.K. Jain, National Project Manager	Shri Sumit Chatterjee, Deputy Secretary	Shri Rajendra Nath, Team Leader
PMU, GEF-SUTP	Ministry of Urban Development	Mott MacDonald Pvt. Ltd.
Tel: +91-011-23062615	Tel: +91-11-23062594	Tel: +91-120-254 3582
Email: iutindia.sutp@gmail.com	Email: sumit_d6@yahoo.com	Email: sutp@mottmac.com

Newsletter coordinated by: Vijay Kovvali, Aditi Singh and Surabhi Kureel

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Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

- The Brundtland Commission, 1987