



Delhi Sustainable Development Summit 2015

Thematic Track_ Concept Note

Safe and Clean Transport for Sustainable City

Most cities in the world are grappling with issues concerning sustainable transportation and safety on the streets. The more complex the issue, the more there is a tendency to focus on the simpler and more technical aspects of the problems. Sustainable transport solutions are frequently reduced to those concerning cleaner vehicle emissions, provision of public transport and 'encouraging' walking and bicycling. The reasons why people and governments don't or cannot follow many of the prescribed goals get less attention. Complex issues involving the interaction of urban structures, urban layout, street design and architectural forms and their influence on human behaviour in transportation choices get neglected by many planners.

This thematic track is proposed on the back of Japan-India collaborative research carried out through International Association of Traffic and Safety Sciences (IATSS) and Indian Institute of Technology Delhi (IITD). Japan experienced a serious problem of traffic fatalities that was referred to as "Traffic War" around 1970, and IATSS was established to cope with the problem, specifically by an interdisciplinary approach in 1974. In the first part of the track, after introducing "Community design for traffic safety in India" as an interdisciplinary research approach, some successful cases and histories in reducing traffic fatalities in Japan and other countries will be explained.

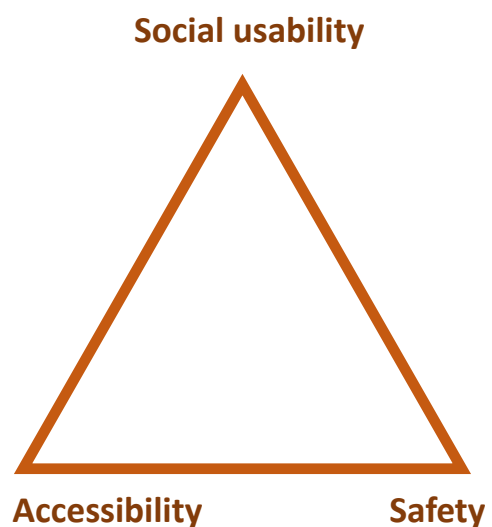
Although travel patterns vary from city to city in the use of bicycles, paratransit modes, mopeds and official public transport, these cities represent the growing urban agglomerations of India where high growth rates are expected in the next decade. However, these modes will not look attractive unless people perceive them to be safe. In the second part of the track, experiences gained from a detailed study of traffic safety in 6 Indian cities will be used to demonstrate how street designs can be altered to make our cities inherently safer. Among these 6 cities, the study team paid special attention to Agra as it has one of the highest fatality rates in India, and proposed an integrated program of road space design from an engineering perspective, built environment design from a land-use perspective, and community design from a social and cultural perspective to enhance urban transport sustainability. A move toward designing safer streets and neighbourhoods has to become an integral part of our efforts to move toward a more sustainable future.

Human beings are strongly influenced by structures and systems they operate in, solutions based on individual behaviour change are not very successful in most situations. The more complex the system, the less freedom individuals have in changing their own behaviour. Here we focus our attention on how a city can be made safer, independent of enforcement and policing activities. This is in the belief that unless people feel safe from crime and traffic accidents they will not willingly walk, bicycle or use public transport. Therefore, urban safety becomes a necessary though not sufficient condition for the promotion of sustainable urban futures. In this context, broader concept of sustainability of urban transport is discussed in our thematic track with emphasis on road traffic safety, environmental and health impact, and community resilience.

To cope with growing traffic fatalities and injuries worldwide, the UN General Assembly adopted a resolution on “Improving global road safety” in April 2014. The WHO has warned that road traffic crashes are on a path to becoming the fifth leading cause of premature mortality by 2030, in many emerging economies. A large majority of the victims of traffic accidents are pedestrians, cyclists and motorcyclists who account for over two thirds of road traffic fatalities.

Traditionally, road traffic safety policies aim to reduce the risk of a crash by improving road infrastructure, by educating road users, and to reduce the injury outcome of a crash by improving vehicle technology and enforcing seatbelt and helmet usage by law. Furthermore, a rapid increase in traffic fatalities in early stage of motorization is associated with the development of road infrastructures deficient in design and increase in speed of vehicles.

Urban form in the structure of its street layout and types of roads have a determining influence on traffic safety. Cities with the same socio-economic characteristics can have very different road traffic fatality rates. Local street and junction design can have a strong influence on promoting safety. Until today vehicle speeds have been a low priority area in urban road design. The best way forward in the short run is to develop strategies where infrastructural measures like traffic calming are combined with





vehicle measures to control vehicle speeds.

Placing public transportation where it is equitably responsive to community needs and encourages links to vibrant centres is valuable. Community involvement and comprehensive approaches and multiple sectors working together is essential for designing safer streets. Effective and safe road design and transport planning has to address a set of conflicts implicit in the social context within which roads are built and transport is provided. Social usability, safety and accessibility are interlinked and interdependent. All three aspects have to be considered in design of safe and livable cities. An interdisciplinary approach is therefore necessary.

Safety of pedestrians and bicyclists must be taken up urgently in all Indian cities. This requires serious commitment by city authorities and municipalities. It is possible to retrofit city streets by introducing traffic calming, small roundabouts segregated cycle tracks and pedestrian paths on arterial roads to create a safe city wide network for pedestrians and bicyclists.