

# Proceedings of the Workshop ‘Mobility for poor: Improving informal transport’

3–5 October, 2012, India Habitat Centre, New Delhi

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## Workshop- ‘Mobility for poor: Improving informal transport’

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The Energy and Resources Institute (TERI) in partnership with the UN-Habitat organized a three-day workshop titled ‘Mobility for poor: Improving informal transport’ from 3-5th October 2012. The aim of the workshop was to create a holistic understanding of informal transport systems and to facilitate knowledge/experience sharing on challenges and solutions for improving informal modes of transport like cycle rickshaws, shared autos, mini buses, etc.

Dr R K Pachauri, Director General, TERI gave the welcome remarks in the workshop and emphasized the need to bring about technological upgradation/innovations in the sector while also finding the means to finance these initiatives. The workshop was inaugurated by Shri B K Chaturvedi, Member, Planning Commission, Government of India. In his inaugural address, Mr. Chaturvedi highlighted the significant role played by the informal modes in meeting the niche mobility demands of the poor and referred to them as the “unregulated/unlicensed public transport services”. He highlighted the need to improve these informal modes so as to ensure better accessibility of urban transport services through last mile connectivity, and also to meet the mobility needs of the poor. The inaugural session also included speeches by Mr. S K Lohia, OSD (UT) and Ex-Officio Jt. Secretary, Ministry of Urban Development, Government of India; Dr. Kulwant Singh, Regional Advisor, UN-Habitat and Ms. Mili Majumdar, Director, Sustainable Habitat Division, TERI. All key speakers highlighted the significance of informal modes in providing employment as well as mobility to the poor.

The workshop was attended by various stakeholders representing service providers, non-governmental organizations, planners and policy makers from India, Philippines, Bangladesh and Indonesia.

The three day event deliberated on a range of issues related to the sector including the legal, regulatory, environmental, and safety issues. The workshop provided a platform to the stakeholders to bring forward their viewpoints and their experience in the sector on the role played by the informal modes. Several initiatives targeting improvements of these modes were also discussed in the workshop. A consensus was achieved in giving due recognition to these modes in all aspects from policy making to planning in a way that it continues to provide affordable services to the poor and complements the public transportation services rather than compete with the same. Key policy interventions/action areas were identified to improve and integrate informal transport systems. Also, it was felt that more research was required to better understand the benefits and concerns associated with the use of these modes.

## List of Attendees

1	Dr RK Pachauri	The Energy and Resources Institute (TERI), New Delhi
2	Shri BK Chaturvedi	Planning Commission, Government of India
3	Mr SK Lohia	Ministry of Urban Development, Government of India
4	Mr BI Singal	Institute of Urban Transport (India)
5	Dr Kulwant Singh	UN-HABITAT
6	Ms Mili Majumdar	TERI
7	Mr S Sundar	TERI
8	Mr Bhushan Tuladhar	UN-HABITAT
9	Ms Glynda Bathan-Baterina	Clean Air Initiative for Asia (CAI-Asia), Philippines
10	Mr Nestor Competente	Rizal Technical University – Kawani Multi-Purpose Cooperative (RTU-KMPC), Philippines
11	Mr Ahmad Rifai	Kota Kita Foundation, Indonesia
12	Dr Jnan Ranjan Sil	Dhaka Transport Coordination Authority, Bangladesh
13	Ms Akshima T Ghate	TERI
14	Ms Anvita Arora	Innovative Transport Solutions (iTrans), New Delhi
15	Mr Dunu Roy	Hazards Centre, New Delhi
16	Mr Amit Bhatt	EMBARQ India
17	Mr Ramesh Prabhu	Three Wheels United India, Bangalore
18	Mr Navdeep Asija	Fazilka Ecocabs, Punjab, India
19	Mr MV Shiju	TERI University
20	Mr Bharat Bongu	Intellectap, Hyderabad
21	Mr Akshay Mani	EMBARQ India
22	Mr Pradip Kumar Sarmah	Center for Rural Development, Guwahati, Assam, India
23	Mr Irfan Alam	Sammaan Foundation, Patna, Bihar, India
24	Ms Megha Kumar	TERI
25	Ms Sangeetha Ann Wilson	TERI
26	Ms Seema Singh	TERI
27	Mr Amit Kumar Sharma	TERI
28	Mr Sarbojit Pal	TERI
29	Mr Vidyadhar Date	Mumbai
30	Dr Ashish Verma	Indian Institute of Science, Bangalore

31	Mr Balachand Parayath	Chennai City Connect, Chennai
32	Ms Ipsita Sinha	Intellectap, Hyderabad
33	Ms Hilary Murphy	UN-HABITAT
34	Ms Sugandha Paul	Institute of Urban Transport (India)
35	Mr Paul Schuttenbelt	Cities Development Initiative for Asia (CDIA)
36	Mr Partho Bosu	CAI-Asia, India office
37	Lt Col Satish Sharma	Petroleum Conservation and Research Association, New Delhi
38	Ms Nalini Shangloo	National Institute for Urban Affairs, New Delhi
39	Ms Archana Roy	National Institute for Urban Affairs, New Delhi
40	Dr Divya Sharma	TERI
41	Ms VB Suneetha	TERI
42	Ms Raina Singh	TERI
43	Mr VS Goyal	GIZ-Sustainable Urban Transport Project (SUTP)
44	Mr Andrews Graf	Ecologic Institute, Berlin
45	Mr RM Aragappan	Urban Mass Transit Company (UMTC), New Delhi
46	Ms Shruti Mahajan	Urban Mass Transit Company (UMTC), New Delhi
47	Mr Anil Anand	FINCAP
48	Dr Kavitha Gotru	National Capital Regional Planning Board, New Delhi
49	Ms Sumeet Trupti	National Capital Regional Planning Board, New Delhi
50	Mr Ranjit P	ICLEI, New Delhi
51	Ms Sharika P Bhatt	EMBARQ India
52	Mr GK Dubey	Urban Mass Transit Company (UMTC), New Delhi
53	Mr Ashish RG	ICLEI, New Delhi
54	Mr Manishankar	Intellectap, Hyderabad
56	Mr Laghu Parashar	Urban Mass Transit Company (UMTC), New Delhi

# Proceedings of Day 1: 3 October 2012

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**Venue: Amaltas Hall, India Habitat Centre, New Delhi**

## SESSION I

### Inaugural session

1. The meeting began with welcome remarks by Ms Akshima T Ghate, Fellow, TERI. She gave a brief introduction about the workshop and highlighted the importance of informal transport and the need to study it.

2. Welcome address by Dr R K Pachauri, Director General, TERI

The welcome address was given by Dr R K Pachauri. He emphasized the importance of informal transport in the context of energy access, especially for the poor in the smaller towns and cities. He highlighted that affordable and efficient technology was required to spread transport services for improving accessibility. He called for initiatives for improving informal transport and finding means to finance these initiatives.

3. Inaugural address by Mr B K Chaturvedi, Member (Transport), Planning Commission

The inaugural address was given by Mr B K Chaturvedi. He emphasised the importance of transport in the context of accessibility of workplaces by the poor. He spoke about the significance of the topic with respect to South and South East Asian countries because of the large population living below poverty line in these countries. He defined informal transport as public transport that is mainly unregulated/unlicensed, but is affordable to a large section of population. He highlighted that for commuting short distances, especially in smaller cities, informal transport plays a prominent role in meeting the mobility needs of the people. He brought fore some of the key issues related to the sector that need attention; health, safety, environment friendliness, etc. were some of the areas where he sought interventions by the city governments. He also laid emphasis on the need to integrate the informal transport sector with the formal transport services within cities.

4. Opening remarks by Mr S K Lohia, OSD(UT) & Ex-Officio Jt. Secretary, Ministry of Urban Development

The opening remarks were given by Mr S K Lohia. He emphasised that urban transport continues to be a neglected sector, both constitutionally and institutionally. He brought to notice that the lack of mobility options in cities lead to people finding localized solutions for mobility; informal transport sector is essentially a result of this demand and (formal) supply mismatch. The poor population is typically affected by the lack of mobility options in cities as informal transport services are also not affordable most of the times. Although there has been large scale funding by the Government of India to improve/introduce public transport systems, providing services for last mile connectivity still poses a big challenge. Informal transport is playing a critical role in this respect. However, there are safety and environmental concerns related to these services

that need attention. To address this issue, Mr Lohia called for strategies that will provide for improvement of informal transport as a means to provide affordable mobility options and last-mile connectivity. He highlighted the need to pay attention to issues like parking space, stopping/standing points, degree of regulation, etc. while developing strategies to improve these modes

He stressed that significant research and development initiatives are needed for the improvement and management of informal transport for which funding is available under the XII Five Year Plan and Global Environment Facility (GEF).

5. Remarks by Dr Kulwant Singh, Regional Advisor, UN-HABITAT

Dr Kulwant Singh spoke about the role of UN and GENUS network in addressing global energy access issues for urban poor and slum dwellers. He highlighted UN-Habitat's commitment to improve urban mobility situation in Asia, Latin America and Africa. He highlighted that the conditions of travel have become difficult for all, irrespective of social and economic distinctions. He called for adoption of Transport Demand Management strategies and better land use-transport integration to solve urban transport issues. He stressed that the focus of urban transport should be on lesser travel times, sustainability, and mobility of the poor. He emphasised that least priority is given to non-motorised transport infrastructure and felt that the principal focus of urban transport plans should be on ensuring equity among all commuter categories. He hoped that the workshop would help in leading a way forward for improving urban mobility.

6. Vote of thanks by Ms Mili Majumdar, Director, TERI

The vote of thanks was given by Ms Mili Majumdar. She highlighted that it was necessary to match institutional and scientific solutions while improving informal transport and due focus should be given on land use-transport integration to solve urban mobility issues.

## Theme 1: What is informal transport? Agreeing to a common definition

Session chair: Mr S Sundar, Distinguished Fellow, TERI

- *What is informal transport?*

1. Akshima T Ghate, TERI

2. Anvita Arora, iTrans, New Delhi

1. Mr S Sundar highlighted that since informal transport modes play an important role in filling the gaps in supply of transport services and providing employment to a large section of the poor in the urban areas, it is essential that these modes are improved without losing their basic characteristics that make them flexible, affordable and accessible. He described informal transport as lying in the grey areas of transport planning and outside the traditional and officially sanctioned public transport sector.



2. The session started with a presentation by Ms Akshima Tejas Ghate, Fellow at Sustainable Habitat Division, TERI. She brought out the need to define informal transport citing lack of a well-accepted definition for the sector. She brought to notice several commonly used definitions like the one given by World Bank (2002) which defined informal transport as “Publicly available passenger transport service that is outside the traditional public transport regulatory system.”

Ms. Ghate defined informal transport from different perspectives and highlighted the differences between formal and informal transport. She expressed concern over the fact that most of the definitions reflect informal transport as a problem to urban mobility rather than as a solution. She also brought to the notice of the audience, main highlights of the e-debate that was hosted by TERI and UN Habitat on [www.urbangateway.com](http://www.urbangateway.com) prior to the workshop. Ms Akshima conveyed the key characteristics of informal transport and the role it plays in meeting mobility demands in different countries. She emphasised that informal transport sector meets the mobility needs of the poor by providing affordable transport services when public transport is not available. It also offers livelihood opportunities for low-income strata in urban areas. She, described informal transport as a mode ‘of the poor’ ‘by the poor’ and ‘for the poor’.

The next issue that she touched upon was the legality of these modes and concluded that legality was not a criterion to define informality. It was accentuated that the informal transport sector lacked the regulations applicable to formal transport or applied them partially. She, however, also brought to notice that these modes often resort to illicit practices like over-speeding, over-loading, retrofitting vehicles, etc. As conclusion to her presentation, she proposed a definition for informal transport based on who provides and regulates it, what role it plays and its contribution in meeting mobility needs.

3. The next presentation in this session was given by Dr Anvita Arora, iTrans. She began her presentation with examples of various informal transport modes in India. She stressed that informal transport was a phenomenon around the world and of more prominence in the developing world. She distinguished informal transport from formal public transport service on the basis of lack of rigid schedules or routes or sometimes pre-set fares, and at the same time providing low occupancy, high frequency services. She explained the different types of informality that exist among these modes based on the type of vehicles used, systems and operations, and the human factor regarding ownership, employment, etc. She presented case study findings on the formality/informality of para-transit modes plying in five Indian cities. She laid emphasis on how informal transport often acts as complementary to formal transport by filling gaps and offering cheap flexible commutes for the urban poor in developing countries. The speaker presented a SWOT analysis on informal modes: cycle rickshaws and auto rickshaws. Highlighting the importance of informal transport modes for the urban poor, she said that they are financially and physically accessible to the poor and provided employment to a large section of the poor. She also brought to the attention of the audience, the user and the driver perspective regarding these modes.

The speaker called for an active and holistic approach towards improving informal modes of transport.

4. The following points were noted in the open discussions in this session:
- Informal transport cannot have one single definition but rather should have situation/context specific definitions.
  - Integration of informal transport with urban planning and a participatory approach is necessary, especially in cities where providing formal public transport is not financially feasible.
  - Policy-makers have to recognize and address the issues related to informal transport. The government should be made aware and reactive to this sector.
  - The role of informal transport in logistics also needs to be addressed.
  - The drivers/operators of these modes should be considered while improving these modes because they are definitely poor even if the users may not be.
  - Detailed research is needed on understanding the nature of informal transport services.
  - The developing countries have a good share of non-motorized informal modes of transport and therefore it is very important to continue this trend.
  - The operators/drivers in this sector are not willing to invest in improving their vehicles as the sector lacks financial security systems.

## SESSION II

### Theme 2: Role of informal transport in meeting the mobility needs of the poor/low-income population

Session Chair: Mr B I Singhal, Director General, Institute of Urban Transport (India)

- *Role of informal transport (Background presentation): Megha Kumar, TERI*
  - *Role of informal transport: Case studies*
    - 1 India – Navdeep Asija, Ecocabs Fazilka, Punjab, India
    - 2 Indonesia – Ahmad Rifai, Kota Kita Foundation, Solo City, Indonesia
    - 3 Bangladesh – Jnan Ranjan Sil, Dhaka Transport Coordination Authority, Bangladesh
1. The session started with a presentation by Ms Megha Kumar, Research Associate, Sustainable Habitat Division, TERI. Ms Kumar presented a few key facts and figures on the existing modal shares in cities like Dhaka, Manila, Lagos, etc., indicating a high dependency on informal transport in these cities. These informal modes help in catering to a significant amount of passenger trips, sometimes even more than the formal systems. She highlighted the important role played by these modes in providing better connectivity to urban poor settlements and access to socio economic opportunities for example education, employment, health, etc., at affordable prices to the poor. The low cost services, flexible operations, higher penetration of these modes as well as odd hour availability add to their advantages. She established the importance of informal transport as a mode 'for the poor' as well as 'by the poor'.

A few examples on informal transport systems were also presented during the course of the presentation to emphasize the importance of these modes; examples included cycle rickshaws in Dhaka, jeepneys in Manila, and minibuss taxis in Rwanda. The presentation set a background for the session, which further saw presentations from India, Indonesia, and Bangladesh highlighting the role of informal transport.

2. Mr. Navdeep Asija presented a case study of Ecocabs initiative in Fazilka, Punjab (India). He highlighted the initiative as an example of socially and environmentally equitable transport system. He began by presenting the cycle rickshaw scenario in India, which according to him was one of the largest employment generating sector in the country for the poor. He also discussed the major problems faced by the cycle rickshaw operators/pullers in India; these included unorganized network of rickshaws, unregulated tariff structures, limited government role, poor health and financial conditions of the traction men, etc.

Mr. Asija presented the case study of Ecocabs initiative. It is a dial-a-rickshaw service provided through various call centers spread across the town of Fazilka in Punjab. Ecocabs initiative aims to improve and promote the rickshaw operations as a sustainable mode of public transportation as well as an alternative to car-centric development for the common benefit of the rickshaw pullers, society, and environment. He explained the operational model of scheme, the research and technological improvements being carried out in the rickshaw design, initiatives related to provision of stands with the help of Municipal Corporation, etc. He also emphasized upon the sustainable financial model of Ecocabs, which helps the rickshaw pullers to own the rickshaws after a period of time.

3. Mr Ahmad Rifai from Kota Kita Foundation, Solo city, Indonesia made a presentation that focusing on the informal public transportation networks in three Indonesian cities, namely Palembang, Solo, and Jogja. The informal modes plying in these cities include the ojek, becak, and angkot. The presentation highlighted the role of informal transport services in providing low-cost, flexible services and serving niche mobility demands. Mr. Rifai also highlighted the role of informal transport in filling in gaps left by the formal services. He also emphasized that these modes not only help in moving people but also play a significant role in the movement of goods.
4. The last presentation in the session was made by Dr Engr Jnan Ranjan Sil from Dhaka Transport Coordination Authority, Bangladesh. His presentation highlighted the various informal transport systems operating in the city of Dhaka. Non-Motorized Transport (NMT) modes (cycle rickshaws) have significant modal shares in the city of Dhaka. He highlighted the important role played by these modes as a feeder mode complementing formal transport, providing efficient and low-cost services to the poor and employment options to them. However, he also discussed certain negative externalities of the informal transport sector like traffic congestion, safety and environmental pollution. Dr. Sil mentioned that in future, the city government looks forward to ensuring a sustainable public transport system in

Dhaka that meets the needs of the people, promotes NMT modes, focuses on integrated land use and transport planning, Bus Rapid Transit (BRT) systems, etc. Towards the end, he emphasized that mass public transport systems were the only solution for the city of Dhaka if it has to improve its transport situation in the long-term.

5. The presentations were followed by discussions. Discussions focused on the gender issues related to the informal transport operations and the role played by the informal modes in providing mobility and employment to the poor. The role of the informal modes as a mobility option 'for' the poor was challenged but it was agreed that it provided employment to a large section of this population and hence established its greater role as 'mobility by the poor'.

The following points were noted from the discussions:

- The number of cycle rickshaws in India is continuously increasing.
- Institutionalization of good systems or models like Ecocabs is important to avoid such systems from falling apart in the course of time as in the case of public transport in Indore city.
- Informal transport modes are transporting both people as well as goods.
- The informal transport operations are mainly dominated by men but at certain places women are also actively participating and providing services in the sector.
- Informal modes play a very important role in providing employment to the low income groups.

# Proceedings of Day 2: 4 October 2012

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Venue: Maple Hall, India Habitat Centre, New Delhi

## SESSION I

Theme 3: Improving informal transport: Challenges and solutions

Session Chair: Dr Vinod Tiwari, Advisor (Urban Development) TERI and Visiting Professor, TERI University

- *Informal transport: Legal and regulatory issues in India*
  - 1 Mr MV Shiju, TERI University
  - 2 Mr Bharat Bongu, Intellcap, Hyderabad
- *Case studies*
  - 1 Mr Akshay Mani, Embarq India
  - 2 Pradip Kumar Sarmah, Center for Rural Development, Guwahati

- 1 The session began with remarks by the Chair, Dr Vinod Tewari, who introduced the panelists and emphasized the need to address the legal and regulatory measures in order to improve the informal transport sector.
- 2 The first panelist, Mr MV Shiju from TERI University made a presentation on “Informal transport: Legal and regulatory issues in India”. He discussed the legal and regulatory issues related to informal transport sector in India with respect to market entry, fitness and safety of both, the vehicle and the driver, route and fare fixing, liabilities in case of accidents and environmental issues. Mr Shiju concluded that the motorized informal transport is generally regulated in the aspects of safety and liability, and only the locally retrofitted vehicles posed challenge with respect to safety and environmental issues. The fare and route fixation for the motorized informal transport largely remains unregulated; and when regulated, it was through an informal mechanism of unions fixing the route and fares. Further, he observed that the non-motorized informal transport was typically perceived as a traffic problem and larger restrictions were imposed on this sector, some of the regulations being against the spirit of the constitution, impinging upon the fundamental rights of the citizen.
- 3 Mr. Bharat Bongu from Intellcap, Hyderabad, made the second presentation on “Regulations: Formal and informal transport”, wherein he discussed the issue of regulation of formal and informal modes through case studies of three cities — Nairobi, Manila, and Delhi. He concluded by presenting challenges of informal transport systems and potential solutions. He further emphasized that the transport

condition of a city can improve only if the formal and the informal systems coexist and act as complementary modes rather than competing with each other.

- 4 Mr Akshay Mani from Embarq India presented the subsequent presentation on “Reforms in Rajkot’s auto-rickshaw sector”. In the presentation, Mr Mani shared the whole process of reform of the auto-rickshaw sector in Rajkot city. In the end, he shared the learning experiences of G-Auto (the improved auto-rickshaw service) experiment from Rajkot.
- 5 The last presentation of the session was made by Mr Pradip Kumar Sarmah, founder, Center for Rural Development and Dipbahan Rickshaw Bank Project. In his presentation, he focused on the social, financial, and technical improvements brought about in the cycle-rickshaw sector through the efforts of Dipbahan Rickshaw Bank Project.
- 6 At the end of the presentations, the Chair Dr. Vinod Tewari applauded all the panelists for a good coverage on the session theme and the floor was opened for discussions. The following are the key highlights of the discussion.
  - a. Mr Pradip Kumar Sarmah explained (on being asked about further details of his project by Mr Navdeep Asija) that the focus of Rickshaw Bank Project is on the ‘Rent to Own’ model, wherein they help the driver to become the owner of the cycle rickshaw. In case of drop out of people from the scheme (the dropout rate is 6–7%), the rickshaw is taken back and re-issued to a new person. Mr Sarmah also mentioned that they are planning to become a cooperative society, of which all the rickshaw pullers would be members and henceforth reselling of the rickshaws would be allowed only within the society members. He also mentioned that in case of sickness, the rickshaw puller is not considered a defaulter, if he is not able to pay his daily installment, to the limit of 15 days. The Rickshaw Bank also provides the rickshaw pullers with immediate cash in case of emergency. The Rickshaw Bank also provides the pullers with training regarding traffic rules and regulations, which is delivered by the local traffic police. This helps in maintaining amiable relations between the rickshaw pullers and the traffic police.
  - b. Mr. Navdeep Asija apprised the floor about the Central Government schemes, which offered lower interest rates on loans (Differential rate of Interest – DRI Schemes), which he said, could be utilized in funding the improvements in the informal transport sector.
  - c. Dr Kulwant Singh, Regional Advisor, UN-Habitat, expressed his views on the issue of presence of a large number of cycle rickshaws in the city of NOIDA in India. He pointed out that the foremost problem in

controlling the increasing number of cycle rickshaws in NOIDA was the lack of clarity on the roles and responsibilities of different agencies.

- d. Mr Pradip Kumar Sarmah brought to light the issue of non-operation of the electric rickshaws in Delhi because of lack of a supporting legislation. He stated that as per the Motor Vehicles Act, 1988, vehicles which ply with a battery of power more than 250 watts fall under the category of motorized vehicles and thus the electric cycle rickshaws no longer remained non-motorized vehicles, legally.
- e. Mr Navdeep Asija highlighted that informal transport was also playing an important role in reducing the emergence of slums in the urban areas. He elaborated, citing example from cities of Punjab, wherein the informal modes (providing connectivity between the city and the rural areas) allowed people from rural areas to commute daily to the urban areas and thus prevented squatting of the rural population in the urban areas.
- f. Mr Balachand Parayath from City Connect, Chennai raised the issue of vehicle idling in case of auto-rickshaws due to empty return trips. Mr Bharat Bongu said that schemes like dial-a-rickshaw could offer a solution to such a problem and he also pointed out that lack of appropriate infrastructure for parking of auto-rickshaws and pick-up of passengers, aggravated the problem.
- g. From the discussion on revenue generation through the display of advertisements on rickshaws, it was noted that the laws regarding display of advertisements on rickshaws varied from state to state. Mr Navdeep Asija informed the house that in Chandigarh advertising on rickshaws was allowed only in case of fleet operations and it was also exempted from paying revenue to the municipality. He further mentioned that laws regarding advertising on rickshaws were present in the Outdoor Advertisement Policy rather than in the Acts related to operation of cycle rickshaws or the Motor Vehicles Act.
- h. Dr Vinod Tiwari expressed his appreciation for Dipbhan Rickshaw Bank's effort in imparting training to the rickshaw pullers through the traffic police, which in turn helped in curbing harassment of cycle rickshaw pullers by the traffic police. Mr Shiju said that the issue of harassment of informal transport operators by the police can be solved only through innovative solutions, as demonstrated by the Dipbhan rickshaw bank or through the medium of Public Interest Litigations (PILs).

## SESSION II

### Theme 3: Improving informal transport: Challenges and solutions

Session chair: Mr Bhushan Tuladhar, Regional Technical Advisor, South Asia, UN Habitat

- *Environmental issues:* Seema Singh, TERI and Sangeetha Ann Wilson, TERI
- *Environmental issues (case study – Philippines)*
  - 1 Glynda Bathan, CAI Asia
  - 2 Mr Nestor Competente, Rizal Technical University–Kawani Multi-Purpose Cooperative (RTU-KMPC)
- *Safety issues:* Dunu Roy, Hazards Centre (New Delhi)

1. The session began with a presentation by Ms Seema and Ms Sangeetha from TERI. The presentation discussed the environmental issues related to informal transport including air pollution, noise pollution, etc. It highlighted the use of adulterated fuel and inefficient technologies as some of the causes of high emissions. The presentation emphasized on the safety issues caused by overloading, poor infrastructure, old age of vehicles, etc. Driver behaviour and overloading were highlighted as the major problems faced by the informal transport sector.

The presentation also discussed a number of case studies like the *Chhakdas* in Jamnagar in India; LPG Tuk-tuks in Bangkok; Electric *safa tempos* in Kathmandu; *Pedi cabs* in San Diego and New York; *Eco cabs* in Punjab (dial-a-cycle rickshaw). These case studies addressed some of the solutions that have been implemented to mitigate the environmental and safety concerns; for example monitoring mechanisms to check fuel adulteration and emission levels; schemes for scrapping of old vehicles, etc.. An example of Philippines was quoted, where all vehicles older than 15 years were replaced by 4-stroke engine vehicles. Another example of Karnataka was mentioned, where tax on older fleet of vehicles was imposed.

2. The next presentation on informal transport in Philippines was made by Ms Glynda Bathan from CAI Asia. Ms Glynda began with a discussion on the popular means of transport in Philippines: the Jeepneys that accounts for about 80% of the passenger kilometres (pkm), the Skylab or Habalhabal, the Tricycles and the most recent 'FX' which can carry about 10 passengers.

Ms Glynda shared an interesting thought: 'Walking should be recognized as an informal transport mode.' She discussed the results from Walkability studies conducted by her organization across 23 cities in Asia and shed light on the issue of lack of pedestrian facilities. The studies reflected that a very high share of road accidents is pedestrian fatalities. On the other hand, the ratio of investment between footpaths and skywalks is 25:75, resulting in more skywalks, which are generally not used as the pedestrians tends to cross the road 'at grade', leaving them vulnerable.



She opined that the reason for lesser investment in footpaths is that more focus is laid on increasing vehicular traffic speeds. There is a tendency of transport planners to plan for cars and low preference is given to pedestrian facilities.

Ms Glynda's presentation also discussed about the transport sector's linkage to carbon emissions. She gave a cost-benefit analysis of various fuel technology options of informal transport in the Philippines.

She raised key environmental and health concerns of the Jeepneys due to poor maintenance, old engines, overloading and bad vehicle design. A slow transition to electric jeepneys (made of fiberglass, 12 seater) is being observed in Philippines. The biggest advantage of the e- jeepneys is that 63 kg of CO<sub>2</sub> emissions are avoided per jeepney per day at tail pipe. But, the source of this electricity remains thermal power.

3. Mr Nestor Competente, General Manager at RTU-KMPC, Phillipines gave a short presentation on the partnership for Clean Air Project in Philippines. He focused on the initiative of transitioning from 2-stroke to 4-stroke engines in the tricycles. According to the Mr Competente, the tricycle upgrading project demonstrated a successful microfinance scheme and capacity building program. He discussed the programme's implementation approach and highlighted the challenges faced.
4. Mr Dunu Roy from Hazards Centre, New Delhi gave a presentation on the perspectives of the urban poor on travel safety. He began by retrospection on the meaning of the term 'safety'. The meaning varies from person to person and depends on the perspective from which it is looked upon. He opined, "Cars are becoming safer by the day, by means of safety features but pedestrians on the other hand are becoming unsafe." Mr. Roy commented that the provisions of the National Urban Transport Policy (India) are not inclusive of the urban poor. He shared some of his personal experience of working with auto-rickshaw drivers and rickshaw-pullers. They face problems of fares, police harassment, permits, and penalties every day. A recent decision by the Delhi government to introduce Global Position System (GPS) in the auto rickshaws has also drawn criticism from the community because of the extra burden of expenses. Mr Roy also highlighted how 'unsafe' and female-unfriendly our subways are.

Mr Roy opined that equitable treatment and inclusion of the informal transport sector would mean, provision of 'equitable spaces'. Moreover, the sector needs to be recognized by the system.

5. The following observations/ comments were made in the discussions following the presentations:
  - The modal shift to electric vehicles has not necessarily replaced the polluting vehicles; the shift that has been observed has merely happened from non-motorized (NMT) modes, which are non-polluting in the first place, to the

electric modes. Therefore, it is important that the NMT modes are retained as 'non-motorised'. Also, the major source of electricity being thermal power in developing countries, pollution has simply shifted from vehicular sources to the thermal power stations.

- Some important measures to promote and protect informal transport sector will include shifting to public transport modes, increased parking charges, congestion pricing, etc.
- Urban planning and transport planning should take into account the provision of space for the informal sector. For instance, planned spaces should be there for parking of rickshaws, mini buses, etc.
- Financing models for technological up gradation of the informal sector should be explored, to make it affordable for the 'poor' who are actually operating the sector in most cases.
- In urban areas, the focus of transport planning should be on the approach of slowing down the vehicular speeds, instead of speeding up.

# Proceedings of Day 3: 5 October 2012

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Venue: Maple Hall, India Habitat Centre, New Delhi

## SESSION I

Theme 3: Improving informal transport: Challenges and solutions

Session chair: Dr Vinod Tiwari, Advisor (Urban Development) TERI and Visiting Profesor, TERI University

- *Including informal transport in urban transport planning:* Mr Amit Bhatt, Embarq India
- *Organizing the auto rickshaw industry:* Mr Ramesh Prabhu, Three Wheels United India, Bangalore
- *Organizing the cycle rickshaw industry:* Mr Irfan Alam, Sammaan Foundation, Patna

1. Dr Vinod Tewari, the Chair, started the session with his remarks that the informal transport has been a highly neglected subject by the planners and the policy makers, who gave higher importance to the formal motorized transport systems in the cities. He said that there is need to look into integration of the existing formal and the informal transportation systems.

2. The first presentation of the session was made by Mr Amit Bhatt from Embarq India on “Including the informal transport in urban transport planning: Case study — Indore”. In the presentation, Mr Bhatt presented the case of transport planning in the city of Indore. In his presentation, he highlighted the gaps in the existing transport planning process. He concluded by presenting a framework, which would help in integrating all the transport modes, formal as well as the informal modes.

Mr Bhatt explained that during the transport planning of Indore city, demand catered by the informal sector was taken into account only during the demand assessment stage but at a later stage, there was no mention on how the plan would integrate the informal transport modes with the proposed transport system of the city. He also mentioned that even the demand catered by cycling was being grossly neglected in the proposed plan. Regarding the fare structure, he informed the floor that it has been proposed to fix the fare of the Bus Rapid Transit (BRT) system same as that of informal transport. He further stated that the mobility pattern along the proposed BRT corridor is being relooked at and the informal transport system is being anticipated to be developed as a feeder system to the BRT system.

- a. Mr Balachand Parayath from CityConnect, Chennai, asked Mr Bhatt if it was possible for the informal and para transit systems to gradually translate into a feeder system. Mr Bhatt replied that the Ahmedabad experience has shown that the mobility patterns along the BRT corridor can be modified and with

time the IPT system can assume the role of a feeder system, but in case of Indore this needs to be substantiated through trial runs.

- b. On a query regarding the operational model of the BRT system in Indore (raised by Mr Balchand Parayath), Mr Bhatt elucidated that the Indore BRT would run on a gross cost model, where the SPV will bear the demand risk. Doubts were raised on the success of this model as this model involved a lot of government subsidy.
    - c. On queries raised by Mr Bharat Bongu from Intellicap, Hyderabad, Mr Bhatt brought to light that currently in Indore there are only 15 routes which are operational, due to their profitability. But in total, 24 routes have been identified for operation of the city bus service. These routes are the prime corridors of the city, generally the arterial roads, where the demand exists, especially the latent demand but as of now no service exists.
    - d. On being asked about how to serve the low demand areas by Mr Ashish Verma from IISc, Bangalore, Mr Bhatt informed the house that it is only over a period of time that a low demand corridor can become a profitable corridor. Therefore the operators are educated about running the services along low demand corridors.
  3. The second presentation of the session was made by Mr Ramesh Prabhu, CEO, Three Wheels India Services Private Limited (TWISPL), Bangalore, on the initiative taken by his organization in improving the auto-rickshaw sector in Bangalore. In the presentation, Mr Prabhu focused on the problems faced by the auto-rickshaw sector, especially the rickshaw drivers, and the solution offered by TWISPL through its innovative business model.
    - a. On the query raised by Ms Akshima Ghate from TERI, Mr Prabhu explained that once the driver pays the total loan amount to TWISPL, he still remains with the organization and enjoys the benefit of other financial services offered by their organization.
    - b. Mr Amit Bhatt cited the example of Rajkot city wherein he mentioned that as per law it was mandatory for the auto-rickshaw owner to be the driver of the auto-rickshaw and that the permit was given only to the drivers and not to the fleet. Mr Prabhu extended the discussion and mentioned that in case of Bangalore, as per the law, fleet-owners were the ones who owned more than 500 auto-rickshaws and advertising was illegal in case of fleet auto-rickshaws. Mr Irfan Alam, founder, Sammaan Foundation, deliberated that there was no law which could provide information about advertising on the cycle rickshaws. Mr Navdeep Asija of Fazilka Ecocab clarified that guidelines on outdoor advertisement on transport modes are available in the Outdoor Advertisement policies of the states.

- c. Mr Balachand Parayath asked if the tariff of the auto-rickshaws was raised on a regular basis or not. Mr Prahbu responded that though the tariff of the auto-rickshaws was raised regularly, yet earnings of the auto-rickshaw drivers remained low due to some other contributing factors.
  - d. The third presentation of the session was made by Mr Irfan Alam, founder, Sammaan Foundation, on “Sammaan: An initiative to organize micro transport system (cycle-rickshaws) in India”, wherein he discussed the initiatives undertaken by his organization for improving the cycle rickshaw sector.
4. The key points from open house discussion are summarized below:
- a. Dr Kulwant Singh, Regional Advisor, UN-Habitat opined that there was need for a model legislation which could lay guidelines on the permit system for the informal transport.
  - b. Dr Ashish Verma emphasized the importance of infrastructure like segregated lanes for cycle-rickshaws.

## Concluding session

**Session Chair:** Mr S Sundar, Distinguished Fellow, TERI

1. Mr S Sundar, Distinguished Fellow, TERI opined that so far most of the global and local debates have focused on low carbon sustainable transportation, but for the first time UN-Habitat and TERI have shifted focus to informal transport. In the policy and planning, informal transport remains largely neglected.
2. After his remarks, Mr Sundar opened the house for suggestions that could be carried forward.

## Suggestions

3. Mr Irfan Alam: There is a need to develop model legislation which clearly defines the role and lays guidelines on the operations of the informal transport that could be easily adopted by the state governments. He further suggested that even innovative models could be developed, like a cooperative society model, to bring about improvements in the informal transport sector.
4. Dr Vinod Tiwari: In the National Transport Development Policy of the Government of India, there is a need to include the issues related to informal transport sector. There is a need to consolidate the issues and best practices discussed in the workshop.
5. Mr S Sundar: The National Urban Transport Policy is completely silent on informal transport.
6. Mr Amit Bhatt emphasized on the need for policy-level interventions and accentuated the need to relook into the existing permit framework and framing policies which allows the individuals to own permit and institutionalize the informal modes like the auto-rickshaw services.

7. Dr Vinod Tiwari: Formal and the informal modes can coexist and play a complementary role. But, the problem arises due to lack of acknowledgement of the role played by the informal transport modes in catering the mobility needs of the cities.
8. Dr Anvita Arora: Recommended developing toolkits on establishing different models for improving the informal transport (eg. Toolkit on developing model similar to G-Auto or toolkit on developing model similar to Dipbahan Cycle Rickshaw Project). She suggested that the toolkits could include the financial structures, organizational structures, implementation mechanisms, and even primers giving details about reforms required in the current legal and regulatory framework. The primers could be essentially valuable in speeding up the reform process as they could be used readily in carrying forward the necessary amendments.
9. Mr SSundar: Carrying forward the toolkit discussion, Mr Sundar put forward his opinion that some of the issues were specific either to the motorized or to the non-motorized informal transport modes, while other issues were more generic. He elaborated that the sector-specific issues could be related to safety and environmental impacts and generic issues could be related to the legal and regulatory issues like the permit framework.
10. Mr S Sundar highlighted that throughout the workshop, informal transport being a pro-poor mode has been challenged. Thus, there was a need to look into building the informal transport as an affordable mode choice for the poor.
11. Mr Navdeep Asija suggested creation of a transport model similar to a carbon trading framework wherein some kind of working procedure or formula is given, which lays down rules for the planners to decide the proportion of motorized and non-motorized modes, and even the proportion of formal and informal transport modes to be provided in a city. Mr Sundar appreciated the recommendation and mentioned that efforts were needed to evolve such a mechanism.
12. Ms Glynda Bathan opined that urban poor were largely dependent on walking to fulfil their mobility needs and the city could meet the transport needs of the urban poor by developing better walking facilities.
13. Mr Navdeep Asija highlighted the fact that while improvements in the formal public transport systems like the BRTS, metro, etc., are on a high priority for the city officials, on the other hand informal transport was a highly neglected sector. To tackle this neglect, he recommended creation of a rule or a formula which would make improvements in the informal transport mandatory in case improvements are made in the formal system. Mr Ramesh Prabhu agreed to Mr Asija's suggestion. Further substantiating Mr Asija's suggestion, Mr Prabhu cited an example from the city Bangalore, where he mentioned a lot of work was being done in improving the formal transport system, like expansion of the metro system, but the informal sector was neglected to the limit that even the minimum basic infrastructure like parking facilities for the auto-rickshaws were absent. Mr Navdeep Asija said that same was the case for the city of Chandigarh where the overnight parking of vehicles was priced at INR 5 but shelter for the drivers was priced much higher, at INR 50.

14. Ms Akshima Ghate drew attention to the fact that as a planner, one tends to overlook the role of informal transport as a service provider. Even the City Mobility Plans neglect the role of informal transport in meeting the urban mobility needs. While developing new transport systems for the city, the role played by the informal transport system is often neglected. Thus, to deal with this negligence, there is a need to develop a policy which is able to guide the city officials regarding integration of the informal transport and related issues. Ms Ghate further opined that the mobility plans need to be reviewed as most of them are silent on role of informal transport.
15. Dr Anvita Arora: Informed the house that Low Carbon mobility plan module was being prepared by iTRANS in association with IIM-Ahmedabad, CEPT University, and IIT-Delhi. The agenda of this module is to bring all the transport modes under the ambit of city level planning process and to further look into their respective carbon footprints. She laid stress on the need to include, but not necessarily formalize the informal transport.
16. Mr Navdeep Asija: Raising finance is also a major challenge for the informal transport sector. He brought to the notice of the house that the Punjab government had made it mandatory for the public banks to finance at least five rickshaws per year.
17. Mr Pradip Kumar Sarmah: Proposed establishment of a national-level platform to deal with all the issues related to the informal transport sector. He felt that involvement of government was essential. He stated that for the financing of informal transport, a clear policy needs to be laid down at the national level.
18. Mr Irfan Alam: A large number of good schemes and policies are present like the DRI scheme, PMEGP, etc., which could be used to support the informal sector. He emphasized that more than policy initiatives, there was need for an advocacy group which could raise relevant issues and spread knowledge about role and issues of the informal transport sector.
19. Mr Balachand Parayath and Mr Navdeep Asija: Stressed on the need of regular tariff revision for the informal transport system. Mr Balachand Parayath emphasized that model legislation could be useful in this case as it would be difficult for every state to work out its own tariff revision framework.
20. Mr Navdeep Asija: Some procedure needs to be evolved regarding fixing of the ceiling value for the informal transport modes. He highlighted that equilibrium needs to be maintained between a no-permit and a permit system, while framing the permit policy.
21. Dr Ashish Verma: The role of informal transport varies from city to city. The city mobility plans need to define the role of informal transport in the respective cities. This would make the integration of formal and the informal transport systems easier.
22. Mr Bharat Bongu: Stressed upon the need for a legal space on the roads and a fare structure for the operation of the informal transport modes.
23. Mr S Sundar: There is a need to develop an approach paper. A working group also needs to be setup which could work on developing a policy package for dealing with the issues faced by the informal transport sector.
24. Mr Bhushan mentioned that the workshop had been very fruitful and other countries could also benefit from the recommendations of this workshop.

The Sustainable Habitat Division at TERI is comprised of three research areas: the Center for Research on Sustainable Building Sciences (CRSBS), the Center for Research on Sustainable Urban Development and Transport Systems (CRSUDTS), and the Association for Development and Research on Sustainable Habitats (ADaRSH).

CRSBS is dedicated to all aspects of energy and resource efficiency in buildings and has been offering environmental design solutions for habitat and buildings of various complexities and functions for nearly two decades. It consists of architects, planners, engineers, and environmental specialists who specialize in urban and rural planning, low energy architecture and electromechanical systems, water and waste management and renewable energy systems. A regional center in Bangalore has been set up to facilitate development and mainstreaming of sustainable buildings, improve performance levels of existing buildings, and raise awareness on sustainable buildings in Southern India.

CRSUDTS works extensively on various urban issues with an aim to promote sustainable urban development. It was established in 1999 in response to the growing urban demands, particularly in the urban infrastructure sectors. CRSUDTS is involved in research related to urban transport and sustainability issues. Its activities range from carrying out energy-environment related analysis, giving inputs to policy and planning, improving urban service provision and governance, carrying out sustainability assessments, exploring climate change implications and carrying out capacity building for various stakeholders, all in the context of the transport and urban development sectors.

ADaRSH has been setup as an independent entity to promote GRIHA.



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