



# Walkability in Kathmandu Valley

## Walking: Our Right-of-Way



Cities in Kathmandu Valley were traditionally designed for walking and providing communal space for people to meet. Large numbers of people in Kathmandu Valley still walk for their daily mobility. A recent study by the Ministry of Physical Infrastructure and Transport, and JICA showed that the travel mode share of walking is 40.7%. However, the share of walking has declined by more than 23% in last two decades. This is mainly because the

plans, policies and infrastructure development that were adopted are almost exclusively vehicle-friendly, discouraging people to walk or cycle. Increasing motorization and vehicle-prioritized infrastructure have led to increased congestion, increased dependency on imported fossil fuel, high levels of air pollution and dramatic increase in road fatalities especially among pedestrians and cyclists.

*Cities in Kathmandu Valley were traditionally designed for walking and providing communal space for people to meet.*

### IMPORTANCE OF WALKING

Walking is the most efficient and environmentally sustainable mode of mobility. Prioritizing and promoting walking generate greater access to all people, improve road safety and create more livable cities. Furthermore, every trip of all the public transport riders and even private vehicle users starts and ends with walking.

- Walkable cities save lives and promotes road safety
- Better pedestrian environment leads to poverty reduction through enhanced economic activities
- Reduces dependency on imported fossil fuel, thus contributing to country's energy security and economy
- Reduces CO<sub>2</sub> emissions and other harmful air pollutants
- Benefits individual's health
- Creates more livable and equitable cities

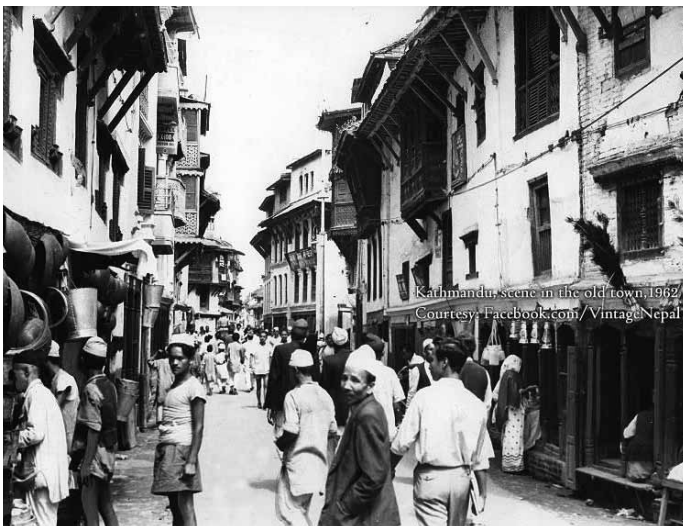


Photo Courtesy: Vintage Nepal

Cities in Kathmandu Valley were traditionally planned and designed for walking



Photo Courtesy: Hannette Vanberg

Vehicular traffic in city core areas has made streets unsafe and inconvenient for pedestrians.



*"We need to get more people to walk because it is good in every sense: it makes a city more vibrant, more safe, more sustainable and healthier. That is positive, but it is actually also the cheapest policy because it is less expensive to invest in design on a human scale than in infrastructure for cars. And we also benefit from lower healthcare costs."*

*- Jan Gehl, Urban Architect & Author-Cities for People*



Photo Courtesy: Hemette Hemberg

Large number of trips in Kathmandu Valley are made on foot. However, walking is not prioritized in the existing plans and policies.

### WALKING-TRAVEL MODE SHARE

Although walking is still the major mode of travel in Kathmandu Valley, it has significantly decline from 53.1% in 1991 to 40.7% in 2012 (MoPPW/ JICA, 2012). Large part of walking and cycling share is replaced by motorcycle, whereas the mode share of public transport has almost remained same. The study further forecasted that walking mode share will decline to 38.8% in 2020.

Compared to many other major Asian cities, walking mode share of Kathmandu Valley is still high. If provided the proper pedestrian infrastructures and made the city more walkable, the share of walking could be increased. The JICA study shows that the average trip length of private vehicle users were found to be around 5km, which can easily reached on foot or by bicycle.

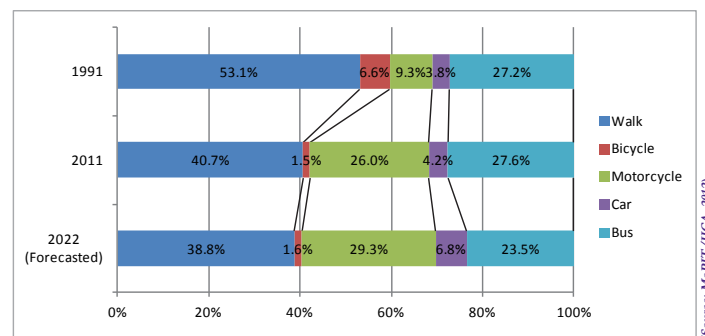


Fig. 1 Travel Mode Share in Kathmandu Valley in 1991, 2011 and 2022-forecasted

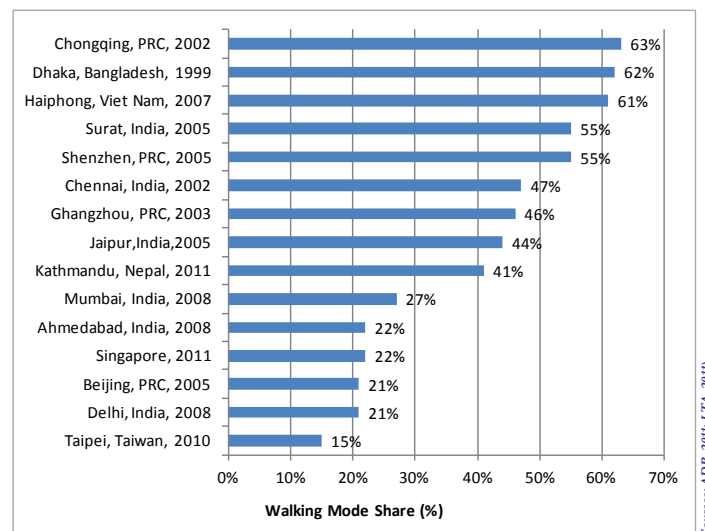


Fig. 2 Walking Mode Share in Asian Cities (%)

(Sources: ADB, 2011; LTA, 2011)



### WALKABILITY IN KATHMANDU VALLEY - STATE OF PEDESTRIAN INFRASTRUCTURE AND SERVICES



Photo Courtesy: Prashanta Khanal

Road infrastructures are not accessible to people with disabilities

According to the Metropolitan Traffic Police Division (MTPD), pedestrians represent up to 49% of all road fatalities in Kathmandu Valley. This clearly shows that our roads are not pedestrian friendly and lacks adequate planning for pedestrians. Pedestrians are also exposed to high level of air pollution as they often walk along the busy roads.

Walkability studies in Asian Cities revealed that Kathmandu is one of the least

cities among the surveyed Asian cities.

During the pedestrian survey, 78% of respondents in Kathmandu city and 46% in Bhaktapur city rated pedestrian facilities either bad or worst. 39% of respondents in Kathmandu and 32% in Bhaktapur said that they will shift from walking to private vehicles if the pedestrian infrastructures are not improved. In terms of pedestrian preference for crossing, 80% of respondents in

Bhaktapur favor ground crossings as opposed to overhead bridges and underground crossings. Around 86% of respondents said that the average distance that they are willing to walk to access the crossing is less than 50 meters.

The 94% of all surveyed road stretches in Kathmandu have no existing facilities for person with disabilities. In terms of improvements in pedestrian facilities, this is the utmost priority perceived by majority of respondents, followed by improved street lighting, and wider, levelled and clean

*Kathmandu is one of the least walkable cities in Asia, receiving one of the lowest walkability ratings. The city is categorized as 'Not Walkable'.*

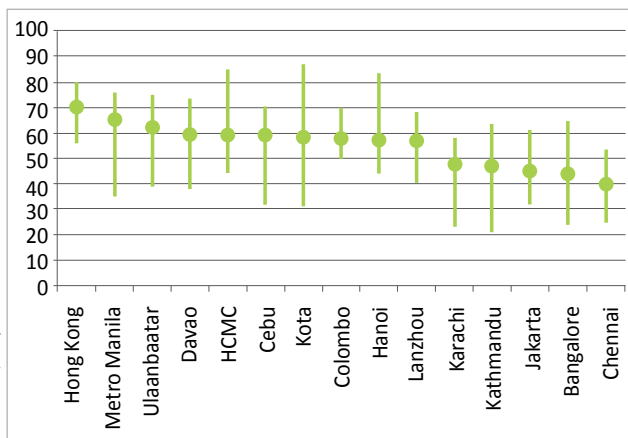


Fig. 3 Walkability ratings for Asian cities

walkable cities in Asia, receiving one of the lowest walkability ratings. The commercial and public transport terminals, which have highest pedestrian movement, are found to be less walkable compared to residential and educational areas, mainly because of poor pedestrian infrastructures and high walking path modal conflict. The average walkability rating of Kathmandu is 40.12 (out of 100), and the city is categorized as 'Not Walkable', whereas Hong Kong and Metro Manila are the most walkable

sidewalks.

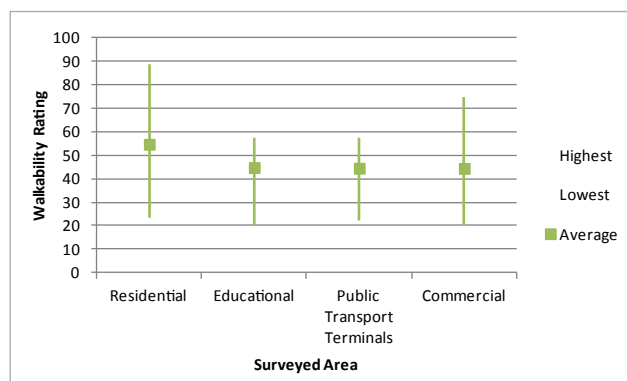


Fig. 4 Walkability rating of four areas in Kathmandu



## POLICIES, PLANS AND INITIATIVES ON IMPROVING PEDESTRIAN FACILITIES



Photo Courtesy: Basu Manandhar

Pedestrianization in Basantapur Durbar Square

*“The report also indicates that pedestrians and cyclists make up more than a quarter of all road deaths. In some countries this figure is much higher. If people could walk and cycle in safety, many more lives could be saved.”*

*- Dr. Margaret Chan, WHO Director-General (Statement on the occasion of the launch of the Global status report on road safety 2013)*

Several plans and initiatives, including the first Physical Development Plan for Kathmandu Valley (1969) have suggested improving the pedestrian infrastructure and pedestrianization of city core areas. There were initiatives on restricting vehicles in Thamel area, however they are yet to materialize. In order to contain urban sprawl, the Kathmandu Valley Long - Term (2000-2020) Development Concept recommended series of preventive and precautionary land management policies including encouragement of infill development, maximizing land-use efficiency and minimum average gross residential density. It supports creation of a car-free zone and pedestrianization. Apart from recommending action plan to restrict vehicle in prescribed urban core areas, the National Transport Policy (2001/02) doesn't have any specific policies to promote walking.

The government of Nepal is widening roads throughout Kathmandu to reduce traffic congestion. Some sidewalks have been built and upgraded under this initiation. However, many sidewalks are built without proper standards and amenities, and in many cases roads are expanded at the expense of sidewalks.

### Kathmandu Sustainable Urban Transport

**Project (KSUTP):** Improving walkability or pedestrianization city center is one of the components of KSUTP, which is being implemented with assistance from ADB. The main objective of the project is to improve the quality of urban life through improving urban mobility. The project is planning to pedestrianize 8-km of heritage routes in Kathmandu city core and improve sidewalks in city center. The project is also upgrading and/or constructing four pedestrian bridges, and improving interchange facility and public space in Kantipath. Street furniture, sidewalk garden and sign post have also been proposed wherever applicable and appropriate to facilitate pedestrians to walk and relax, and create pleasant walking environment.

**Pedestrianization of Historical Areas:** Kathmandu, Bhaktapur and Lalitpur municipalities have pedestrianized small stretches of historical squares in Kathmandu, Bhaktapur and Patan. Motor vehicles are restricted to enter the squares completely or for a certain period of time. The main objective is to preserve cultural heritage sites, promote tourism and create walking environment for pedestrians. However it is often found that the restriction of vehicles in those pedestrianized areas are not properly regulated.



### Khagendra Accessible Road Initiative

Large number of people with disabilities (PWDs) resides in and around Khagendra New Life Center, Jorpati. Khagendra Accessible Road project of building an exemplary accessible road from Bagmati Bridge (Narayantar) to Jorpati Chowk was initiated in 2011, by the local community in collaboration and support of Khagendra New Life Center, Spinal Injury Rehabilitation Center, and Ministry of Physical Infrastructure and Transport. The immediate objective of the project is to build 100m of accessible sidewalk in both side of the road. This project is expected to benefit more than five

thousand people with disabilities. This initiative aims to set an example of accessible infrastructure, sensitize government and public about the accessibility, and create an example that could be taken as reference to build similar infrastructure nationwide. Various awareness programs and discussions with local communities were organized to implement the project including fund-raising. The Road Division, Kathmandu has committed to fund fifty percent of total cost of the project.

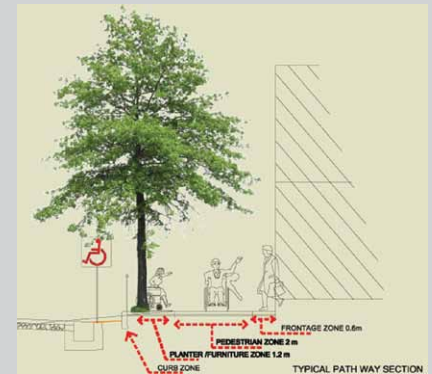


Fig. Proposed wheelchair friendly sidewalk design at Jorpati

### PEDESTRIANIZATION IN THAMEL

Thamel, located within the core city, is a popular tourist destination and historical locality of Newar communities. With increasing tourism activities, it is facing serious traffic related problems, such as congestion, safety, noise and air pollution. Several initiatives and plans were made to regulate the entry of private motor vehicles, but have failed to sustain.

Thamel to be vehicle-restricted area to promote tourism activities. 54% rated the air quality of Thamel either fairly bad or very bad, and 45% of surveyed tourists rated walking condition of Thamel either fairly unsafe or very unsafe. 72% of tourists said that they will walk more often if there were improvement in pedestrian infrastructures.

According to a multi-stakeholder perception study conducted by RECPHEC/NEAT in 2013, nearly 95% perceived traffic congestion and air pollution as major problems in Thamel. Majority of key stakeholders in Thamel (businesses, local residents and tourists) are positive towards making Thamel a pedestrian friendly zone. Around 78% of the total respondents reported that they want to see pedestrian-friendly Thamel. The idea of making a complete pedestrian-only zone is not very popular among local residents. Moreover, they appear to find the vehicle-entry permit system appealing. Businesses, on the other hand, appear to prioritize vehicular

*If Thamel was made vehicle-free, I would have enjoyed spending time here instead of dreading it.*

- Tourist (USA)

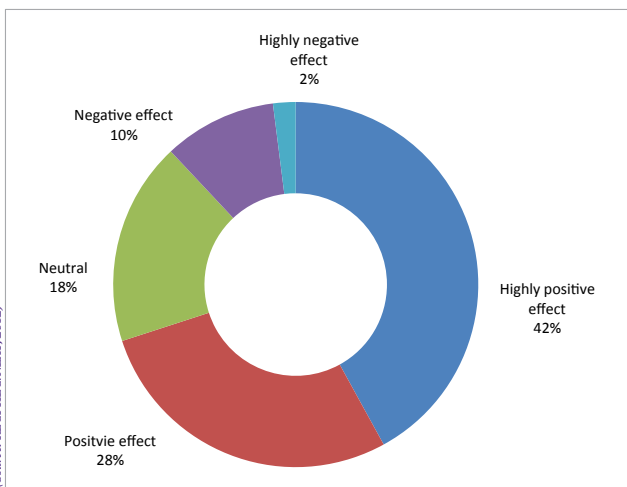


Fig. 5 Perceptions on effect of Pedestrianization in Thamel business

A study by CIUD in 2004 showed that there is still huge number of non-motorized users. It recorded over 27,000 of pedestrians, cycle users and rickshaws movements in 12 hours, while that of vehicles were found to be nearly 45,000, largely motorbikes. The study proposed to restrict entry of vehicles for certain hours, and recommend providing parking facilities, entry of emergency vehicles and operation of electric vehicles to meet the mobility demand of elderly and people with disabilities.

According to a survey carried out by CEN/CANN in 2012, 87% of tourists preferred walking in Thamel. 85% of tourists preferred

entry into Thamel only during the afternoon (12 pm – 2 pm) and at night (10 pm – 6 am). Around 70% of businesses believe that not having vehicles inside Thamel (full or partial) will have positive effect on their businesses.

Pedestrianization of Thamel will yield wide array of benefits from increased economic and tourism activities, improvement in air quality, to development of sustainable mobility culture, eventually creating more livable city. The Kathmandu Metropolitan City should take lead on this initiative with participation of wider stakeholders including local communities in both planning and implementation of this project.



### SIDEWALK DESIGN CRITERIA AND STANDARDS

A sidewalk is not just for moving people from point A to B, it is public realm where people come to meet, talk, sit, relax and eat. For many urban poor, it is the only public space they could afford to go to, and to sustain their livelihoods. A good sidewalk promotes safer and comfortable mobility of people, and should be vibrant and inviting space. It should promote social and economic activities, and be accessible to all users regardless of age, gender, ability and status.

Comfort, continuity, and safety are the governing criteria for the design of pedestrian facilities. Footpaths should be provided on all streets, except on traffic calmed small streets. Footpaths should incorporate the following:

- A continuous unobstructed minimum

width of 2 m

- No breaks or obstructions at property entrances and side streets
- Continuous shade through tree cover
- No railings or barriers that prevent sideways movement on and off the footpath
- Elevation over the carriageway (e.g. +150 mm) and adequate cross slope for storm water runoff. At the same time, the elevation should be low enough for pedestrians to step onto and off of the footpath easily
- Surmountable gratings over tree pits to increase the effective width of the footpath

*"You have to design your streets for everyone. The cities that have safe streets, that are easy to get around, are the ones that will grow and thrive in the 21st century."*

*- Janet Sadik-Khan,  
Commissioner,  
NYCDOT*

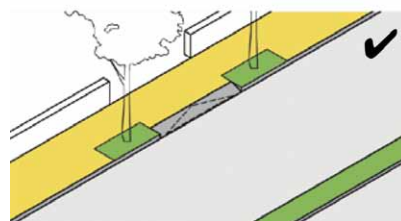
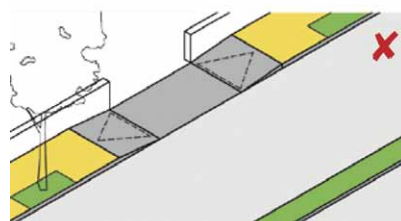
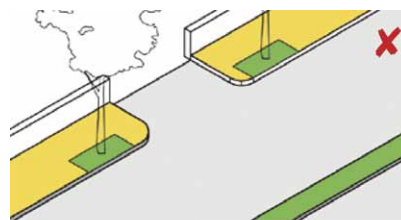
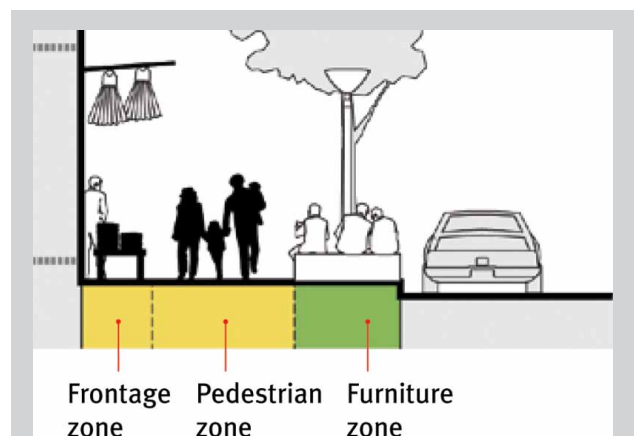


Fig. Sidewalk should be continuous and vehicle ramps should be provided in conflict areas such as private property access spaces

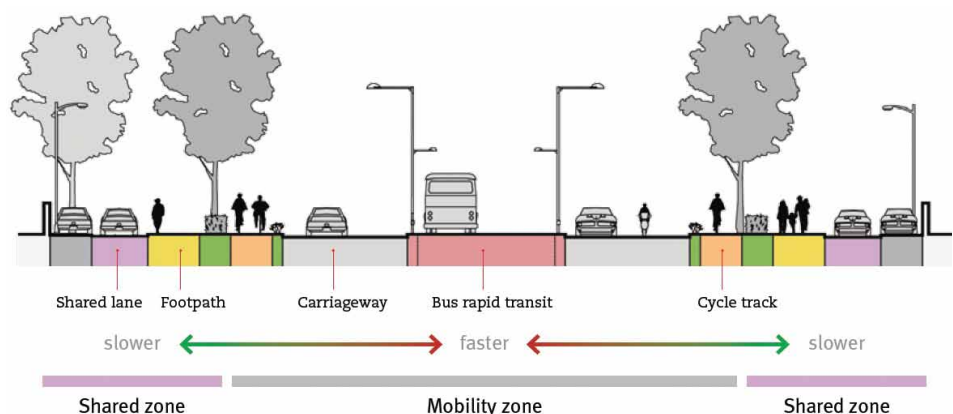


Sidewalk should have distinct zones that serve different purposes:

**Pedestrian zone:** Provides continuous space of at least 2m width of right-of-way for walking and should be free of any on obstructions.

**Furniture zone:** Space for landscaping, furniture, lights, bus stops, sign, and private property access ramps etc.

**Frontage zone:** Provide buffer between street-side activities and the pedestrian zone.



Complete Street- catering the needs of all road users

(Source: ITD/IEC, 2017)



Photo Courtesy: Prashanta Khanal

While the vehicles are provided with wide carriageway, sidewalks lack proper width and amenities

## CONCLUSIONS AND RECOMMENDATIONS

In the absence of specific policies and strategies to promote walking, the modal share of walking is steadily decreasing. Walking is neither convenient nor safe. Thus, there is urgent need to formulate plans and policies to improve walkability in cities of Nepal and harness the wider socio-economic, environmental and health co-benefits.

**Formulate and implement comprehensive urban transport policy and strategy, integrating with land-use planning:** The Ministry of Physical Infrastructure and Transport should take lead in formulating an inclusive urban transport policy and strategy that prioritizes the mobility and accessibility of people not vehicles, protecting the pedestrian rights and ensure their safety. In order to content urban sprawl and promote walking, transport policies and planning should be integrated with land-use by ensuring the development of compact and mixed land-use, where essential economic and social services are provided within the walkable distance. The Kathmandu Valley Development Authority should take lead on this.

**Develop urban road standards or design guidelines:** The Government needs to take the lead in formulating and implementing urban road standards and design guidelines that incorporate complete street concept, more importantly prioritizing pedestrians, cyclists and public transport users.

**Vehicle free urban core areas:** With wider stakeholder consultations and local communities' participation, the city governments should implement plans to restrict vehicular movement and improve walkability.

**Dedicated funding mechanism:** A secure and dedicated funding for improving pedestrian infrastructure and services should be established by mobilizing the national and local resources. As in many other cities around the world, certain percentage of transport budget as well as the pollution tax on fuel should be allocated for improving non-motorised transport infrastructures.

*“When you construct a good sidewalk, you are constructing democracy. A sidewalk is a symbol of equality.”*

*- Enrique Penalosa, Former Mayor of Bogota*



Photo Courtesy: Prashanta Kharel

Sidewalks are often encroached by illegal parking of private vehicles. Although traffic police division has initiated campaign against illegal parking, it is yet to be enforced effectively.

*“Mobility is not just a question of building wider or longer roads; it is about providing appropriate and efficient systems that serve the most people in the best, most equitable manner. This includes encouraging a transition from car use to trains, buses and bicycles, and bringing more pedestrians onto well-lit sidewalks.”*

- Secretary-General Ban Ki-moon (Message on World Habitat Day, 2013)

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