

CODATU XII

**DECENTRALIZED COOPERATION FOR URBAN TRANSPORT: EXPERIENCING DIRECT
COOPERATION BETWEEN LOCAL GOVERNMENTS WORLDWIDE**

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SESSION 7

Accessibility : the social dimension of sustainable transport

ACCESSIBILITY AND SOCIAL INCLUSION IN INDIA

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Accessibility in India

An able bodied individual without personal transportation is concerned with:

- *Access to activities at specific locations.*
- *Availability of affordable public transportation.*
- *Ability to board and disembark (over crowding/ high steps/ running bus etc).*
- *Ease in changing vehicle and modes through the trip chain (origin to final destination).*
- *The total travel time.*
- *Personal safety concerns....whether or not the trip can be made alone by the traveler (i.e. child, woman, elderly etc)*

Continued.....

A disabled person is concerned with additional factors:

- *Availability of accessible public transportation*
- *Availability of affordable transportation*
- *Availability of “safe” transportation (personal safety)*
- *Availability of an escort for the desired trip (standard expectation)*

Underlying Concerns

- Economic
- Design of infrastructure
 - sidewalks,
 - entry/exits of building,
 - road surface,
 - accessible toilets,
 - accessible hotels/ accommodations.
- Design of vehicles
 - accessible public buses,
 - taxis, trains, subways,
 - scooters, motorbikes, auto rickshaws,
 - cycle rickshaws, ferries, tongas (horse carriages),
 - airplanes
- Personal Safety

Barriers to Accessibility

Urban barriers.....

- Ingress and egress into public buildings and homes
- Design of roadways, footpaths/ side walks
- Inaccessible public transportation

Rural Barriers

- Entryways / exits from homes
- Public buildings, schools, clinics etc
- Lack of paths / all weather roadways
- Lack of accessible, affordable and reliable public transportation

A State Map of India

Census of India 2001, The office of the registrar general, India



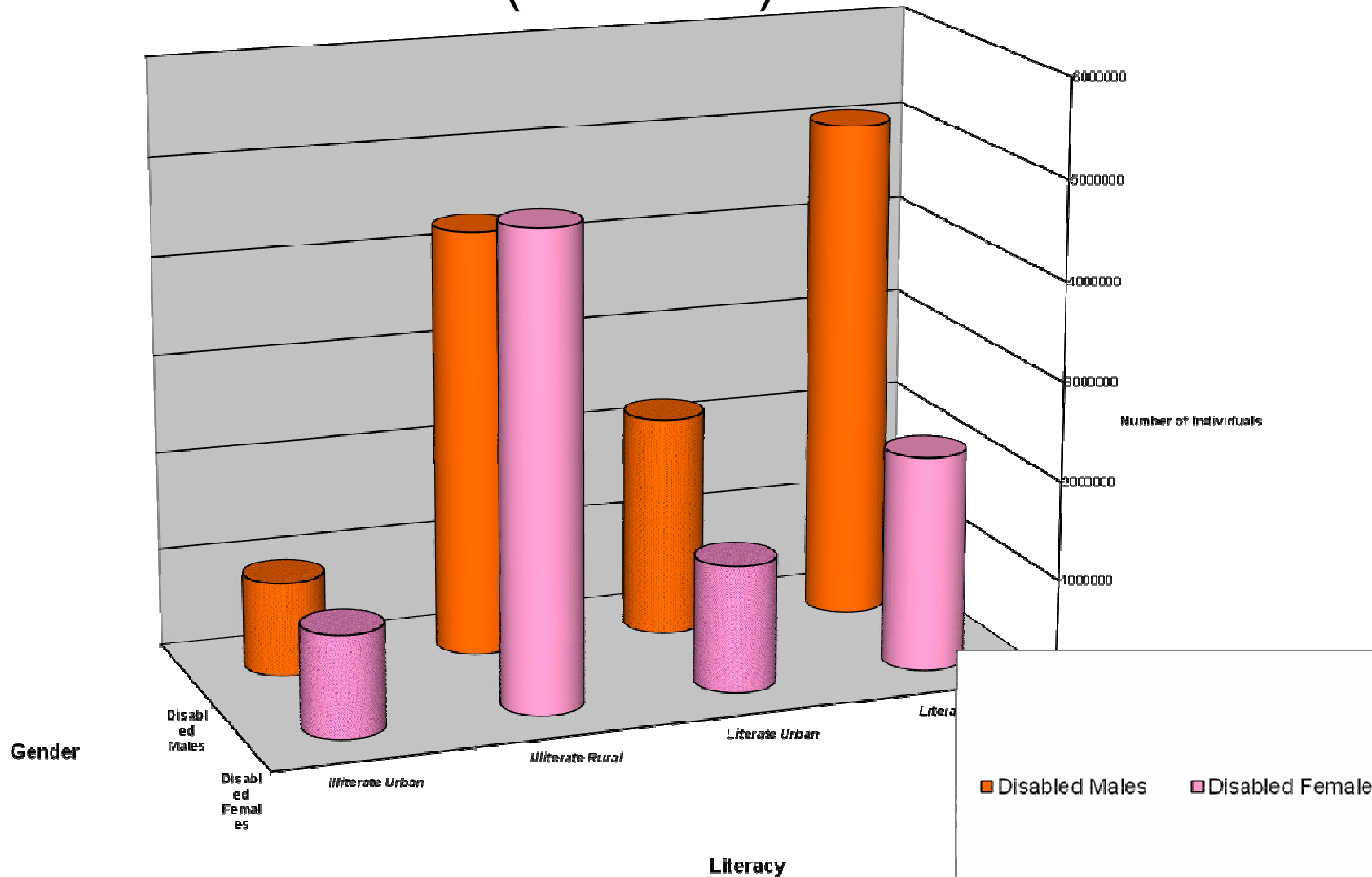
Statistics on Disability (Census 2001)

Total Disabled Population	21,906,769
Visually Impaired	10,634,881
Speech Impaired	1,640,868
Hearing Impaired	1,261,722
Mobility Impaired	6,105,477
Mentally Impaired	2,263,821

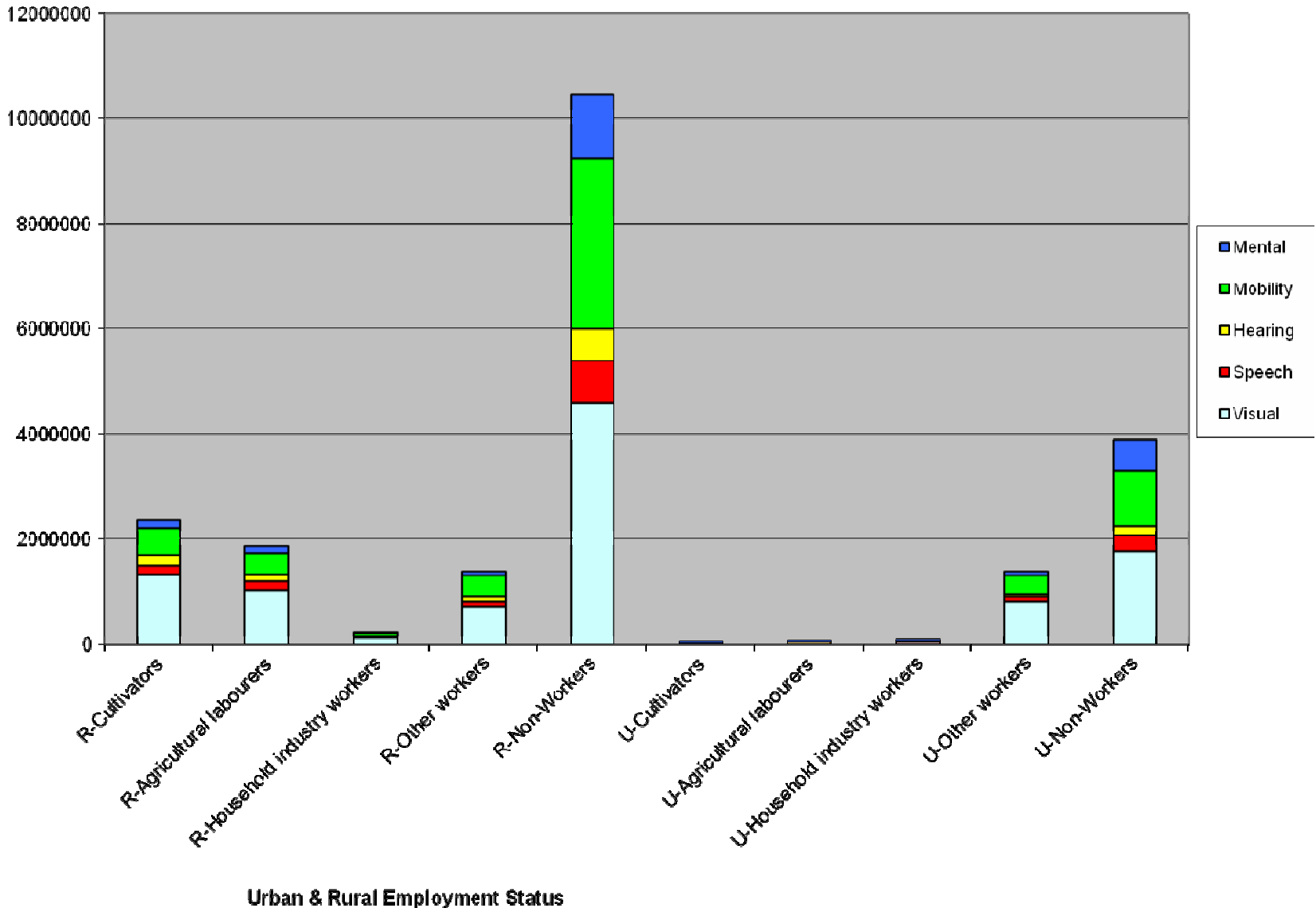
Size of Illiterate Population (Census 2001)

	Tot. Disabled Pop.	Visually Impaired	Speech Impaired	Hearing Impaired	Mobility Impaired	Mentally Impaired
Literate	10,801,232	5,301,316	594,431	544,748	948,871	857,813
Illiterate	11,605,537	5,333,565	1,046,437	716,974	1,253,854	1,406,008
Urban Illiterate	1,993,910	889,994	192,927	96,241	449,179	365,569

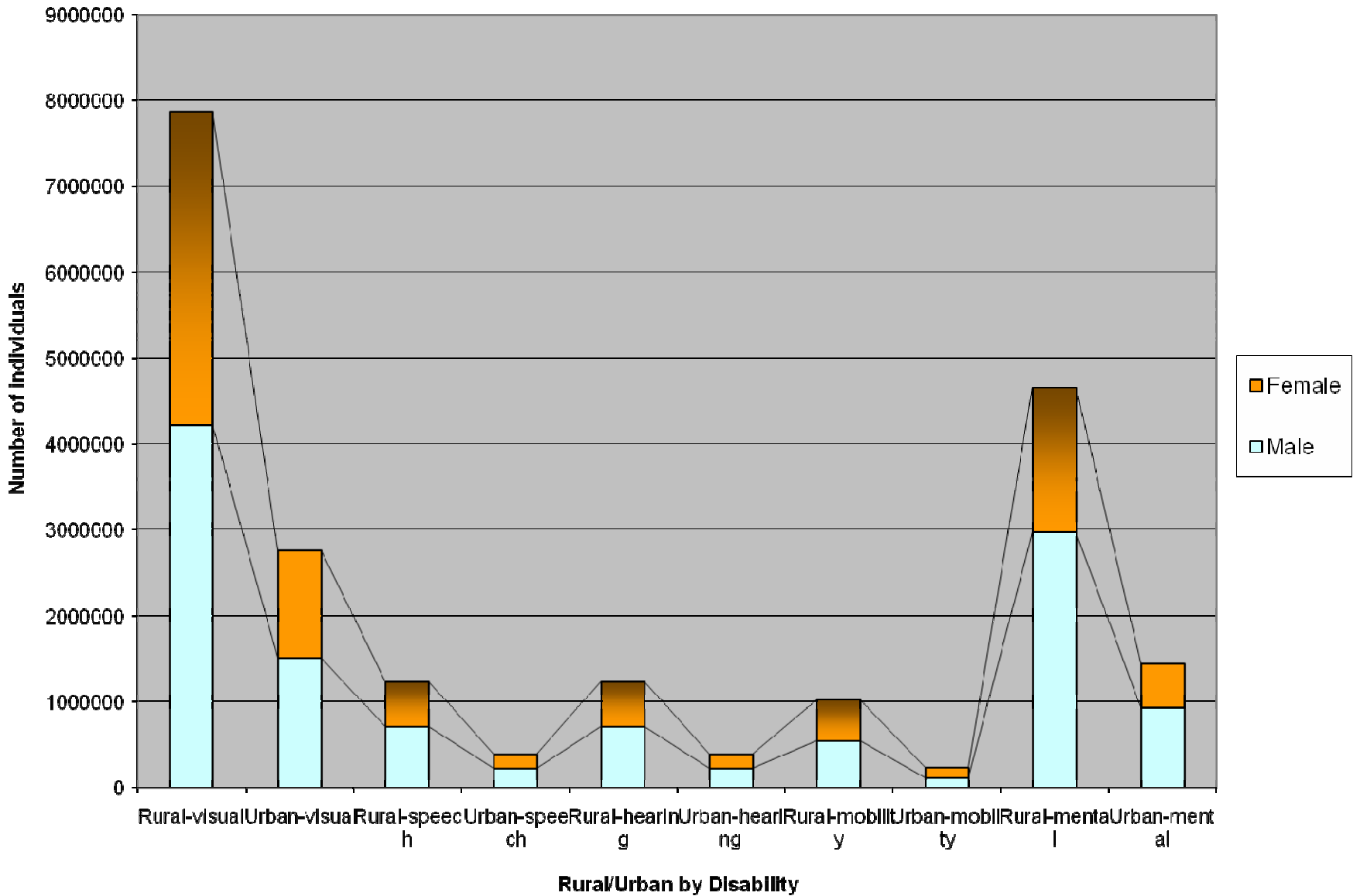
Distribution of Literate and Illiterate Disabled Males and Females by Rural & Urban Areas (census 2001)



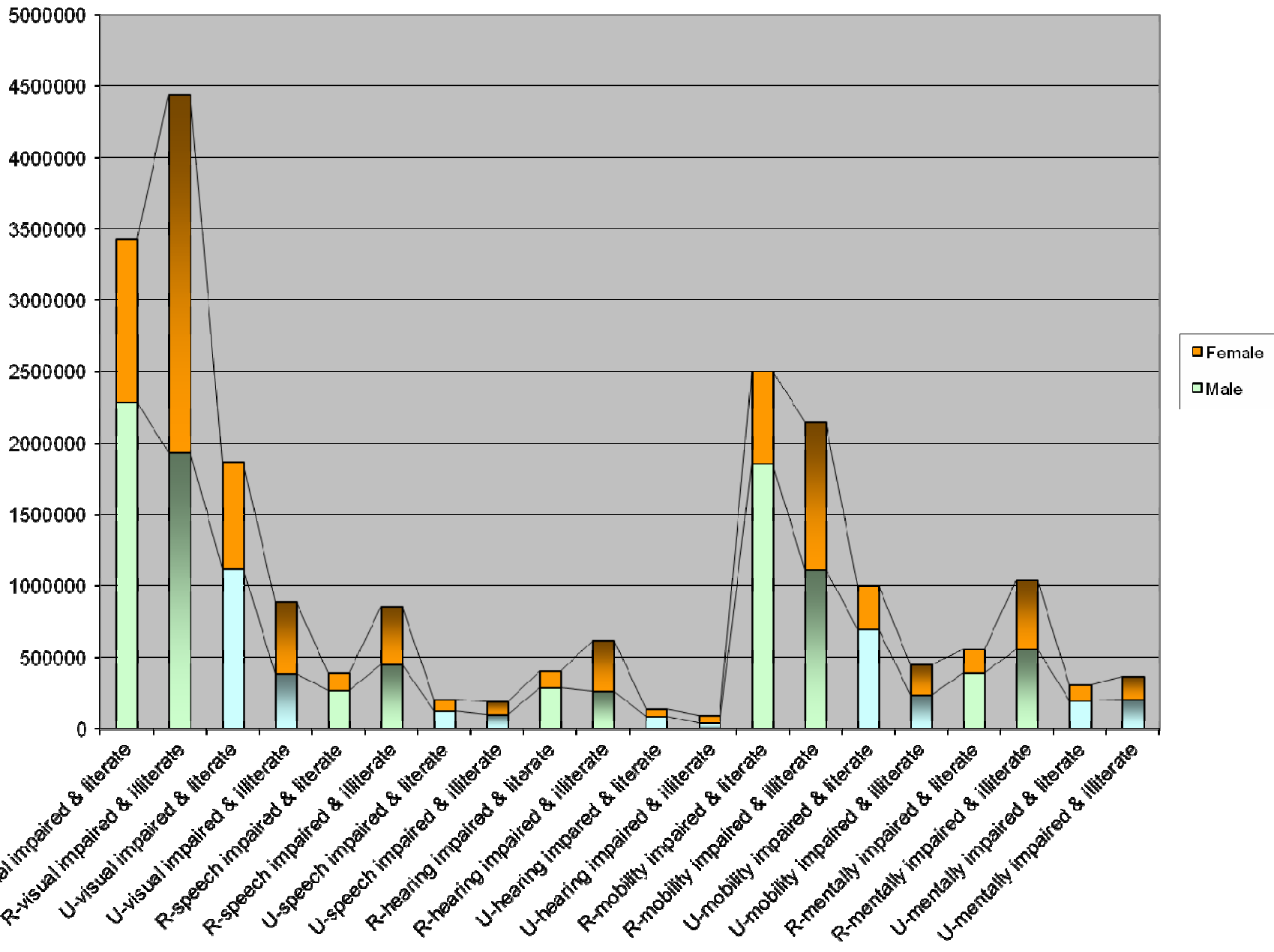
Employment Status by Disability Categories in Rural & Urban Areas (Census 2001)



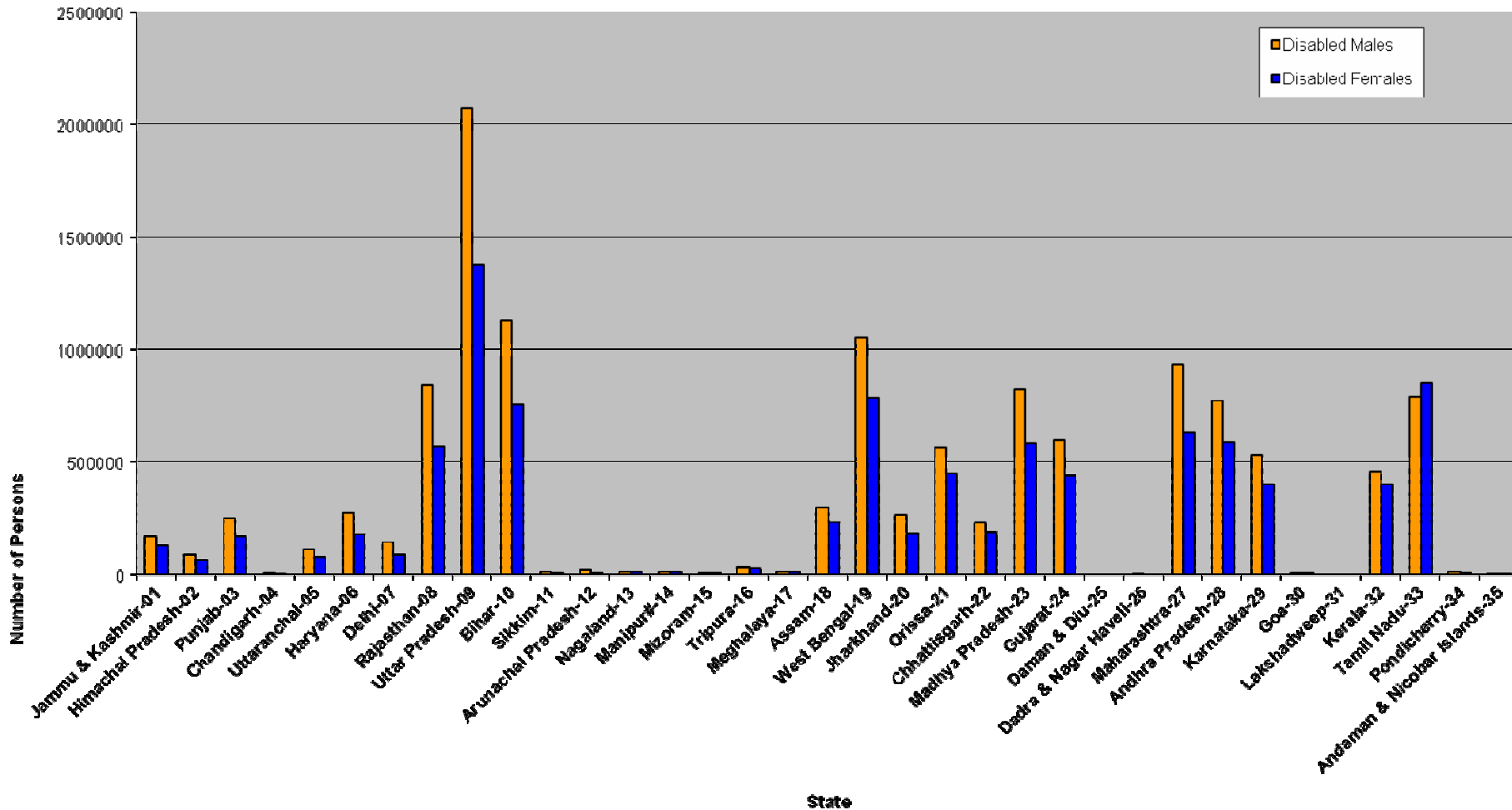
Rural and Urban Distribution of Different Disabilities by Gender



Disability Categories by Literacy & Gender in Rural & Urban Areas



Statewide Distribution of Disabled Males and Females



Building Accessibility

Urban

Rural

New Market, Kolkata



Typical Side Street in Nizamuddin Area, Delhi

source: www.time.com/.../journey/photoessays/india8.html



Gate Way to Taj Mahal, 2006



A Makeshift Ramp, Taj Mahal's Entry way, 2006



Makra Kali Bari, Bhutan-India Border, 2005



Sabarmati Gandhi Ashram

www.thesecondlayer.com/.../west/gallerywest.html



School Entrance in Almora, Himachal Pradesh

source: paularodrigo.mydynip.net/.../subway1



Computers on the wall outside a village school: Himachal Pradesh

paularodrigo.mydynip.net/.../subway1



Safety: Design of Footpaths/ Side Walks, Roadways

Urban

Rural

Crossing the Road on Marine Drive, Mumbai

source:paularodrigo.mydynip.net/.../ subway1



Typical Street Pavement, Kolkata

source: www.siprep.org/christian_service/IndiaJournal.htm



Suburbs of Delhi, 2006



Street in Pathanamthitta

source:www.ghastlycomic.com/india2005/india-69.htm



National Highway 11, Bharatpur, 2006



People Crossing a River in a Rural Area





Village of Khoplung, Himalyan Foothills



Phunsoling, Gateway to Bhutan from India



The State of Accessible Transportation

Urban

Rural

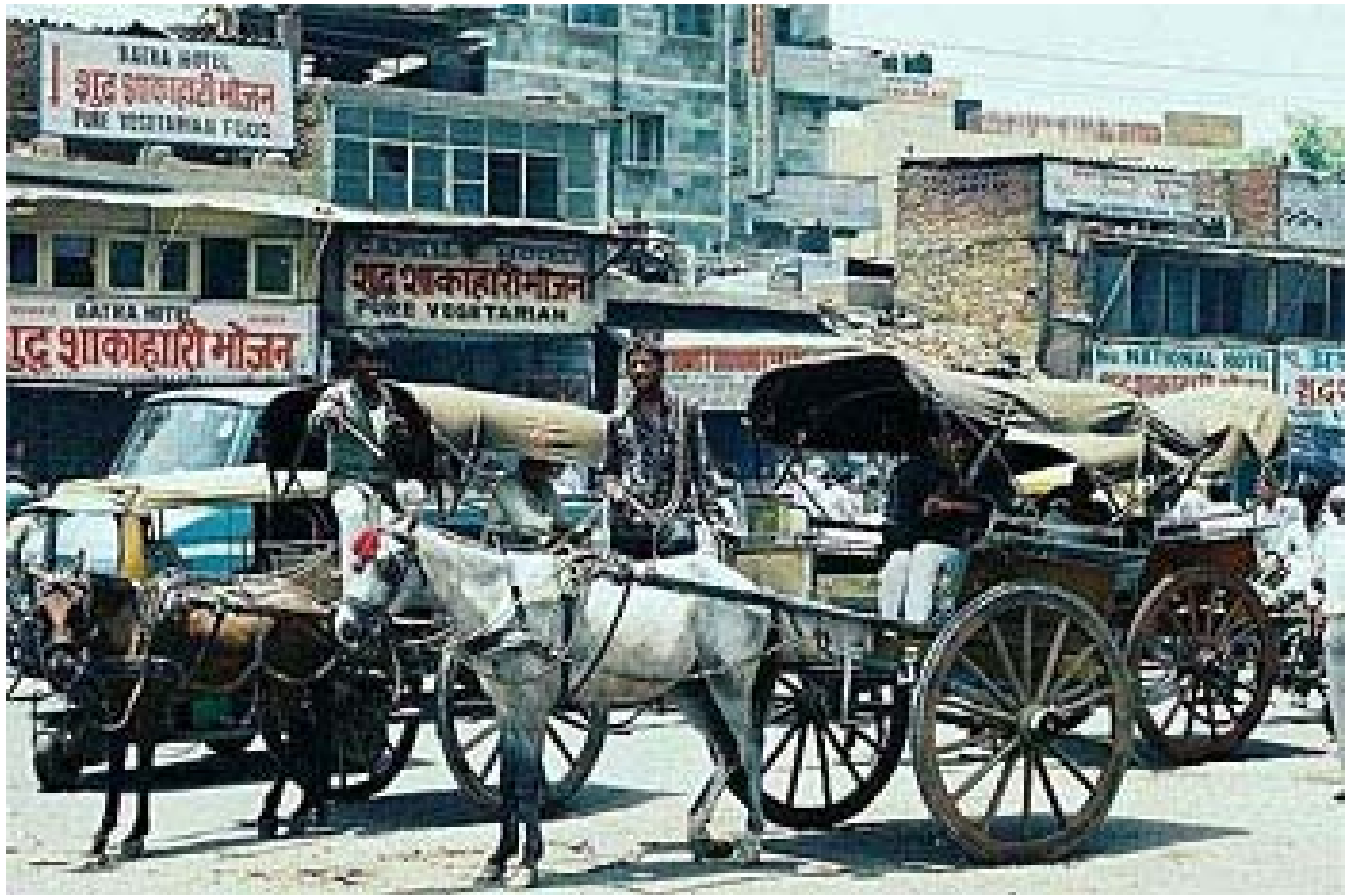
Commuter Trains in Mumbai

source:www.virtualltourist.com/travel/Asia/India/TravelGuide-India.html



Tonga in Old Delhi

source: www.electrictedge.com/.../images/tonga.jpg



A Scooter Rider Carrying Clothes



Entrance to the Metro Rail, Kolkata (2003)



Tram



Private Bus, Kolkata



Scooter/ Autorickshaw



Khurda Road Railway Station, near Kolkata

source:www.trekearth.com/.../Asia/India/East/page4.htm



Cycle Rickshaw

source: [international.sdstate.edu/.../ photo_gallery1.htm](http://international.sdstate.edu/.../photo_gallery1.htm)



Ferry Across the Hoogly River, Howrah

source: www.trekearth.com/.../Asia/India/East/page4.htm



Transport in the Rural Areas



Progress Towards Accessibility and Inclusion

Accessible Toilet in Delhi Hat, 2006



Ramp onto Diwan-I-Khas, City Palace, Jaipur, 2006



Curb Cut Near Jantar Mantar, New Delhi, 2006



New Low Floor Bus Designed for Increased Accessibility, 2006



The New Delhi Metro, 2006



Summary & Conclusions

Inaccessible and Exclusionary Environment

- Lack of accessible entrances/ exits to/ from municipal / public buildings, and homes.
- Apartment buildings lack lifts if four storey or less; homes in rural areas lack smooth surface for mobility within a home to complete daily chores; lack of access even to public schools.
- Disabled Women in rural areas most adversely affected and most likely to be home bound, immobile, and illiterate, and dependent on other members of the household.
- Lack of accessible public transportation in almost all areas, except for major metropolitan areas.

Solutions

- Design new roads and highways to accommodate accessibility & safety for all
- Design traffic signals and street/ road crossings which are safe, visible, and accessible
- Re-design and resurface footpaths (sidewalks) to allow safe passage for persons with all type of disabilities for both cities and villages
- Design / retrofit accessible entrances to public buildings and promote retrofitting of entryways into private homes especially in rural areas.

Continued.....

- Design low level mobility devices for use rural women with mobility impairment due to their critical role within the household.
- Design or retrofit all type of vehicles both motorized and non motorized to make them accessible.
- Develop & use universal signs for easy comprehension for even the illiterate person

Legislative/ Implementation Strategies to Increase Accessibility and Inclusion

- Phase in enforcement of the Persons with Disabilities Act of 1995 at all levels
- Change urban pavement culture to allow more space for accessible space for pedestrians
- Provide financial incentives for implementing increased accessibility and inclusion especially of women in rural areas
- Educate everyone on the use of universal signs traffic and road signs.

Continued.....

- Phase in retrofitting of all public buildings, schools etc.
- Enforce fines and penalties to State and local governments until changes are made
- Create a monitoring board at the national level
- Duplicate such a monitoring board in each state
- Mandate advisory board made up of citizens at local levels (city, town, villages etc) to monitor and address local priorities