ACCESSIBLE TRANSPORT:
LESSONS FROM URBAN TRANSPORT PROJECTS IN EAST ASIA

Final Report
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This report on “Accessible Transport: Lessons from World Bank funded urban transport projects in East Asia” gives information on the accessibility situation for disabled persons and persons with special needs from 14 urban transport projects in China and Vietnam.

The information in the report is primarily based on a desk review of the 14 Project Appraisal Documents (PADs) and the Implementation Completion Reports (ICRs) for 6 urban transport projects which have already been implemented. In addition, five World Bank Task Team Leaders (TTLs), responsible for the project preparation stage of the reviewed projects, were interviewed for their comments, views and opinions regarding the planning and implementation of these projects. We are very grateful for their contributions and suggestions for future projects. Furthermore, we would like to thank the following persons, who provided us with useful information on the accessibility situation in China: (i) Mr. Shomik Mehndiratta, East Asia and Pacific Region of the World Bank; (ii) Professor Chen, China; and (iii) Ms. Winnie Wang, Junior Professional Associate (JPA) of the World Bank.
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1. Introduction

In 2006 the Convention on the Rights of Persons with Disabilities was adopted. The purpose of the Convention is to promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities, and to promote respect for their inherent dignity (Convention on the Rights of Persons with Disabilities, 2006, UN). Until today 147 countries and Regional Integration Organizations (GIO) have signed the Convention. 99 countries and GIOs have also ratified the convention. Both China and Vietnam signed the Convention in 2007 and China has also ratified it in 2008 (UN).

In Article 3 – General principles, in the Convention on the Rights of Persons with Disabilities a number of principles are stated; respect for inherent dignity, individual autonomy including the freedom to make one's own choices, and independence of persons; Non-discrimination; Full and effective participation and inclusion in society; Respect for difference and acceptance of persons with disabilities as part of human diversity and humanity; Equality of opportunity; Accessibility; Equality between men and women; Respect for the evolving capacities of children with disabilities and respect for the right of children with disabilities to preserve their identities.

In Article 20 - Personal mobility, it is stated “States Parties shall take effective measures to ensure personal mobility with the greatest possible independence for persons with disabilities, including by: Facilitating the personal mobility of persons with disabilities in the manner and at the time of their choice, and at affordable cost etc.

Also in UN Standards Rules on the Equalization of Opportunities for Persons with Disabilities from 1994 it is stated in rule 5 about accessibility “For persons with disabilities of any kind, States should (a) introduce programs of action to make the physical environment accessible; and (b) undertake measures to provide access to information and communication.” Furthermore, it is mentioned that “States should initiate measures to remove the obstacles to participation in the physical environment. Such measures should be to develop standards and guidelines and to consider enacting legislation to ensure accessibility to various areas in society, such as housing, buildings, public transport services and other means of transportation, streets and other outdoor environments.

These documents show that there must be a continuously work with improving the accessibility in our outdoor and traffic environment in all countries around the world. The question is not if, but how we can work with this issue in an efficient way. One thing is sure, also people involved in planning and constructing outdoor and traffic environments must take their responsibility if we should be able to reach the goal.

Available statistics from countries around the world show that persons with disabilities and special needs travel less than other people and think it is much more troublesome for them to travel or being out as pedestrians, than for others.

A number of studies show that engagement in normal daily activities is essential for people’s health and well-being. This includes being able to travel easily to and from different places.
Therefore it is important to provide public transport and to support private transport that can offer opportunities for all persons to travel, as well as to provide accessible pedestrian areas that all are able to use for all.

Many countries around the world are working with creating a more accessible transport system as well as an accessible environment for pedestrians. The last ten to fifteen years many countries have formulated national laws and policies on accessibility in outdoor environments. Many countries have also decided on special technical standards and guidelines for how to create an accessible outdoor environment as well as guidelines for how to serve and assist persons with disabilities or special needs. There is also an ISO standard under development covering accessibility and usability for building construction. The standard covers aspects like car parking, adequate maneuvering space, ramps, contrast and tactile surfaces, etc. (Building Construction - Accessibility and usability of the built environment, ISO/DIS 21542, Draft International Standard).

Even if developed countries have come further in their work with accessible traffic environments than developing countries, they are fighting with already existing infrastructure and environments and the high costs for reconstruction. Also these countries struggle with improving accessibility.

One advantage among developing countries is the possibility to create new infrastructure and traffic system. This provides a chance to plan and build accessible from the very beginning. For example creating an accessible pedestrian environment will not include a lot of additional costs if the design is included from the beginning.

1.1 The concept of accessibility

The concept of accessibility is used in two different ways, to describe the possibility to reach different destinations depending on efforts (such as for example cost, time, access to different modes of transport) and to create an environment which is accessible, i.e. possible to use, for persons with disabilities. The first interpretation of accessibility is often used on a more macro level and is of measured for all people and not only people with disabilities. The reasons for not having access can be due to too far distances, available modes of transport are too expensive or lack of modes of transport (or in some cases appropriate pedestrian facilities). In this report the main focus will be on accessibility for people with disabilities. This accessibility needs to be handling very precise and includes a lot of details in the design of the environment.

According to a well-used theory (Lawton, 1986), accessibility has its base in the relation between demands from the environment and the capacity of the individual. Individual physical or cognitive capacity has to correspond to the demands of the environment for a person to be able to use that specific environment, and then that environment is accessible for that person.
This means that restrictions on carrying out certain trips or movements can be either due to low individual capacity (a disability) or to large demands from the environment (big level differences, too steep ramps, no tactile guiding etc). Accessibility is reached when there is a correspondence between a person’s capacity and the demands of the environment. WHO also uses this framework for describing accessibility, using concepts like functioning and disabilities and other contextual factors.

It is important to remember that no person is handicapped by himself or herself. It is in the relation to a certain environment a person can become handicapped, i.e. restricted to carry out what is supposed to be carried out in that environment, e.g. crossing a street, using a bus etc.

If people confront an environment demanding more capacity than they possess, they cannot use that environment. There are two alternative ways to handle this. Either a person’s level of capacity can be increased, until it reaches the level that corresponds to the environment’s demands (through for example if this is possible), or the demands of the environment can be reduced (for example by providing an accessible ramp at level differences). Thus a person can be handicapped in one environment but not in another. All depends on how the environment is designed.

Although the theory starts with the relation between one single individual using one particular environment it can be applied on a societal level concerning groups of individuals with a certain disability (e.g., blind people or people using wheelchair) and general transport environments (such as pedestrian areas or vehicles, etc.). On societal level general guidelines and standards for accessibility can be developed.

1.2 Guidelines and standards for accessible environments

Many countries have guidelines and standards for creating accessible environment and transport systems. Often these guidelines and standards are not covering the whole system, but rather different parts like built environment, outdoor environment, different public transport system and vehicles used, service and information.

For example guidelines regarding outdoor environments often include measures for space and width for wheelchair users, appropriate non slippery firm surfaces, maximum gradients on ramps and curb stones, design of handrails, and visual and tactile markings for persons with impaired vision. In some countries’ appropriate designs for pedestrian crossings including light poles and guiding for visually impaired persons are included in ordinary street and road design documents. Some of the existing guidelines are the international ISO CD 21542 Building constructions – Accessibility and usability to the built environment, Americans with Disabilities Act (ADA), 28 CFR Part 36 Standards for Accessible Design from US and Swedish regulation HIN BFS 2003:19 and ALM BFS 2004:15.
In regulations for accessible buses for example measures for height of the entrance, kneeling function, door width, ramps or lifts, handles and button design and placement, seats for people with disabilities and special spaces with security belts for people travelling in wheelchairs, visually and audible information on board the vehicle. Examples of standards are Directive 2001/85/EC from the EU, The Public Service Vehicles Accessibility Regulations 2000 form UK and Americans with Disabilities Act (ADA) - Accessibility Guidelines for Transportation Vehicles – Part 1192 from US.

For further information on international examples see Appendix 8.

1.3 People with disabilities

When planning for people with disabilities in the transport sector there are different ways of defining who is a person with disabilities. Sometimes there are quite strict definitions using classifications of impairments, while sometimes a much wider definition is used also including people with different size (e.g. children, very tall people or very short people), people with short-time impairments, people who cannot understand the language, elderly people, pregnant women and people with prams and luggage. One concept that is sometimes used is “people with special needs”.

According to the Rights of Persons with Disabilities, persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others (Convention on the Rights of Persons with Disabilities, 2006, UN).

The World Health Organisation defines disability as an umbrella term, covering impairments, activity limitations and participation restrictions. Impairment is a problem in body function or structure; an activity limitation is a difficulty encountered by an individual in executing a task or action; while a participation restriction is a problem experienced by an individual in involvement in life situations (ICF, World Health Organisation, 2001).

1.4 Need for this project

The United Nations estimates that between 6 and 10% of the population in developing countries has a disability – some 400 million people worldwide. In developing countries, disabled people are more likely to be among the poorest people. Moreover, exclusion increases the costs associated with disability, further constraining disabled people from breaking out of poverty.

Improved access and mobility are important factors in reducing poverty and can facilitate the participation of people with disabilities in economic, social and political processes. Physical accessibility will also benefit people with limited mobility in the broader term, including elderly, children, and pregnant women.
Many countries have legislation requiring that these challenges should be addressed but effective enforcement and responses have generally been limited. Action to improve the situation is constrained by the serious lack of understanding on accessibility and mobility needs as well as by a lack of resources for implementation. Governments often find it difficult to allocate funding for this in the face of pressure to meet other priorities. The private sector may not have sufficient incentives to implement provisions for people with disabilities. In many cases, applying developed countries’ accessibility standards to deliver accessible transport systems may not be affordable for the provider or for the users in low-income countries, as most of them are too poor to pay the costs of such standards.

The World Bank’s role in promoting accessibility, particularly in the transport sector, has been limited. While some analytical work on the importance of promoting accessibility in the sector has been produced, there has been little implementation of accessibility measures within the context of Bank funded projects and the work that has taken place, particularly in the East Asia region, has not been fully evaluated.

1.5 The main goals of this study

The main goals of this study include the following:

- to review and assess accessibility features of fourteen recent urban transport projects in China and Vietnam, which have been prepared for the East Asia Region of the World Bank;

- to highlight best practice on national laws, policies, technical innovations, services provided and potential correlations with improved welfare of transport users on these projects, which may be applicable on Bank financed projects in other countries;

- to make recommendations in order to improve accessibility features in other urban transport projects of the region and elsewhere financed by the Bank.

1.6 Tasks included in the project

The main task in this project was to analysis how the issue of accessibility have been addressed in World Bank funded urban transport projects in East Asia and to suggest how the World Bank can promote and support accessibility in future Bank funded projects.

The defined subtasks in the project were:

- Review of World Bank project documents regarding how the accessibility issues were addressed;
- Making interviews with Team Task Leaders from the World Bank;
- Assessing the projects at each site regarding accessibility; process and outcomes;
- Highlight best practice from the projects;
• Make recommendations for the World Bank about how to ensure that accessibility issues are addressed in future funded projects.

The internal documents to be reviewed were the Project Appraisal Document (PAD) for each of the projects included in the study, and the Implementation Completion Reports (ICR) for the six completed projects. A checklist was prepared for the review these documents in order to check for how accessibility has been covered through the different stages of the project process (See Appendix 1). The checklist included the following aspects:

**Planning phase**
- Needs from persons with disability mentioned
- Needs from persons with disability included specifically in the project
- Meetings and co-operation with groups of people with disabilities
- Use of national or regional documents about the rights of persons with disabilities
- Reviewing of the project proposal from accessibility aspects

**Implementation phase**
- Cooperation with stakeholders concerning the accessibility issue
- Use of national or regional documents concerning accessibility (declarations/bills about rights of persons with disabilities, design manuals or guidelines, procurement standards etc)
- Training programs regarding accessibility

**Outcomes from the project**
- Benefits for persons with disabilities or other groups with special needs
- Best practice

Interviews were made with the six Team Task Leaders (TTL) from the World Bank, who have been working with the relevant projects. The interviews were carried out through telephone or personal meeting and followed a structured question guide which is found in Appendix 2. Four different areas were covered in the interview, (i) inclusion of requirements for persons with disabilities in the project, (ii) project design, (iii) the World Bank process regarding accessibility issues, and (iv) personal information. The interview lasted between half an hour and one and an half hour.

Field studies were planned to be carried out for each project to get information about how the projects were proceeding at site. For this task a number of question guides were prepared for interviews with different people such as;

- the Team Leader of the supervision consultant;
- a representative of the government’s Project Management Unit (PMU);
- representatives of organization representing the people with disabilities;
- a responsible person at the concerned Public Transport Authority;

Other parts of the field study included assessments of the pedestrian environment and the public transport system (when applicable), gathering information on laws, regulations and design standards for accessibility for various parts of the environment and gathering facts
from surveys on people with disabilities and their needs in the transport system in the concerned countries.

The most important outcome from this field-review would be the information about “best practice” or good examples to be highlighted. The other outcome, from this part, would be more information about the processing of the projects and how they were developed compared to what is written in the early planning documentation. Assessments of whether the projects included the issue of accessibility during implementation and assessments of the infrastructure would then be possible.

1.7 World Bank projects included in the study

Fourteen World Bank funded projects are included in this review. They are all projects in the East Asia Region of the World Bank. Twelve of the projects are in China and two in Vietnam. The Project Appraisal Documents for these projects were dated between May 1998 and May 2010. Six of the projects are completed, while the other ones are ongoing. Three of the projects were approved 2010 and these are just in the beginning of implementation and construction.

The loan amount for the projects varies from $43 million to $218 million. Only for one project the loan amount was under $100 million. For most of the projects the loan amount was $100 or $150.

Main focus of the projects was construction of road infrastructure (e.g. major ring roads and other major highways), traffic management schemes, and improvements of public transport facilities (e.g. bus priority schemes, Bus Rapid Transit and improvements of terminals). Most of the projects also included smaller components for institutional development, improvement of non-motorized traffic (pedestrians and bicycles) and traffic safety in urban areas. This implies that all projects also included improved facilities for pedestrians in one way or another.

In nine projects there was a small component of public transport, but the main component was improvement of road infrastructure. In four of the projects improvements of the public transport facilities was one of the main components using between 20% and 50% of the project cost.

The reviewed projects are the following:

1. Guangzhou City Center Transportation Project (China);
2. Urban Transport Improvement Project (Vietnam);
3. Liaoning Urban Transport Project (China);
4. Urumqi Urban Transport Project (China);
5. Shijiazhuang Urban Transport Project (China);
6. Wuhan Urban Transport Project (China);
7. Liaoning Medium Cities Transport Project (China);
8. Hanoi Urban Transport Development Project (Vietnam);
9. Guiyang Transport Project (China);
10. Xian Sustainable Urban Transport Project (China);
11. Wuhan Second Urban Transport Project (China);
12. Anhui Medium Cities Urban Transport Project (China);
13. Taiyuan Urban Transport Project (China); and

The reason for why these projects are included is the interest from the transport sector of the East Asia and the Pacific Region of the World Bank to assess their own work regarding accessibility and there has not been any prior evaluation carried out regarding accessibility issues for these projects. In this region of the World Bank, relatively many urban transport projects have been carried out compared to other regions of the Bank. All approved urban transport or development projects which had good project documentation from this region from 1998 are included.

Below is a description of each project regarding the objectives and included components. In Appendix 1 and Technical Working Paper no. 1 there are more general facts and details about the projects.

Project No. 1: Guangzhou City Center Transport Project, China

The Project Development Objective (PDO) was to improve the accessibility of the City Center of Guangzhou by providing the efficient use of the urban transport system in an environmentally sustainable way. The main project component was the construction of an inner ring road (about 86% of the total cost). Other project components included the following: (i) traffic management and road safety (6% of project cost); (ii) public transport improvement measures (4% of project cost); (iii) motor vehicle emission control measures (1% of project cost); (iv) road maintenance activities (1% of project cost) and (v) institutional development component (2% of project cost). The date of the Project Appraisal Document (PAD) was on May 4, 1998. The project is completed.

Project No. 2: Urban Transport Improvement Project, Vietnam

The project’s overall objective was to increase operational efficiency and safety on selected corridors and in the central areas of Hanoi and Ho Chi Minh City, by the following: (i) improving traffic flows by implementation of a package of traffic engineering and management measures which included re-design junctions, provide new traffic signals and controls, segregate two-and four-wheeled traffic, and improve facilities for pedestrians; and (ii) strengthening the Transport and Urban Public Works Services and Traffic Police Departments in Hanoi and Ho Chi Minh City in areas of traffic management and enforcement with training and necessary equipment. Project components included improvement measures for the traffic system (about 85% of project cost) and institutional development component (about 15% of project cost). The date of the PAD was on June 17, 1998. The project is completed.
Project No. 3: Liaoning Urban Transport Project, China

The PDO were to improve the urban transport system in 3 cities (Shenyang, Fushun and Anshan) so as to facilitate economic and social development within these project cities. A sub-objective was to improve the operational efficiency and safety of the road system. The main project component was spent on road infrastructure (about 76% of project cost), and the other project components were the following: traffic management (about 8% of project cost); road maintenance (about 8% of project cost); public transport (about 7% of project cost) and institutional development (about 1% of project cost). The date of the PAD was on February 25, 1999. The project is completed.

Project No. 4: Urumqi Urban Transport Improvement Project, China

The PDO was to foster a multi-modal urban transport system which should be planned, designed and used for the safe, efficient and healthy movement of people and goods. The main project component was road infrastructure construction (about 88% of project cost); and the other project components were the following: traffic management and pedestrian facilities (about 5% of project cost); public transport (about 3% of project cost); environmental management (about 2% of project cost); and institutional development (about 2% of project cost). The date of the PAD was on November 27, 2000. The project is completed.

Project No. 5: Shijiazhuang Urban Transport Project, China

The PDO was to foster the development of an efficient and environmentally sustainable urban transport system in the City of Shijiazhuang while providing a wider set of travel choices for the users. The main project component was road infrastructure construction (about 76% of project cost), and the other project components were the following: (traffic management (about 11% of project cost); road maintenance (about 6% of project cost); public transport (about 4% of project cost); environmental management (about 1% of project cost); and institutional development (about 2% of project cost). The date of the PAD was on February 25, 2001. The project is completed.

Project No. 6: Wuhan Urban Transport Project, China

The PDO stated that the project would promote the development of an integrated, efficient, and sustainable transport system for the movement of people (especially the poorer sections of society) and goods in Wuhan. More specifically, the project aimed to support the following: (i) Investments in transport infrastructure and services to address the needs of the existing system – in particular, the issues related to capacity, safety and sustainability, and the mobility of users; (ii) Formulation of a transport strategy to guide investment decisions; and (iii) Reforms to improve performance of bus service delivery. The main project component was road infrastructure construction (about 80% of project cost), and other project components were the following: traffic management (about 6% of project cost); road maintenance (about 6% of project cost), environmental management (about 1% of project cost); and institutional development (about 1% of project cost). The date of the PAD was on February 12, 2004. The project is completed.

Project No. 7: Liaoning Medium Cities Transport Project, China

The PDO were to assist the project cities (Benxi, Fushun, Jinzhou, Liaoyang, Panjin and Dengta) in enhancing the following: (i) the performance and quality of their existing urban
transport infrastructure in terms of mobility, access, and safety; (ii) the efficiency and effectiveness of their urban public transport and road maintenance services; and (iii) the responsiveness of their urban transport systems to the needs of population without access to private motorized vehicles. The major project component was construction of the main road network (68% of project cost); improvement of secondary roads and road maintenance (about 23% of project cost); traffic management (about 5% of project cost); public transport (about 3% of project cost) and institutional development (about 1% of project cost). The date of the PAD was on February 12, 2004. The project is not yet completed.

Project No. 8: Hanoi Urban Transport Development Project, Vietnam

The main PDO of the project was to increase urban mobility in targeted areas in Hanoi by the following activities: (i) increasing the use of public transport in two existing corridors and one new corridor; and (ii) reducing travel times by all modes between the city center and the west and northwest sections of the city. The objectives of the Global Environment Facility (GEF) Trust Fund Grant project component were to promote a shift to more environmentally and sustainable transport modes and urban development plans, and to promote replication of these approaches in the country and the region. The global environment objective was to lower Hanoi’s transport related greenhouse gas emissions. The main project component was road infrastructure construction (about 64% of project cost); development of a new Bus Rapid Transit system (33% of project cost) and institutional development (about 3% of project cost). The date of the PAD was on May 17, 2007. The project is not yet completed.

Project No. 9: Guiyang Transport Project, China

The PDO is to increase the access and mobility of Guiyang’s Municipality transport users through priority infrastructure investments while establishing more sustainable mechanisms for rural road maintenance, as well as enhancing capacity for keeping municipal debts under control. The main project component is road infrastructure construction (about 51% of project cost); and the other project components include: rural transport improvements (48% of project cost) and institutional development (1% of project cost). The date of the PAD was on November 26, 2007. The project is not yet completed.

Project No. 10: Xian Sustainable Urban Transport Project, China

The PDO is to improve transport accessibility and mobility in Xian Municipality while protecting cultural heritage and reducing environmental impact of urban transport system. The main project component is road infrastructure construction (about 64%); and the other components are: public transport (about 19% of project cost); traffic management (about 11% of project cost); environmental management (about 5% of project cost) and institutional development (about 1% of project cost). The date of the PAD was on May 28, 2008. The project is not yet completed.

Project No. 11: Wuhan Second Urban Transport Project, China

The PDO was to assist the Municipality of Wuhan to enhance mobility for passenger trips within and to the central area of Wuhan in an environmentally sustainable, integrated and safe manner. The project involved the following: (i) priority interventions in public transport (including traffic management), (ii) road safety improvements, (iii) enhanced management of the tunnel and bridges connecting Wuhan’s three boroughs, (iv) road improvements, and (v) institutional development. The main project component was road infrastructure construction (about 86% of
project cost); and other project components were the following: public transport (about 9% of project cost); road safety (about 3% of project cost); travel demand management (about 1% of project cost) and institutional development (about 1% of project cost). The date of the PAD was on March 2, 2010. The project is not yet completed.

Project No. 12: Anhui Medium Cities Transport Project, China

The PDO was to improve mobility on selected main corridors in the Municipalities of Anqing, Huaibei, Luan and Wuhu in the Anhui Province in a safe and efficient manner. The main project component was road infrastructure construction (about 67% of project cost); and the other project components: local access and freight (about 27% of project cost); public transport (about 6% of project cost) and institutional development (about 1% of project cost). The date of the PAD was on April 14, 2010. The project is not yet completed.

Project No. 13: Taiyuan Urban Transport Project, China

The PDO was to improve mobility on selected transport corridors of the city center of Taiyuan Municipality in Shanxi Province in a safe and efficient manner. The main project component was road infrastructure construction (about 69% of project cost), and the other project components were: public transport (about 27% of project cost); traffic safety and management (about 8% of project cost) and institutional development (about 1% of project cost). The date of the PAD was on May 13, 2010. The project is not yet completed.

Project No. 14: Fuzhou Nantai Island Peri-urban Development Project, China

The PDO was to support sustainable peri-urban development in Fuzhou with the provision of strategic transport infrastructure and by strengthening the city’s decision support system on land development and management. The main project component was road infrastructure construction (about 91% of project cost); and other project components were public transport (about 8% of project cost) and institutional development (about 1% of project cost). The date of the PAD was on November 18, 2005. The project is not yet completed.
2. Review of World Bank funded projects

This chapter describes how accessibility has been included in the 14 projects from what is written in the Project Appraisal Documents (PADs). This is a desk review of official written documents and the actual work that has been done in the project might show another picture.

The chapter is divided into three parts describing how accessibility is addressed in the PADs in the following three phases: planning phase, implementation phase and after completion. Different areas such as included accessibility aspects, participation from people with disabilities and special needs, use of guidelines, reviewers, cooperation with stakeholders and training programs are covered. In each section there is a summarized description of all projects and then a short description for each project.

2.1 Planning phase

2.1.1 Accessibility aspects included in the World Bank documents

The review of the accessibility aspects included in the projects shows that accessibility is not a main focus and is not specifically included in most of the projects. All projects except from one have improved facilities for pedestrians included, but this is on a general basis and not with focus on accessibility for persons with disabilities or special needs. What is often included are improvements of the sidewalks and pedestrian crossings, and in some projects footbridges and tunnels. In some of the projects, the safety aspect of the pedestrians is clearly addressed and in two projects (Wuhan and Hanoi) accessibility measures are included, e.g., removal of obstacles from the sidewalks, dropped curbs, ramps, and tactile markings.

It can be expected that the general improvements for pedestrians as part of the projects, will also improve the situation for persons with disabilities or special needs, since for example, it will be easier and safer to walk along a road or crossing a road, but this is not quite the same as creating a fully accessible environment.

The same situation can be expected for public transport, an improved public transport system should benefit people with disabilities as well as all other travelers. However, some impairments require special design in order for a person to use the system. These special designs, (e.g., low floor buses, ramps, audible and visible information, accessible bus stops, etc.) have not been specifically included apart from in one project (The Hanoi urban transport project).

The following paragraphs show summaries of the accessibility aspects in each project.

Project No. 1 Guangzhou City Center Transport Project

Provision of sidewalks, footpaths and about 30 pedestrian crossings were included. Very small amount of financial resources out of the total project cost were allocated for improving the pedestrian environment. There was nothing mentioned about accessibility as such in the document.
Project No. 2 Vietnam Urban Transport Improvement Project

Small amount of financial resources out of the total project cost were allocated for improving the pedestrian environment. The improvements of pedestrian facilities were on selected corridors and in the central areas of Hanoi and Ho Chi Min City (HCMC). The pedestrian components included provision of sidewalks and pedestrian crossings and there was no information about accessibility in the project documentation. One focus was to improve safety for pedestrians.

Project No. 3 Liaoning Urban Transport Project

There was no specific accessibility related component but the project included provision of sidewalks and pedestrian crossings in 3 cities in the Liaoning Province. Very small amount of financial resources out of the total project cost were allocated for improving the pedestrian environment.

Project No. 4 Urumqi Urban Transport Improvement Project

The project included many pedestrian facilities but mainly focusing on safety measures for pedestrians, e.g., junction improvements, provision of 18 pedestrian crossing facilities (16 overpasses and 2 underpasses), mid-block traffic signalized crossings, plus a number of at-grade pedestrian crossings to ensure pedestrian access and safety. There were no details concerning the designs of the various pedestrian safety facilities. The project also included improvements at 4 bus terminals and a railways station. There were no details about what these improvements would be and thus it is not possible to evaluate if these are constructed in a fully accessible way.

Project No. 5 Shijiazhuang Urban Transport Project

The project provided pedestrian system improvements, including new pedestrian bridges, junction improvements and sidewalk improvements. Removal of utility poles and other obstructions to clear the sidewalks, strengthening enforcement to reduce biking on the sidewalk and parking on the sidewalks were mentioned as parts of the traffic management and road safety component of the project.

Project No. 6 Wuhan Urban Transport Project

The project aimed to enhance mobility of pedestrians and non-motorized traffic by financing a network of pedestrian/non-motorized traffic routes. The project included a component for improvement of the pedestrian system, including 17 underpasses and pedestrian bridges, junction improvements, mid-block signalized pedestrian crossings at 63 locations, sidewalks improvements, removal of utility poles and other obstructions development of a pedestrian street. The project also included construction of 11 public transport interchanges and 12 bus terminals. The project also had a component for the planning of a Bus Rapid Transit (BRT) system but this component was later dropped from the project. Accessibility aspects were not discussed in the project documentation. One of the road network components was to create safe conditions for pedestrians.
Project No. 7 Liaoning Medium Cities Transport Project

The project aimed at enhancing pedestrian facilities and improving non-motorized traffic by financing improvements to pedestrian and non-motorized traffic facilities, including new sidewalks and pedestrian crossing facilities. There was no information about the design aspects of these pedestrian facilities in the documentation, but special efforts were made to ascertain the needs of vulnerable groups, such as the elderly, migrants, women and the mobility impaired persons.

Project No.8 Hanoi Urban Transport Development Project

The project focused on improving urban mobility in targeted areas in the city of Hanoi, and the project addressed both motorized vehicles and non-motorized traffic. The project aimed at enhancing pedestrian facilities and improving non-motorized traffic by provision of a network of pedestrian and non-motorized traffic routes, including new sidewalks and pedestrian crossing facilities with dropped curbs and accessible traffic signals. The project also supported the development of a Bus Rapid Transit System (BRT). The BRT system was designed to provide better accessibility for disabled persons. The project included provision of the following measures at the stations and interchanges: dropped curbs, ramps, tactile surface markings, Braille information maps. Co-operation with the Hanoi Disability Forum, the Hanoi Sports Association for the Disabled and the Vietnam Association for the Handicapped allowed for an enhanced understanding of concerns by the disabled persons and ensured that these concerns were addressed in the project design. Travel needs of the disadvantaged persons were mentioned.

Project No. 9 Guiyang Transport Project

The project included construction of 45 rural bus stations, which were fairly simple. There was no accessibility issue addressed in the project. General improvements of facilities for pedestrians were not included in the project.

Project No. 10 Xi’an Sustainable Urban Transport Project

The project aimed at increasing accessibility and mobility by bus, non-motorized vehicles and walking by making journeys by these modes quicker, easier, more pleasant and safe. The project focused both on motorized vehicles and non-motorized traffic. The project provided improved pedestrian facilities and measures for non-motorized traffic by provision of a network of pedestrian and bicycle routes, including new sidewalks and pedestrian crossing facilities, junction improvements, mid-block signalized pedestrian crossings, etc. The project also included construction of new passenger transport terminals. The project document provides some information on bus platforms, and the terminal buildings, which will include dining halls, repair shops and administration facilities. There is no information regarding accessibility aspects.
Project No.11 Wuhan Second Urban Transport Project

The project aimed at assisting the Municipality of Wuhan to enhance mobility for passengers within and to the central area of Wuhan in an environmentally sustainable, integrated and safe manner. The project included improvements of facilities for pedestrians and bicyclists in selected road corridors, junction improvements, mid-block signalized pedestrian crossings, sidewalk improvements. Improvements for the travelers were carried at bus stops and as well as construction of new public transport terminals.

Project No. 12 Anhui Medium Cities Transport Project

The project aims are to improve mobility on selected main corridors in the Municipalities of Anqing, Huaibei, Luan and Wuhu in the Anhui Province in a safe and efficient manner. The project focuses both on motorized vehicles and non-motorized traffic. The project will provide enhancement of facilities for pedestrian and non-motorized traffic by providing improvements of pedestrian and non-motorized traffic facilities, including new sidewalks and pedestrian crossings. Each project city is committed to ensure better public transport operations, enhanced safety and mobility for all road users, especially the vulnerable population.

Project No.13 Taiyuan Urban Transport Project

The project aimed at enhancing pedestrian facilities and improving non-motorized traffic by providing improvements to pedestrian and non-motorized traffic facilities, including new sidewalks and pedestrian crossing facilities. Three bus terminals will be constructed as part of the public transport component. Travel needs of the disadvantaged and vulnerable road users are mentioned in the project documents. Among other things needs for persons with physical disabilities was address under the project by providing new sidewalks and safe road crossings along the corridors.

Project No. 14 Fuzhou Nantai Urban Development Project

The project documentation did not include any accessibility component, but some measures to improve the pedestrian and non-motorized traffic environment along of the major ring roads. The public transport component included construction of a public transport interchange. However, there is no reference to accessibility aspects in the project documentation.

2.1.2 Participation of people with disabilities

The review shows that in most of the projects, there has not been any participation of people with disabilities or special needs or representatives for these groups. As required by the Bank all projects included public participation meetings regarding environmental impact assessment and resettlement planning. Eight of the projects did not include any other stakeholder consultations. The other six projects included stakeholder consultations regarding other issues, such as project design and requirements from special groups.

In the Urumqi project some discussions with different stakeholders took place on the project design, but not on the issue of accessibility. In the Liaoning project there were some public input from groups of vulnerable people, like elderly and the mobility impaired. In the Xian project there were meetings held with among others elderly and persons with disabilities and the project tried to catch barriers and needs for these different groups. In the Anhui there were
lots of public meetings mentioned, but the focus was mainly on environmental issues and resettlement planning. In the Taiyuan project there was extensive public input to the project design in a wider sense and also targeting special interest groups. Also in the Hanoi project there were meetings held with organizations representing people with disabilities such as Vietnam Association for the Handicapped.

The reviewed urban transport projects in China and Vietnam showed that there are examples of public participation regarding other issues than environment and resettlement. It seems like there has been an improved situation regarding public participation concerning the project design since 2007. Among the later projects, there are now more urban transport projects, which include this kind of public participation compared with the earlier projects.

No written documents from groups of people with disabilities (e.g. proposals from interest groups, results from surveys, etc.) were provided in the planning phase of the projects according to the information in the PADs.

The following paragraphs describe the participation of people with disabilities in each project.

**Project No. 1 Guangzhou City Center Transport Project**
No meetings or documentation.

**Project No. 2 Vietnam Urban Transport Improvement Project**
No meetings or documentation.

**Project No. 3 Liaoning Urban Transport Project**
No meetings or documentation.

**Project No. 4 Urumqi Urban Transport Improvement Project**
Stakeholder meetings were held with community leaders, religious groups and private bus operators to obtain their views on the project design, impacts and possible mitigation measures, but no meetings held on accessibility or with people with disabilities.

**Project No. 5 Shijiazhuang Urban Transport Project**
No meetings or documentation.

**Project No. 6 Wuhan Urban Transport Project**
No meetings or documentation.

**Project No. 7 Liaoning Medium Cities Transport Project**
This project involved a lot of public participation activities during the planning and design phases as well as during the project implementation period. Focus groups, open meetings and questionnaires were used to obtain public input to the project design and implementation. Special efforts were made to ascertain the needs of vulnerable groups, such as the elderly, migrants, women and the mobility impaired persons.
Project No. 8 Hanoi Urban Transport Development Project

Focus group meetings have been held with Vietnam Association of the Handicapped, the Hanoi Sports Association for the Disabled and Hanoi Disability Forum, and suggestions where included in the public participation strategy and the Stakeholder Participation Plan (SPP). In the project documentation, it was found that the project involved consultation and collaboration with NGOs and other civil society organizations.

The preparation of a public participation strategy was an important element of the BRT component and the project contained a SPP. This plan included the following: (i) consulting the public on the projects components and seeking their input primarily through “town hall” meetings, (ii) generating public awareness, involvement and transforming that into sustained political support for the BRT, and (iii) general interest in the BRT.

Project No. 9 Guiyang Transport Project

No meetings or documentation.

Project No. 10 Xi’an Sustainable Urban Transport Project

The project incorporated a public participation process as a strategic input to the project preparation process to enhance the project design. Special efforts were made to ascertain the needs of vulnerable groups, such as the elderly, migrants from rural areas and persons with disabilities. The participants in the meetings reflect representation from various citizen groups in Xi’an. Special efforts were made to ensure senior, the lower income population, and other urban vulnerable groups are well represented.

The main findings from the public participation process regarding the vulnerable groups, e.g., the disabled persons and the elderly were identification of major barriers to travel and major demands for improvements. The barriers for persons with disabilities were poor road conditions and safety concerns with mixed traffic, lack of crossing facilities and lack of sensitivity of public transport service to the needs of the disabled persons and elderly people. The needs were improved road and sidewalk conditions, provision of more road infrastructure facilities for persons with disabilities and improved traffic management at junctions.

It is planned that during the implementation stage, public consultation will include annual monitoring of how well the agreed design solutions to the publicly raised issues are incorporated during project implementation.

Project No. 11 Wuhan Second Urban Transport Project

No meetings or documentation.

Project No. 12 Anhui Medium Cities Transport Project

The project involved a lot of public participation during the planning and design phases as well as during project implementation period. The following activities were arranged: focus groups, open meetings, questionnaire to obtain public input to the project design and the
implementation phase. However, all the public participation discussions focused mainly on issues concerning the Environmental Management Plan (EMP) and the Resettlement Action Plan (RAP) for the project affected persons. Each project city is committed to ensure better public transport operations, enhanced safety and mobility for all road users, especially the vulnerable population.

**Project No.13 Taiyuan Urban Transport Project**

A key feature of the project design has been the use of an extensive public participation process to complement technical analysis. This was complemented by an independently supervised three stage effort consisting of focus groups, open meetings, and questionnaires which sought to obtain public input into the project design and target the needs of vulnerable groups such as the elderly, migrant workers, mobility impaired and the poor.

**Project No. 14 Fuzhou Nantai Urban Development Project**

No meetings or documentation.

2.1.3 Inclusion of national regulations or guidelines

Many countries now have some kind of declaration, regulations or other documents regarding the rights of people with disabilities. More and more countries are also preparing different types of planning and design standards and guidelines to improve the accessibility in the transportation sector. According to the information in the PADs there were no national or regional documents about the rights of persons with disabilities or regulations and guidelines mentioned in the project planning documentations either in China or Vietnam.

2.1.4 Project reviewers

All the urban transport projects reviewed were prepared by the Bank’s project teams with approximately 10 to 20 specialists. However, there was no accessibility specialist included in these project preparation teams. In most of the teams, there were experienced urban transport specialists, who had some knowledge and experience about accessibility in the transport sector. Since the projects did not focus on accessibility issues, the specialists might not have had any opportunity to promote a stronger emphasis regarding accessibility for persons with disabilities and special needs. It seems like there has been no person with responsibility for the accessibility aspects of the projects similarly to what is required for environmental impact assessments and resettlement planning in all projects.

The following paragraphs show the review situation for each project.

**Project No. 1 Guangzhou City Center Transport Project**

The Task Team Leader (TTL) has professional experience on accessibility issues related to public transport. No other accessibility specialist has been involved in the project preparation.

**Project No. 2 Vietnam Urban Transport Improvement Project**

A very experienced urban transportation specialist from the World Bank with accessibility experience was one of the peer reviewers for the project.
Project No. 3 Liaoning Urban Transport Project

The TTL has professional experience on accessibility issues related to public transport. No other accessibility specialist has been involved in the project preparation.

Project No. 4 Urumqi Urban Transport Improvement Project

A senior World Bank urban transport specialist with experience with accessibility experience from the Latin America Region was part of the project preparation team. The TTL's professional experience prior to joining the World Bank included accessibility issues related to public transport.

Project No. 5 Shijiazhuang Urban Transport Project

An international transportation specialist was included in the World Bank project preparation team. He has some experience with accessibility issues from working on other World Bank funded urban transport projects in China.

Project No. 6 Wuhan Urban Transport Project

A senior urban transport specialist from the World Bank project team with experience with accessibility issues from working on other World Bank funded urban transport projects in China was part of the project preparation team.

Project No. 7 Liaoning Medium Cities Transport Project

An international transportation specialist was included in the World Bank project preparation team. He has some experience with accessibility issues from working on other World Bank funded urban transport projects in China.

Project No. 8 Hanoi Urban Transport Development Project

A senior World Bank urban transport specialist with experience with accessibility experience from the Latin America Region was part of the project preparation team and an international transportation specialist consultant was also a member of the World Bank project preparation team. These persons have some experience with accessibility issues from working on other World Bank funded urban transport projects in China.

Project No. 9 Guiyang Transport Project

An international transportation specialist, who has some experience with accessibility issues from working on other World Bank funded urban transport projects in China, was a member of the World Bank project preparation team.

Project No. 10 Xi’an Sustainable Urban Transport Project

A senior World Bank urban transport specialist with experience with international accessibility experience was part of the project preparation team.
Two senior urban transport specialists from the World Bank have been peer reviewers, who have experience regarding accessibility issues from working on other World Bank funded urban transport projects in Latin America and other Regions of the Bank.

Project No. 12 Anhui Medium Cities Transport Project

The project team did not seek advice from any known World Bank urban transport specialists with knowledge and experience regarding accessibility issues. The TTL had knowledge of accessibility issues.

Project No. 13 Taiyuan Urban Transport Project

The project team did not seek advice from any known World Bank urban transport specialists with knowledge and experience regarding accessibility issues. The TTL had knowledge of accessibility issues.

Project No. 14 Fuzhou Nantai Urban Development Project

The project team did not seek advice from any known World Bank urban transport specialists with knowledge and experience regarding accessibility issues. The TTL had knowledge of accessibility issues.

2.2 Implementation phase

2.2.1 Cooperation with stakeholders

For all projects, consultations with NGOs and civil society were held regarding resettlement and rehabilitation measures planned under the Resettlement Action Plan (RAP) as the Bank require. The consultations regarding other issues were limited in the projects, except from the projects in Vietnam, Liaoning (medium cities), Hanoi, Xian and Anhui.

The Hanoi project was the one that clearly showed that also during the implementation phase the project authority was going to cooperate with the Vietnam Association of Handicapped and Hanoi Disability Forum. In the Liaoning and the Anhui projects there were public surveys planned to be carried out during the implementation phase in order to determine the impacts and benefits of the projects. In the Xian and in the Vietnam projects it was mentioned that consultations with stakeholders would continue during the implementation phase, but it was not stated which stakeholders would be involved or what topic should addressed. Overall there is not much about stakeholder involvement in the implementation phase regarding accessibility and travelers needs.

The following paragraphs show the cooperation with stakeholders in each project.

Project No. 1 Guangzhou City Center Transport Project

No cooperation with stakeholders was mentioned for the implementation phase.
Project No. 2 Vietnam Urban Transport Improvement Project

According to the PAD, it was not planned to have any formal consultations with the road users in Hanoi and Ho Chi Min City during the implementation phase. The project documentation mentioned that consultations with local stakeholders would be an integral element of the project implementation and monitoring. However, it was not mentioned who these stakeholders would be or which organizations would be consulted in the project implementation phase.

Project No. 3 Liaoning Urban Transport Project

No cooperation with stakeholders was mentioned for the implementation phase.

Project No. 4 Urumqi Urban Transport Improvement Project

No cooperation with stakeholders was mentioned for the implementation phase.

Project No. 5 Shijiazhuang Urban Transport Project

No cooperation with stakeholders was mentioned for the implementation phase.

Project No. 6 Wuhan Urban Transport Project

No cooperation with stakeholders was mentioned for the implementation phase.

Project No. 7 Liaoning Medium Cities Transport Project

It was mentioned that the public consultations with stakeholders would continue during the implementation period. Each project city should conduct public surveys to determine the impacts and benefits of the project during the implementation period. It is stated that individual interviews with a selection of mobility impaired persons would be carried out.

Project No. 8 Hanoi Urban Transport Development Project

It was expected that the public consultations with the stakeholders and, in particular, the Vietnam Association for the Handicapped, the Hanoi Disability Forum, would continue during the implementation period. The Government agency (Transport and Urban Public Works Services Department) should facilitate meetings to discuss accessibility issues with these organizations during the project implementation period.

Project No. 9 Guiyang Transport Project

No cooperation with stakeholders was mentioned for the implementation phase.

Project No. 10 Xi’an Sustainable Urban Transport Project

It was mentioned that the public consultations with the stakeholders would continue during the implementation period.
Project No. 11 Wuhan Second Urban Transport Project

No cooperation with stakeholders was mentioned for the implementation phase.

Project No. 12 Anhui Medium Cities Transport Project

It was mentioned that the public consultations with the stakeholders would continue during the implementation period. Each project city should conduct public surveys to determine the impacts and benefits of the project during the implementation period, including the vulnerable groups. Each municipality is committed to ensure better public transport operations and enhanced safety and mobility for all road users on the project corridors, especially the vulnerable population (e.g., elderly people, disabled persons and women).

Project No. 13 Taiyuan Urban Transport Project

No cooperation with stakeholders was mentioned for the implementation phase.

Project No. 14 Fuzhou Nantai Urban Development Project

No cooperation with stakeholders was mentioned for the implementation phase.

2.2.2 Use of guidelines and standards

None of the projects included any information about national or regional accessibility documentation to be followed during the implementation phase. The following types of documents could have been considered during the project preparation phase:

- declarations/bills about rights of persons with disabilities
- rules and regulations about accessibility
- design guidelines for accessible pedestrian environment
- design guidelines for accessible stops/stations and terminals regarding accessibility
- design guidelines for accessible information systems
- procurement guidelines for accessible public transport vehicles

These types of documents have become more and more common in different countries during the last decade, but were not so common earlier and are even less common in developing countries. Therefore it is not so surprising that these documents have not been frequently included or used in the project preparation. In both China and Vietnam there are nowadays some important documents regulating the rights of persons with disabilities and accessibility in the built environments, and for the latest projects it could be expected that these documents were referred to and used.

The World Bank has facilitated the production of two guidelines for Bus Rapid Transit: (i) Bus Rapid Transit Accessible Guidelines in 2007 and (ii) Transit Access Training Toolkit in 2009. These documents are not referred in the project documentation for the later projects.

2.2.3 Training programs for transport agency staff

Training programs in accessibility could be prepared for government officials, project management unit staff, public transport vehicle drivers, and staff at terminals including...
information and tickets centers. However, it was found in the reviewed projects that no accessibility training programs have been considered.

2.3 Outcomes from the project

The presented outcome from the projects in this section is based on information in the PADs and predicted from what is described about the project. What the actual outcome is from the projects or will be might be different from what is presented in this chapter.

The Hanoi project and the Xian project might achieve the most accessible outcome since there has been a clearer cooperation with originations representing people with disabilities or discussion about barriers and needs among elderly and disabled persons. Also in some of the other Chinese projects (Liaoning medium cities and Anhui) there has been a focus on public consultations with vulnerable groups on their travelers needs.

For the other projects it can be assumed that the overall situation for pedestrians or public transport travelers will be improved and project outcome might also have a positive effect on people with disabilities and special needs but accessibility was not dealt with in these projects.

The following paragraphs show summaries of the outcome related to accessibility in each project.

Project No. 1 Guangzhou City Center Transport Project

The project might improve the situation for physical and visual impaired persons, due to provision of improved pedestrian facilities. However, the project does not have any focus on providing an accessible pedestrian environment.

Project No. 2 Vietnam Urban Transport Improvement Project

The project might improve the situation for physical and visual impaired persons, due to provision of improved pedestrian facilities. However, the project does not have any focus on providing an accessible pedestrian environment.

Project No. 3 Liaoning Urban Transport Project

The project might improve the situation for physical and visual impaired persons, due to provision of improved pedestrian facilities. However, the project does not have any focus on providing an accessible pedestrian environment.

Project No. 4 Urumqi Urban Transport Improvement Project

The project considers the impacts on minority groups, women and poor people. The project might improve the accessibility situation for physical and visual impaired persons due to the fact that the following pedestrian facilities were provided: sidewalks, footbridges/subways and traffic signal controlled pedestrian crossings. The project does not have any focus on providing an accessible pedestrian environment but has some focus on vulnerable groups.
Project No. 5 Shijiazhuang Urban Transport Project

The project might improve the accessibility situation for physical and visual impaired persons due to the fact that there was a pedestrian improvement component, which included construction of sidewalks, pedestrian footbridges and junction improvements with traffic signals. The construction of the new bus terminals may improve the accessibility within these locations. However, there is no indication in the PAD that accessibility measures will be included.

Project No.6 Wuhan Urban Transport Project

The project considered the impacts on different groups. Improvement of facilities for pedestrians and new public transport interchanges and bus terminals might improve the accessibility situation for all people. However, the project does not have any focus on providing an accessible pedestrian environment or public transport system.

Project No. 7 Liaoning Medium Cities Transport Project

Special efforts were made to ascertain the needs of the vulnerable persons and the project tried to address accessibility problems for physical and visual impaired persons. The project included improvement of sidewalks and provision of new pedestrian crossings. The improvements to the public transport interchanges and bus terminals should provide better access for the public and may improve the accessibility within these public transport facilities. However, nothing is stated in the project documentation.

Project No. 8 Hanoi Urban Transport Development Project

The physically and visually impaired persons should benefit from provision of new sidewalks, dropped curbs at junctions, improved pedestrian crossings and improved facilities within the Bus Rapid Transit (BRT) stations, public transport interchanges/terminals and bus stops, since extensive consultations have taken place with organizations representing people with disabilities.

Project No. 9 Guiyang Transport Project

The project might improve the situation for physical and visual impaired persons, due to the construction of 45 new rural bus stations. However, the project does not have any focus on providing an accessible environment.

Project No. 10 Xi’an Sustainable Urban Transport Project

Special efforts were made to ascertain the needs of the vulnerable persons and the project addressed accessibility problems for elderly people and persons with disabilities. The project included improvement of sidewalks, provision of pedestrian crossings and street lighting. The improvements to the public transport interchanges and bus terminals should provide better access for the public and improve the accessibility within these public transport facilities.
Project No.11 Wuhan Second Urban Transport Project

Improved sidewalks and new pedestrian crossings will be provided under the project as well as construction of public transport terminals. These measures might improve accessibility for the physically and visually impaired persons.

Project No. 12 Anhui Medium Cities Transport Project

The project has significant social benefits as it supports the development of public transport users, provision of pedestrian and bicycle facilities. The public participation process undertaken during project preparation enabled the project to address transport related needs of vulnerable groups, e.g., mobility impaired. The project focuses on improving facilities for pedestrians and bicyclists and developing a culture for respect of pedestrians and cyclists, particularly at intersections and crossings. Improvements to the public transport terminals should provide better access for the public and may improve the accessibility for the disabled persons within the terminals.

Project No.13 Taiyuan Urban Transport Project

The project focuses on improving facilities for pedestrians and bicyclists and developing a culture for respect of pedestrians and cyclists, particularly at intersections and crossings. Improvements to the public transport terminals should also provide better access for the public and may improve the accessibility within the terminals for the physically and visually impaired persons.

Project No. 14 Fuzhou Nantai Urban Development Project

The project might improve the accessibility situation for persons with disabilities due to construction of a new public transport interchange.
3. Summary of each project from an accessibility perspective

In this chapter each of the 14 reviewed projects is presented one by one. The content of this chapter will be the same as in Chapter 2, but all information regarding accessibility for each projects is put together to provide an easier way for the reader to get a full picture of each project. All information in this chapter comes from the Project Appraisal Document (PAD) for each project, i.e. it does not describe how the project actually is proceeding. (See Technical working Paper No.1 for further details).

The planning phase for the projects covers the accessibility aspects which are included in the World Bank documents, participation of people with disabilities, inclusion of national regulations or guidelines and project reviewers. The implementation phase covers cooperation with stakeholders, use of guidelines and standards, and training programs for transport agency staff. The expected outcomes from the project are also described.

Project No. 1 Guangzhou City Center Transport Project

The project included provision of sidewalks, footpaths and about 30 pedestrian crossings. Very small amount of financial resources out of the total project cost were allocated for improving the pedestrian environment. There was nothing mentioned about accessibility as such in the document.

The PAD did not mention anything about disabled persons or accessibility issues. No consultation meetings were arranged with persons with disabilities or organizations representing this road user group to discuss accessibility issues. The project documentation did not include any information about laws and regulations for disabled persons. There is no information on general design manuals, guidelines, public transport design or pedestrian guidelines. Furthermore, no information was provided regarding training programs for accessibility.

The Task Team Leader had professional experience related to transit accessibility issues from his previous career with a large public transport authority in Asia.

The project might improve the situation for physical and visual impaired persons, due to provision of improved pedestrian facilities. However, the project does not have any focus on providing an accessible pedestrian environment.

Project No. 2 Vietnam Urban Transport Improvement Project

Small amount of financial resources out of the total project cost were allocated for improving the pedestrian environment. One focus was to improve safety for pedestrians. The improvements of pedestrian facilities were on selected corridors and in the central areas of Hanoi and Ho Chi Min City. The pedestrian components included provision of sidewalks and pedestrian crossings and there was no information about accessibility in the project documentation.
The PAD did not mention anything about disabled persons or accessibility issues. No public consultation meetings were arranged with disabled persons or organizations representing this road user group to accessibility. The project documentation did not include any information about laws and regulations for disabled persons. There is no information on general design manuals, guidelines, public transport design or pedestrian guidelines. Furthermore, no information was provided regarding training programs for accessibility.

A senior urban transport specialist from the World Bank with accessibility experience from other regions of the Bank was one of the peer reviewers for the project.

According to information in the PAD, it was not planned to have any formal consultations with the road users in Hanoi and Ho Chi Min City during the project preparation phase. The project documentation mentioned that consultations with local stakeholders would be an integral element of the project implementation and monitoring. However, it was not mentioned who these stakeholders would be or which organizations would be consulted in the project implementation phase.

The project may improve the situation for physical and visual impaired persons due to provision of improved pedestrian facilities. However, the project does not have any focus on providing an accessible pedestrian environment.

**Project No. 3 Liaoning Urban Transport Project**

There was no specific accessibility related component but the project included provision of sidewalks and pedestrian crossings in 3 cities in the Liaoning Province. Very small amount of financial resources out of the total project cost were allocated for improving the pedestrian environment.

The Project Appraisal Document did not mention anything about disabled persons or accessibility issues. Many public consultations were carried out during the project preparation period, e.g., site interviews, informal discussion groups, etc. However, it is not clear if any meetings were arranged with disabled persons or organizations representing this road user group to discuss accessibility issues. The project documentation did not include any information about laws and regulations for disabled persons. There is no information on general design manuals, guidelines, public transport design or pedestrian guidelines. Furthermore, no information was provided regarding training programs for accessibility.

The Task Team Leader had professional experience related to transit accessibility issues from his previous career with a large public transport authority in Asia.

The project may improve the accessibility situation for physical and visual impaired persons.
Project No. 4 Urumqi Urban Transport Improvement Project

The project included many pedestrian facilities which mainly focused on safety aspects for pedestrians, e.g., junction improvements, provision of 18 pedestrian crossing facilities (16 overpasses and 2 underpasses), some mid-block traffic signalized pedestrian crossings, plus a number of at-grade pedestrian crossings to ensure pedestrian access and safety. There were no details concerning the specific designs of the various pedestrian safety facilities. The project also included improvements at 4 bus terminals and a railways station. There were no details about what these improvements would be and thus it is not possible to evaluate if these were constructed in a fully accessible way.

The Project Appraisal Document did not mention anything about disabled persons or accessibility issues. However, it was mentioned in the documentation that the project would provide facilities to help, the poor, women and minority groups. Two rounds of public participation meetings were arranged to discuss concerns regarding project components. These meetings focused on ensuring that the people most affected by the project would be fully aware of the mitigation measures to be implemented. No meetings were arranged with disabled persons, persons with special needs or organizations representing these groups to discuss their accessibility issues.

A senior World Bank urban transport specialist with experience with accessibility experience from the Latin America Region was part of the project preparation team. TTL professional experience prior to joining the World Bank included accessibility issues related to public transport.

It was mentioned that the public consultations with the stakeholders would continue during the implementation period. The project documentation did not include any information about laws and regulations for disabled persons. There is no information on general design manuals, guidelines, public transport design or pedestrian guidelines. Furthermore, no information was provided regarding training programs for accessibility.

The project considered the impacts on minority groups, transient population, women and the poor. It is expected that the project may improve the accessibility situation for physical and visual impaired persons.

Project No. 5 Shijiazhuang Urban Transport Project

The project provided pedestrian system improvements, including new pedestrian bridges, junction improvements and sidewalk improvements. Removal of utility poles and other obstructions to clear the sidewalks, strengthening enforcement to reduce biking on the sidewalk and parking on the sidewalks were mentioned as parts of the traffic management and road safety component of the project.

The project focused mainly on motorized traffic, bus public transport, including construction of new bus terminals. Attention was also given to improvements of the bicycle and pedestrian systems in the City of Shijiazhuang. The Project Appraisal Document did not mention
anything about disabled persons or accessibility issues. No meetings were arranged with disabled persons or organizations representing this road user group to discuss accessibility issues. No consultations with NGOs were mentioned in the project documentation. There was no information about laws and regulations for disabled persons. There was also no information on general design manuals, guidelines, public transport design or pedestrian guidelines. Furthermore, no information was provided regarding training programs for accessibility.

An international transportation specialist was included in the World Bank project preparation team. He has some experience with accessibility issues from working on other World Bank funded urban transport projects in China.

The project should improve the accessibility situation for physical and visual impaired persons. It is expected also that the new bus terminals constructed under the project may also improve the accessibility within these terminals.

Project No.6 Wuhan Urban Transport Project

The project aimed to enhance mobility of pedestrians and non-motorized traffic by financing a network of pedestrian/non-motorized traffic routes. The project included a component for improvement of the pedestrian system, including 17 underpasses and pedestrian bridges, junction improvements, mid-block signalized pedestrian crossings at 63 locations, sidewalks improvements, removal of utility poles and other obstructions development of a pedestrian street. The project also included construction of 11 public transport interchanges and 12 bus terminals. The project also had a component for the planning of a Bus Rapid Transit (BRT) system but this component was later dropped from the project. Accessibility aspects were not discussed in the project documentation. The aim of one of the road network components was to create safe conditions for pedestrians.

The project improved the mobility of disabled persons since it provided pedestrian facilities. The Project Appraisal Document did not mention specifically about disabled persons or accessibility issues. However, it was mentioned that the project would address the travel needs of low income people and vulnerable groups and determine the potential impact of the project on vulnerable groups poor, women and migrants and to identify measures that would maximize the net benefits for these vulnerable groups. Public participation meetings were arranged to discuss various concerns regarding the project components. These meetings focused mainly on ensuring that the people most affected by the project would be fully aware of the mitigation measures to be implemented. It was expected that these public consultations with the stakeholders would continue during the implementation period. No meetings were arranged with disabled persons, persons with special needs or organizations representing these groups to discuss their accessibility issues. The project documentation did not include any information about laws and regulations for disabled persons. There is no information on general design manuals, guidelines, public transport design or pedestrian guidelines. Furthermore, no information was provided regarding training programs for accessibility.
A senior urban transport specialist from the World Bank project team with experience with accessibility issues from working on other World Bank funded urban transport projects in China was part of the project preparation team.

The project considered the impacts on different user groups. Improvement of facilities for pedestrians and new public transport interchanges and bus terminals may improve the accessibility situation for all people. However, the project does not have any focus on providing an accessible pedestrian environment or public transport system.

**Project No. 7 Liaoning Medium Cities Transport Project**

The project aimed at enhancing pedestrian facilities and improving non-motorized traffic by financing improvements to pedestrian and non-motorized traffic facilities, including new sidewalk and pedestrian crossing facilities. There was no information about the design aspects of these pedestrian facilities in the documentation, but special efforts were made to ascertain the needs of vulnerable groups, such as the elderly, migrants, women and the mobility impaired persons.

This project involved a lot of public participation activities during the planning and design phases as well as during the project implementation period. Focus groups, open meetings and questionnaires were used to obtain public input to the project design and implementation. Special efforts were made to ascertain the needs of vulnerable groups, such as the elderly, migrants, women and the mobility impaired persons. It was mentioned that the public consultations with stakeholders would continue during the implementation period. Each project city should conduct public surveys to determine the impacts and benefits of the project during the implementation period. It is stated that individual interviews with a selection of mobility impaired persons would be carried out. No inclusion of national regulations or guidelines. There is no information on general design manuals, guidelines, public transport design or pedestrian guidelines. Furthermore, no information was provided regarding training programs for accessibility.

An international transportation specialist was included in the World Bank project preparation team. He has some experience with accessibility issues from working on other World Bank funded urban transport projects in China.

Special efforts were made to ascertain the needs of the vulnerable persons and the project tried to address the accessibility problems for physical and visual impaired persons. The project included improvement of sidewalks and provision of new pedestrian crossings. The improvements to the public transport interchanges and bus terminals should provide better access for the public and may improve the accessibility within these public transport facilities. However, nothing is stated in the project documentation.
Project No.8 Hanoi Urban Transport Development Project

The project focused on improving urban mobility in targeted areas in the city of Hanoi, and the project addressed both motorized vehicles and non-motorized traffic. The project aimed at enhancing pedestrian facilities and improving non-motorized traffic by provision of a network of pedestrian and non-motorized traffic routes, including new sidewalks and pedestrian crossing facilities with dropped curbs and accessible traffic signals. The project also supported the development of a Bus Rapid Transit System (BRT). The BRT system was designed to provide better accessibility for disabled persons. The project included provision of the following measures at the stations and interchanges: dropped curbs, ramps, tactile markings, Braille information maps. Co-operation with the Hanoi Disability Forum, the Hanoi Sports Association for the Disabled and the Vietnam Association for the Handicapped allowed for an enhanced understanding of concerns by the disabled persons and ensured that these concerns were addressed in the project design. Travel needs of the disadvantaged persons were mentioned.

Focus group meetings have been held with Vietnam Association of the Handicapped, the Hanoi Sports Association for the Disabled and Hanoi Disability Forum, and suggestions where included in the public participation strategy and in the Stakeholder Participation Plan (SPP). In the project documentation, it was found that the project involved consultation and collaboration with NGOs and other civil society organizations. The preparation of a public participation strategy was an important element of the BRT component and the project included a SPP. This plan covered the following aspects: (i) consulting the public on the projects components and seeking their input primarily through “town hall” meetings, (ii) generating public awareness, involvement and transforming that into sustained political support for the BRT, and (iii) development of a general interest in the BRT. There is no information on general design manuals, guidelines, public transport design or pedestrian guidelines. Furthermore, no information was provided regarding training programs for accessibility.

A senior World Bank urban transport specialist with experience with accessibility experience from the Latin America Region was part of the project preparation team and an international transportation specialist consultant was also a member of the World Bank project preparation team. These persons have some prior experience with accessibility issues from working on other World Bank funded urban transport projects in China.

It was expected that the public consultations with the stakeholders and, in particular, the Vietnam Association for the Handicapped, the Hanoi Disability Forum, would continue during the implementation period. The Government agency (Transport and Urban Public Works Services Department) should facilitate meetings to discuss accessibility issues with these organizations during the project implementation period.

The physically and visually impaired persons should benefit from provision of new sidewalks, dropped curbs at junctions, improved pedestrian crossings and improved facilities within the Bus Rapid Transit (BRT) stations, public transport interchanges/terminals and bus stops, since
extensive consultations have taken place with organizations representing people with disabilities.

Project No. 9 Guiyang Transport Project

The project included construction of 45 rural bus stations, which were fairly simple. There was no accessibility issue addressed in the project. General improvements of facilities for pedestrians were not included in the project.

The project documentation contained information about extensive public consultations as part of the project preparation process. However, the public participation process concerned mainly the environment and resettlement aspects of the project. There was nothing mentioned about disabled persons in the project documentation. No meetings were arranged with disabled persons or organizations representing this road user group to discuss accessibility issues. The project documentation did not include any information about laws and regulations for disabled persons. There is no information on general design manuals, guidelines, public transport design or pedestrian guidelines. Furthermore, no information was provided regarding training programs for transportation accessibility.

An international transportation specialist was a member of the World Bank project preparation team, who has some experience with accessibility issues from working on other World Bank funded urban transport projects in China.

The project may improve the situation for physical and visual impaired persons due to the construction of 45 new rural bus stations. However, the project did not have any focus on providing an accessible transportation environment.

Project No. 10 Xi’an Sustainable Urban Transport Project

The project aimed at increasing accessibility and mobility by bus, non-motorized vehicles and walking by making journeys by these modes quicker, easier, more pleasant and safe. The project focused both on motorized vehicles and non-motorized traffic. The project will provide improved pedestrian facilities and measures for non-motorized traffic by provision of a network of pedestrian and bicycle routes, including new sidewalks and pedestrian crossing facilities, junction improvements, mid-block signalized pedestrian crossings, etc. The project also included construction of new passenger transport terminals. The project document provided some information on bus platforms, and the terminal buildings, which will include dining halls, repair shops and administration facilities. There is no information regarding the accessibility aspects.

The project incorporated a public participation process as a strategic input to the project preparation process to enhance the project design. Special efforts were made to ascertain the needs of vulnerable groups, such as the elderly, migrants from rural areas and persons with disabilities. The participants in the meetings reflect representation from various citizen groups in Xi’an. Special efforts were made to ensure that the lower income population, and other
urban vulnerable groups were well represented. The main findings from the public participation process regarding the vulnerable groups, e.g., the disabled persons and the elderly, were identification of major barriers to travel and major demands for improvements. The barriers for persons with disabilities were poor road conditions and safety concerns with mixed traffic, lack of crossing facilities and lack of sensitivity of public transport service to the needs of the disabled persons and elderly people. The needs were improved road and sidewalk conditions, provision of more road infrastructure facilities for persons with disabilities and improved traffic management at junctions. It is planned that during the implementation stage, public consultation will include annual monitoring of how well the agreed design solutions to the publicly raised issues are incorporated during project implementation. It was also mentioned that the public consultations with the stakeholders would continue during the implementation period. Nothing was mentioned about improving accessibility for public transport buses, bus stops and terminals. It was found in the project documentation that there was lack of sensitivity regarding public transport services to address the needs of the elderly. There was no information about laws and regulations for disabled persons. There was also no information on general design manuals, guidelines, public transport design or pedestrian guidelines. Furthermore, no information was provided regarding training programs for accessibility.

A senior World Bank urban transport specialist with experience with international accessibility experience was part of the project preparation team.

The project made special efforts to ascertain that the needs of the vulnerable persons were taken care of and that the project also addressed accessibility problems for elderly people and persons with disabilities. The project included improvements of sidewalks, provision of pedestrian crossings and new street lighting. The improvements to the public transport interchanges and bus terminals should provide better access for the public and may improve the accessibility within these public transport facilities.

Project No.11 Wuhan Second Urban Transport Project

The project aimed at assisting the Municipality of Wuhan to enhance mobility for passengers within and to the central area of Wuhan in an environmentally sustainable, integrated and safe manner. The project included improvements of facilities for pedestrians and bicyclists in selected road corridors, junction improvements, mid-block signalized pedestrian crossings, sidewalk improvements. Improvements for the travelers were carried out at bus stops and as well as the construction of new public transport terminals.

The project did not specifically address accessibility issues for disabled persons and persons with special needs. A key feature of the project design was the use of an extensive public participation process to complement the technical analysis. Technical preparations were complemented by an independently supervised 3-stage effort consisting of focus groups, open meetings and questionnaire, which sought to obtain public input into the project design and target the needs of vulnerable groups, such as the elderly, migrant workers, the mobility impaired and the poor. The project documentation did not include any information about laws
and regulations for disabled persons. There is no information on general design manuals, guidelines, public transport design or pedestrian guidelines. Furthermore, no information was provided regarding training programs for accessibility.

Two senior urban transport specialists from the World Bank have been peer reviewers, who have experience regarding accessibility issues from working on other World Bank funded urban transport projects in Latin America and other Regions of the Bank.

The expected outcomes will be the improved sidewalks and new pedestrian crossings provided under the project as well as construction of public transport terminals. These measures may improve the accessibility situation for the physically and visually impaired persons.

**Project No. 12 Anhui Medium Cities Transport Project**

The project aims are to improve mobility on selected main corridors in the Municipalities of Anqing, Huaibei, Luan and Wuhu in the Anhui Province in a safe and efficient manner. The project focuses both on motorized vehicles and non-motorized traffic. The project should result in enhancement of the facilities for pedestrian and non-motorized traffic by providing improvements of pedestrian and non-motorized traffic facilities, including new sidewalks and pedestrian crossings. Each project city is committed to ensure better public transport operations, enhanced safety and mobility for all road users, especially the vulnerable population.

The project involved a lot of public participation during the planning and design phases as well as during project implementation period. The following activities were arranged: focus groups, open meetings, questionnaires to obtain public input to the project design and the implementation phase. However, all the public participation discussions focused mainly on issues concerning the Environmental Management Plan (EMP) and the Resettlement Action Plan (RAP) for the project affected persons. The views of the vulnerable groups were taken into consideration by the appropriate authorities. The public transport component included investments in new bus stops with shelters and upgraded the signage. The new public transport terminals were designed on the basis of trends in demand and services, and to address existing problems and taking into account the needs of the mobility impaired. Each project city is committed to ensure better public transport operations, enhanced safety and mobility for all road users, especially the vulnerable population (e.g., elderly people, disabled persons and women). The project documentation did not include any information about laws and regulations for disabled persons. There is no information on general design manuals, guidelines, public transport design or pedestrian guidelines. Furthermore, no information was provided regarding training programs for accessibility.

The project team did not seek advice from any known World Bank urban transport specialists with knowledge and experience regarding accessibility issues since the TTL already had some knowledge of accessibility issues.
The project has significant social benefits as it supports the development of public transport users, provision of pedestrian and bicycle facilities. The public participation process undertaken during project preparation enabled the project to address transport related needs of vulnerable groups, e.g., mobility impaired. The project focuses on improving facilities for pedestrians and bicyclists and developing a culture for respect of pedestrians and cyclists, particularly at intersections and crossings. Improvements to the public transport terminals should provide better access for the public and may improve the accessibility situation for the disabled persons within the terminals.

Project No.13 Taiyuan Urban Transport Project

The project aimed at enhancing pedestrian facilities and improving non-motorized traffic by providing improvements to pedestrian and non-motorized traffic facilities, including new sidewalks and pedestrian crossing facilities. Three bus terminals will be constructed as part of the public transport component. Travel needs of the disadvantaged and vulnerable road users are mentioned in the project documents. Among other things the needs for persons with physical disabilities are addressed under the project by providing new sidewalks and safe road crossings along the project corridors.

A key feature of the project design has been the use of an extensive public participation process to complement the technical analysis. This was complemented by an independently supervised three stage effort consisting of focus groups, open meetings, and questionnaires which sought to obtain public input into the project design and target the needs of vulnerable groups such as the elderly, migrant workers, mobility impaired and the poor. The public participation meetings were arranged to discuss concerns regarding project components. These meetings focused on ensuring that the people most affected by the project would be fully aware of the mitigation measures to be implemented. The views of the vulnerable groups were taken into consideration by the appropriate authorities. Public concerns collected through consultation cover a wide range of aspects from bus routes and stations at certain locations, appropriate ticket price, facilities needed at bus stations, etc., to adequate infrastructure for secondary and small streets, pedestrian crossings and intersections, vehicle parking lots, road lighting, green belt, drainage, signaling and signage, etc. These concerns were fully considered in the scoping and design of the project. The public transport component included terminals, which were designed on the basis of trends in demand and services, and to address existing problems and taking into account the needs of the mobility impaired. The project documentation did not include any information about laws and regulations for disabled persons. There is no information on general design manuals, guidelines, public transport design or pedestrian guidelines. Furthermore, no information was provided regarding training programs for accessibility.

The project team did not seek advice from any known World Bank urban transport specialists with knowledge and experience regarding accessibility issues since the TTL had some knowledge of accessibility issues.
The project focuses on improving facilities for pedestrians and bicyclists and developing a culture for respect of pedestrians and cyclists, particularly at intersections and crossings. Improvements to the public transport terminals should also provide better access for the public and may improve the accessibility within the terminals for the physically and visually impaired persons.

**Project No. 14 Fuzhou Nantai Urban Development Project**

The project documentation did not include any accessibility component, but some measures to improve the pedestrian and non motorized traffic environment along of the major ring roads. The public transport component included construction of a public transport interchange. However, there is no reference to accessibility aspects in the project documentation.

The project focused mainly on construction of major road infrastructure for motorized traffic, which also included facilities for pedestrians, construction of new public transport interchange and bus stops. The Project Appraisal Document did not mention anything about disabled persons or accessibility issues. The project documentation did not include any information about laws and regulations for disabled persons. There is no information on general design manuals, guidelines, public transport design or pedestrian guidelines. Furthermore, no information was provided regarding training programs for accessibility.

The project team did not seek advice from any known World Bank urban transport specialists with knowledge and experience regarding accessibility issues since the TTL had some knowledge of accessibility issues.

The project may improve the accessibility situation for persons with disabilities due to construction of pedestrian facilities and a new public transport interchange.
4. Interviews with Task Team Leaders from the World Bank

Interviews with the Task Team Leaders from the World Bank were an important source of information regarding how the issue of accessibility has been addressed in the reviewed urban transport projects. Questions about if and how accessibility has been incorporated in the projects, if and how different parts within the projects have taken interest in accessibility, and if the internal project preparation process in the World Bank was addressing accessibility and how improvements can be made in the future were discussed during the interviews.

The presented data in this chapter is the words of the Task Team Leaders and shows how they apprehend the situation when they were involved in these projects. The answers might not reflect the actual situation in the country or in the World Bank, but they reflect how the Task Team Leaders felt and what they know at the time for the project. It might also be that the interviewed Task Team Leaders had different and conflicting views on some subjects, but no judgments of what is right or wrong has been made when reporting this data.

The interviews were made to get a better understanding of the project planning work process within the Bank regarding accessibility issues. The following five Task Team Leaders (TTL) were interviewed for this study:

- Mr. Ed Dotson, responsible for the Wuhan and Urumqi urban transport projects;
- Mr. Richard Scurfield, responsible for the Guangzhou, Liaoning and Shijiazhuang urban transport projects;
- Mr. Jit Bajpai, responsible for the Vietnam Urban Transport Improvement Project;
- Mr. Shomik Mehndiratta, responsible for Liaoning Medium Cities, Wuhan 2, Anhui Medium Cities Taiyuan urban transport projects and Fuzhou-Nantai Peri-Urban Development Project;
- Ms. Rakhi Basu, responsible for Xian Sustainable Urban Transport Project.

This chapter includes a summary of the outcomes from the interviews and some reflections on the interviews. The chapter is divided into different aspects such as inclusion of accessibility issues in the projects, involvement of accessibility in future projects and the process within the Bank to highlight accessibility. See Appendix 3 which includes the questions asked during these interviews.
4.1 Inclusion of accessibility issues in the projects

Does the TTL know of any existing legislation/standards etc. regarding accessibility in the countries where these projects have been carried out?

Four of the TTLs were not aware of any legislation or standards for accessibility either in China or in Vietnam at the time of the project preparation. They were also not aware of any legislation or special design standards for use either at the municipality level or at the national level. One TTL said that the Transport Sector Strategy for Wuhan Municipality did not include any information on accessibility issues for disabled persons. The TTL for the Urumqi project said that since there was no national legislation requiring these issues to be addressed, the City had no particular interest in implementing accessibility issues.

“As far as I know there were no legislation, transport strategies, guidelines or technical standards in the Chinese provinces where I was working.”

One TTL, who had worked in China, said that China had excellent legislation, rules, regulations and standards for accessibility and that there are also provincial and municipal regulations for accessibility. He also mentioned that the institutional set up for accessibility is working well and the regulations are well enforced.

Has there been any discussion within the Project Organizations (e.g., PMU) about accessibility issues?

There were no discussions about accessibility issues within the project organizations for the projects in China or in Vietnam.

A study of vulnerable persons was carried out during the project preparation for the Wuhan project, which also included some discussions on mobility issues, but there was no special focus on accessibility for persons with disabilities. Improved pedestrian facilities (e.g., new sidewalks free from obstacles) and improved public transport were included in the project, but not with any focus on accessibility issues. There was discussion about doing a follow-up study to check if all proposals were implemented, but it did not materialize.

“Theyir main focus was to construct major highways.”

One TTL working in China reported that the World Bank office in Beijing once a year invites special interest groups for the disabled persons and women in transport to a meeting to discuss accessibility issues for ongoing and planned urban transport projects. The World Bank Country Director for China also takes a great interest in these issues.

Have accessibility issues been included in the projects?

In all projects improvement of pedestrian facilities were included as part of the project, and some projects also included improvements of the public transport
systems. What is specially mentioned as improvements of pedestrian facilities were provision of sidewalks, pedestrian crossings and pedestrian traffic signals. In the Urumqi project, dropped curbs at junctions and pedestrian crossings were also mentioned, but the improvements did not specifically focus on the needs from people with disabilities.

Three of the TTLs said that the projects resulted in general improvements in the facilities, but there was no specific attention given to accessibility for people with disabilities or specific accessibility measures. The situation was the same regarding improvements of the public transport system, which often included construction of new bus stops and terminals, and procurement of new vehicles, but with no focus on accessibility.

“The needs from persons with disabilities or accessibility were not included in the projects. As in most projects, generally improved infrastructure facilities might imply an improvement for people with disabilities as well, but there was no focus on accessibility.” (regarding some projects in China)

One TTL for projects in China mentioned that since walking is an important mode of transport (about 40% of all personal trips), the authorities and the government Project Management Units are giving priority to provide obstacle-free pedestrian facilities. The TTL said that special public participation meetings were arranged to discuss accessibility issues for all urban transport projects which he managed. Attention to accessibility details have resulted in improved facilities for disabled persons. Another TTL said that in the Xian project, public participation meetings with stakeholders were included during the project preparation phase. There was special attention given to involve vulnerable road users, e.g., the elderly, women and persons with disabilities.

**Why has accessibility not been included in the projects?**

Four of the interviewed TTLs gave an explanation for why accessibility has not been addressed in the projects. The common explanation was that the projects needed to focus on so many other issues, which are standard requirements by the Bank, e.g., procurement, financial management, environment, resettlement, etc. Other explanations were lack of regulations and interest from the involved people in the Client’s organization.

The reason for not including accessibility issues in the case of the first Vietnam project was the lack of legal requirements or regulations and that no one in the project group had any interest for this issue. Also for some of the earlier Chinese projects, the TTLs said that since there was no legal requirements for including accessibility and no person in the project organization had any knowledge or interest to include accessibility in the project, and therefore it was not included.
“There were no persons in the government’s project organization promoting inclusion of specific accessibility related components. The city gave priority to construction of major road infrastructures.”

Another TTL, who worked in China on the earlier projects, said that there were no accessibility requirements from the Central Government, which provincial and local authorities had to implement. The management and staff from the project management organizations also had too little knowledge about the accessibility aspects of road infrastructure and for public transport facilities, and therefore it was not included in the project. There was no interest in the government project management organization. The cities gave priority to addressing minority people issues and construction of major road infrastructures.

“There was no priority from the local administration to address the accessibility issues, and there were no requirements or directives from Central Government to improve accessibility.”

“There were no legal requirements to include accessibility facilities for disabled persons and there were no persons in the government’s project organization promoting inclusion of specific accessibility related components to assist the disabled transport users.”

**Could the TTL have done anything to involve accessibility issues in the project?**

On the question if there was anything the TTL could have done to include this issue, the answers focused around the problem that there were so many other basic issues to take care of first before considering the accessibility aspects. Furthermore, since there was not a big focus on accessibility either internal in the World Bank or in the project countries, the accessibility issue was not addressed.

The TTL for one of the Vietnam projects mentioned that since the Bank did not focus on accessibility at this time and there were so many other issues to focus on (e.g. environmental, resettlement, etc.), he had a little incentive to add accessibility. One TTL frankly said he could not do anything, since there was no interest in the government’s project management organization (PMU).

One TTL mentioned that the design of new buses could have been more accessibility “friendly”. The accessibility issue could have been involved to a higher degree in the public transport part of the project, but again there was no interest by the project management organization and then it is difficult to force the issue to be taken care of.

“There is a need to educate the management and staff from the Project Management Organizations regarding accessibility aspects of road infrastructure and public transport facilities.”

One TTL expressed the opinion that the project organization had to “fight on so many fronts” (i.e., address all the different requirements for the project) so it would
not been easy to add accessibility in addition to all the other project requirements. It was difficult for the Bank to impose on the Government to improve accessibility for the public transport system. For example, to require procurement of buses with low floors in order to improve accessibility would have been too expensive for the clients.

“The basic road infrastructure was not there, the basic transport services were not there so it was unrealistic also to deal with accessibility issues for a small part of the population. You should really have the basic transport infrastructure in place before you tackle the accessibility issues.”

“The transport problems were too large and it was unrealistic to spend large costs on a very small proportion of the society.”

According to one TTL what can be done is to educate government officials and the staff from the project management units so they would understand the importance of accessibility, then it would be easier for the TTL to follow up this aspect. Another TTL expressed it as there could have been more awareness given in the project to address the problems of the disabled persons.

One TTL answered that he took strong interest in addressing accessibility for persons with disabilities, elderly people and women through public participation meetings, such as focus groups, open meetings and use of questionnaires. Thus in these projects the issue of accessibility was addressed.

**Does the TTL think the outcome of the project will be of importance for persons with disabilities?**

All of the TTLs think that the outcomes of the project will benefit people with disabilities as well other people, since all projects included general improvement measures for pedestrians.

In one of the Vietnam projects, new pedestrian facilities were built and especially the installation of dropped curbs which should benefit people with disabilities.

“The project provided a lot of pedestrian facilities which would also help disabled persons.”

In one of the Chinese projects, public transport facilities were also improved, e.g., provision of new bus stops and construction of new bus terminals. These facilities would probably also result in an improved situation for people with disabilities, but the project did not address accessibility issues as such.

The outcomes of several projects provided improved infrastructure for pedestrians and improved transport services, and these measures should also improve the situation for people with disability, even if there was no specific focus on accessibility. There were some accessibility measures implemented (e.g. tactile markings) but these were inappropriately used at that time, said one of the TTLs.
The outcomes of the project in Urumqi will probably improve the situation also for persons with disabilities, since there will be a general improvement of the pedestrian facilities and public transport facilities (e.g., improved bus stops and new bus terminals).

One TTL, working in China, said that the World Bank and the Government gave priority to address issues concerning people with disabilities and people with special needs. Improved pedestrian facilities and public transport facilities should be very helpful for the vulnerable road users.

4.2 Involvement of accessibility in future projects

Should the Bank require that the Transport Strategy also include accessibility?

The TTLs opinion about whether the Bank should require that the client has a Transport Strategy, which includes accessibility aspects for disabled persons varies. Even though the TTLs agree that it is an important issue, some were hesitating to say how the Bank can “force” the client to include accessibility if it is not mandatory in the country or for the municipality.

One TTL said that the Bank should encourage the clients to develop transport sector strategies, which also includes requirements for improving the accessibility and, for example, recommendations about enforcement for clearing sidewalks from being blocked by hawkers, parked vehicles or storage of building materials.

One TTL for a project in China was more doubtful about what the Bank can do and said that until a national policy is agreed on accessibility, this issue will not be addressed properly by the municipalities. He mentioned that if the central government decides that accessibility is important, then the issue will be taken seriously by the clients. Until that happens, the TTL said that the Bank cannot force the clients to address the accessibility issues. A national policy on accessibility is required before this issue will be addressed properly by the Municipalities in China. The TTL also said that if the central government decides that accessibility is important, then this issue will be taken seriously, but until that time the Bank cannot force the clients that accessibility issues must be addressed in the Bank funded project.

“The Bank cannot dictate to the Borrowers that accessibility issues must be addressed in Bank funded urban transport projects.”

Another TTL said that it could be difficult for the Bank to require that accessibility is included in the Bank funded projects, because different cities have different needs. Some cities are far more developed and advanced compared with some other cities, and this fact should be considered during the project discussions between the clients and the Bank. He mentioned it is difficult to cover everything and if there is more focus on accessibility in the strategies other important issues might be left out. This is
more complicated than to just to require that a certain aspect should be included in the project.

“Who will then decide on what should be taken out in order to accommodate accessibility aspects for disabled persons? You have to be realistic about the future projects so they do not become too sophisticated.”

In one case, the city did not have any transport strategy and therefore development of such strategies became part of the project’s institutional development component. The TTL mentioned also that there was no opportunity for adding accessibility into these strategies at that time. However, the TTL believed that the issue of accessibility should be included in the clients’ transport strategies if the Bank provided funding for future urban transport projects.

Also another TTL working in China was positive to include accessibility in the transport strategy, but at the time of project preparation for the project she was managing, the Chinese cities were giving priority to improve the transport infrastructure for motorized vehicles instead of giving more attention to sustainable solutions for all modes of transport, including facilities for non-motorized traffic and walking. The sustainable urban transport should also address accessibility.

One TTL has a clear opinion about including accessibility in the Transport strategy.

“It is recommended that each Province and every Municipality where the World Bank is funding transport infrastructure improvements should have a transport strategy, which also addresses accessibility for people with disabilities and special needs.”

**Should public participation events also include the issue of accessibility?**

All of the TTLs said that concerned private individuals and officials from organizations representing persons with disabilities should attend the public participation meetings for the project. One TTL said that representation from organizations of people with disabilities should attend these meetings and not only the persons directly affected by the environmental and resettlement aspects as was the case in one project in China.

Even though one TTL agreed that the public participation should include representatives from NGOs or civil society groups representing persons with disabilities, he said that it may not be so easy to find such organizations in China and also to know if they are really able to address the accessibility issue in a proper way.

“You need to find independent persons who can talk about the accessibility issues. There may be some national federations or similar organizations, which could be consulted and their representatives should be involved in focus groups with the project designers and the Clients’ representatives.”
One TTL emphasized that his urban transport projects included public participation meetings to discuss accessibility issues, which were separate from the Bank required public participation meetings regarding environmental and resettlement issues. Therefore he supported that this kind of meetings should be arranged.

“This gave opportunities for the special disability interest groups to comment on existing and future plans, which could be adjusted or modified, based on comments from the participants.”

One TTL thought that more attention should be given to include the vulnerable groups (e.g., elderly people, women and people with disabilities) in the public participation events. These groups should be invited during the project preparation and design stages, and there should also be public consultation meetings with participation by disabled persons during the project implementation stage to monitor that the agreed design solutions raised during the preparation stage were actually implemented. NGOs could provide a platform for the disabled persons.

**Do you think that officials in Bank funded projects should take a greater interest in the accessibility aspects of transport projects?**

One TTL mentioned that officials from concerned Government agencies and the Public Transport Authorities should take a more active role regarding accessibility issues. The TTL suggested that one way to make this happen, could be to have foreign experts in accessibility giving presentations and participate in local workshops or sending officials from the transport agencies overseas to learn about how to address accessibility issues. A suggestion from another TTL is that more awareness building regarding accessibility should be carried out.

“The priority for many government officials was mobility and there was very little understanding for accessibility issues for the disabled persons.”

Another TTL thought that the World Bank should encourage borrowers to arrange local training courses in accessibility and to arrange for relevant persons to travel abroad to see how the accessibility issues are addressed in developed countries. He also said that the issue of accessibility needs to be more addressed generally.

“More marketing campaigns on accessibility aspects in the transport sector are required – similar to promoting road safety.”

One TTL mentioned that it depends on the city of the project. If the project is carried out in more sophisticated cities, officials from Government and Public Transport Authorities should be encouraged to deal with accessibility issues and the Bank project team should discuss this issue during project preparations. However, the TTL also said that it is difficult to decide on how much pressure the Bank could impose on the Client in order to include accessibility, but some of the larger cities in China should definitely be able to address this issue if there is a political will to do so.
“It should be pointed out to them that this is an issue with real concern around the world and it should be taken seriously by the Clients in China and Vietnam.”

“The relevant authorities should take an interest in making road infrastructure accessible because this is possible to do without huge additional costs at the planning stage of development.”

“There should be no excuses for not doing road infrastructure improvements accessible.”

One TTL said that it is possible that the Government or the concerned Municipality would take greater interest if there were instructions from higher authority to give more attention or importance to the accessibility aspects in their projects.

One TTL pointed out that making the public transport services accessible is much more complicated, since this will have major cost implications, e.g. procurement of “kneeling” buses. Therefore this is much more difficult to achieve, according to the TTL. If the Bank is pushing for a model of private bus companies or self-supported bus operators supported by Government, the extra cost to make the system accessible could be considerable and even result in the bus operations not being economically viable, according to the TTL.

**Do you think that the institutional strengthening or development component should include training regarding accessibility aspects as well?**

All TTLs were positive about including accessibility training as a part of the institutional strengthening or development component for the projects.

One TTL working on projects in China suggested that national associations for disabled persons and government departments dealing with social sector issues like disabilities should arrange training courses with local and foreign experts as trainers. National workshops should be arranged with participation from relevant government departments, civil society organizations and NGOs representing disabled people, some disabled private persons and representatives from transport sector organizations. Another TTL working in China proposed that the government agencies should carry out discussions with the technical training institutions to encourage them to implement training courses which included how to address accessibility for disabled transport users.

“The World Bank should encourage borrowers to arrange local training courses in accessibility, and some persons directly involved in the project planning and implementation could be sent abroad to see how the accessibility issues are addressed in developed countries.”

“Capacity building of transport planners in China is required. There are many good engineers but few transport planners.”
One TTL said that the project team should discuss training aspects with the client’s representative and not put constraints on the team. It is better to create the right incentives rather than enforcing rules on specific issues.

**What is your opinion about twinning arrangements with an overseas authority with experience in accessibility issues?**

Most of the interviewed TTLs believed that twinning arrangements with transport sector authorities overseas, with good knowledge in accessibility, could be a good idea and one way to raise the issue of and knowledge about accessibility.

However, one TTL pointed out that it sometimes can be difficult to keep these twinning arrangements going. He said that the success of twinning arrangements depends on sustainable funding to keep the twinning arrangements going after the projects are completed. The government or the municipalities will have to provide appropriate resources to keep the twinning arrangements going. Third party financing is problematic because the funding is only available for a short time and therefore one TTL said he would not encourage twinning arrangements in Bank projects unless there is sustainable funding for such arrangements. There must also be a commitment from the Cities to continue these arrangements.

Another TTL, working on the Vietnam project, was positive to the idea as such but he was also concerned about the funding of these twinning arrangements.

*“Twinning arrangements must focus on low-cost solutions.”*

One TTL said that the idea of twinning arrangements between cities and organizations is good, but he was not aware of any examples in China. Even so he thought it could be useful if there was a dialogue on the issue of accessibility and that workshops were arranged. Using local consultants with support from consultants from the developed world could be a successful solution.

Another TTL said that the municipalities for the project cities have so many things to do and he recommended that the project teams should review and decide if a twinning arrangement could be a suitable solution. If it is suitable, twinning arrangements between urban planning departments could be the best way to address universal design issues.

4.3 The process within the Bank to highlight accessibility

**Is there normally any person with knowledge about accessibility included in the consulting team?**

The experience from the TTLs differs somewhat. Some are rather confident that the consultants have knowledge about accessibility while other ones are more hesitating.
One TTL, who worked on the Vietnam project, said that it is leading consulting firms that are engaged in the World Bank projects and these have some experience regarding accessibility. For example, one U.S. consulting firm, which this TTL had prior work experience, was very familiar with accessibility requirements since they had worked on projects governed by the American Disability Act (ADA).

Another TTL commented from another perspective and he had a feeling that the problem is probably not lack of competence among the consultants, but lack of scope within the projects. The TTL also expressed a view that it will take a long time until the developing countries will have the same accessibility standards as developed countries.

“There is limited scope for introducing the accessibility standards used in many developed countries to the developing countries, because this would be too costly.”

In one project in China, the TTL believed that there were no or limited knowledge and experience of accessibility among the staff in the consulting firms. It might be however, that consultant firms can hire short-term experts in accessibility issues if required for specific projects, but that was not done in this project.

Also another TTL, who was responsible for some projects in China, said that there was no competence about accessibility from the consulting teams preparing these projects (which started 10-15 years ago). This TTL said that he generally was against using large foreign consulting companies in these types of projects because of large costs and inefficiency and that he preferred to use local companies with experienced foreign advisors.

Another TTL, working in China, said that the consulting teams had to follow Codes of Practices so the consultants should always ensure that there was at least one person in their team, who has some accessibility knowledge. The TTL highlighted that sensitivity and emphasis on details are most important aspects to consider when addressing accessibility issues.

**Did anyone with knowledge/awareness about transport accessibility issues review the project documentation before the loan was approved?**

All the TTLs, except from one, commented that experienced transport specialists within World Bank had provided technical input to the project preparation, e.g., checking of design drawings and technical specifications, but it was not expressed that any of them was specialized in accessibility issues.

“A senior urban transport specialist from the World Bank was part of the project team preparing the project and it might be that he was aware of the accessibility issue, but there was no disability review carried out.”

Regarding one of the earliest projects, the TTL for a Chinese project said that no one in the Bank reviewed the accessibility aspects of the projects.
One TTL commented that three of the early Chinese projects were complex projects because they were trying to address many transport issues and problems for motorized and non-motorized traffic (bicyclists and pedestrians). Therefore addressing the question of accessibility at that time would have made these projects even more complex. The main focus at that time was to get the Clients to understand that the new projects were not meant only to improve the situation for motorized vehicles but also to preserve facilities for bicycles and pedestrians, and to improve the public transport.

“Road safety was on the Bank’s agenda but nobody in the Bank was pushing for accessibilities for the disabled persons. The priority was to improve basic road infrastructure and transport services.”

One of the TTLs working on projects in China, said that all final design drawings as part of the contract documents were checked for relevant accessibility issues.

**What measures could the World Bank take in order to involve accessibility in the future transport projects?**

The TTLs agreed that the World Bank could influence the clients to improve the situation regarding the inclusion of accessibility in the projects and to get this implemented. Most of the TTL believed the Bank should be quite clear about what is required by the Bank regarding accessibility to get a loan from the Bank.

One TTL suggests that the Social Development Group in the Bank should work more closely with the Transport Sector Group regarding accessibility for disabled persons.

“In the future, there should be some Bank directives to address the accessibility situation in Bank projects. The degree of involvement would depend on the level of development in the respective countries. One way is to use local consultants with input from experienced foreign advisors.”

Another TTL believed that the World Bank should make it clear to the Borrowers what criteria must be satisfactorily complied with in order for the project loan to be approved. The Social Development Group in the Bank should make a statement on accessibility aspects which the Bank will require for future funding of urban transport projects.

One TTL expressed opinion that for future projects, the Social Development Group of the Bank could take a more active role to promote inclusion of more accessibility in the Bank funded transport projects. There should also be a dialogue regarding this issue between the transport center and the social development center in the Bank. Accessibility could be a part of the social development assessment of urban transport projects. Accessibility for disabled should be on the “radar screen” of the Bank and should be raised as an issue according to this TTL, who had worked in China.
However, this must be done in relation to what is actually possible to achieve in each country and project.

“However, it will be necessary to determine what can feasibly be done, given the level of sophistication of the place where the Bank is working to do this.”

One TTL believed that the project preparation guidelines for Task Managers could be improved and include the accessibility issue as well. Another TTL raised the questions of awareness.

“There should be awareness building programs on accessibility given in the Bank and also for the staff in the government’s project implementation office. The Bank should also encourage NGOs working on the social development aspects for Bank funded urban transport projects to take an interest to build up their capacity how to assist the disabled persons affected by these projects.”

One of the TTLs working in China recommended that the Bank should ensure the following: (i) to assign the right people with relevant experience from developed countries in the Bank’s project team; (ii) to carry out awareness training with persons who are very familiar with accessibility issue; and (iii) to provide incentives for Bank staff to work on accessibility issues. These measures may result in more Bank staff being interested to get involved in projects dealing with accessibility aspects.

**Competence in accessibility among the TTL according to themselves**

The competence regarding accessibility among the TTLs varies. All the TTLs were experienced transport specialists, who have come across the issue of accessibility in different ways, e.g. working with experienced US consulting companies or working with urban transport projects. One TTL had professional experience related to accessibility in public transport from a previous career with a large public transport authority in Asia. Another TTL had some knowledge and experience regarding accessibility issues from working in the Bank and with relevant organizations outside the Bank. One TTL has good knowledge about accessibility through working with this issue in several World Bank projects.

Three of the TTLs did not know about or had used any of the World Bank Guidelines for Bus Rapid Transit (BRT) or the Access Training tool kit. For the earliest projects this was of course due to the fact that the Bank guidelines had not been produced at that time. Two of the TTLs knew about the Guidelines for Bus Rapid Transit (BRT), one of them had also used it for some projects, while the other TTL had not been involved in projects including BRT.

No TTL gave any references to websites regarding accessibility, which they could recommend.
4.4 Reflections from the interviews

The first reflection to make from the interviews is that accessibility has not been an issue, when most of these projects where prepared. One reason for this is that the focus of the projects often has been to construct ring roads or other main highways. However, when the focus has been on improving the situation for non-motorized traffic, there was no specific focus on addressing accessibility issues. Some of the TTLs argued that it would have been too difficult and too expensive to include accessibility aspects into the project.

According to most of the TTLs, the reason that accessibility has not been included or focused in the reviewed projects, was that accessibility was not an issue among the Borrowers. The country themselves and the management teams for the projects had no intension to work with accessibility aspects. Furthermore, most of the TTLs argued that accessibility has not been an issue within the Bank until recently and that was another reason why it has not been prioritized. Accessibility in the transportation sector becomes more frequently discussed and dealt with around the world and this issue will probably be much more included in future World Bank projects. In some of the recent urban transport projects, accessibility seems to be dealt with much more comprehensively compared to the earliest transport projects.

Most of the TTLs thought that the Bank can and should promote accessibility and that new directives from the Bank management can improve the situation, so that accessibility becomes a more natural part of the projects, which would be very positive. Many of the TTLs interviewed, put a lot of trust in the Social Development Department for preparing guidelines regarding accessibility, but it is also important that technical standards and planning documents regarding accessibility is incorporated in the World Bank operational requirements. Accessibility audits could be required for all relevant designs prior to issuing procurement clearances by the Bank and for this an internal accessibility audit training course could be arranged for the transportation engineers in the Bank.

An issue raised from some TTLs is that it is important that the required standards are adjusted to what is appropriate for use in developing countries. Some TTLs are worried that the cost for creating accessible environments will be very high and difficult to cope with. However, it is important to remember that constructing transport infrastructure in an accessible way from the beginning may not be much more expensive than constructing infrastructure which is not accessible.

Regarding the knowledge about accessibility within the Bank’s preparation team, the Borrowers’ management team and the consultants, there seems to be some knowledge about accessibility, but not often people with any real expertise. Until accessibility is a more integrated part of transport sector projects, it is probably advisable to engage an accessibility expert at various stages of the project cycle, to secure that the outcomes of the projects are accessible.
What is needed according to many TTLs is advocacy for accessibility in the transport sector. This will help the TTLs to promote and to work more extensively with accessibility in the future. The Bank must therefore find a way to promote accessibility among the Clients and prepare a list of requirements for accessibility to be fulfilled for future transport projects.
5. Actual accessibility of World Bank funded projects

This chapter describes a way to analyze how the projects are progressing regarding accessibility aspects and a way to check the outcome from the completed projects. The previous chapters presented the results from a desk review of the written documents (PADs and ICRs) which described the projects before they have actually been implemented. This chapter describes a way to monitor the projects when they are under implementation, i.e. how field-reviews could be carried out.

Since the field-review information gathered from the included 14 projects was limited, this chapter will not describe how well the projects are actually doing with or have been working with accessibility issues. Instead the chapter will give a more general overview of what is going on in Vietnam and China related to accessibility in the transport sector and only provide some short descriptions of some of the 14 included projects.

5.1 Procedures for gathering information during Project Implementation

Since the desk review gives a description of how the project is supposed to be carried out it is important to also get a description of how the projects are proceeding regarding accessibility issues and what is the actual outcomes from the projects (for those that are completed). Since the focus of the projects was not improved accessibility for people with disabilities, the written documents did not show many accessibility measures or activities related to improving accessibility. It might however, be that the accessibility aspects have been incorporated in the projects along the way and that the outcomes of the projects actually have improved the accessibility. To get information about this, reviews at the project sites must be carried out.

In order to assist the collection of information about accessibility aspects in the World Bank funded projects in China and Vietnam, question guidelines were prepared for use when interviewing different stakeholders. The following question sheets were prepared:

- Questions to the Team Leader of the supervision consultants;
- Questions to a representative from the government’s Project Management Unit (PMU);
- Questions to a representative from an organization representing the disabled persons;
- Questions to a responsible person at the concerned Public Transport Authority;

In order to get a thoroughly review of each urban transport project in the field, it was suggested that interviews should be carried out with the consultant’s Team Leader, a representative for the project at the Ministry and a person from an organization for persons with disabilities. If the project included a public transport component, it was recommended that an interview should be carried out with a responsible person at the Public Transport Authority. (See Appendix 4 for copies of the interview forms).
The interviews were supposed to gather information about the ongoing implementation of the projects and give a better understanding about if and how accessibility was incorporated in the projects. The interviews should provide a better understanding on what obstacles were found for including accessibility issues in the projects and under what circumstances accessibility issues had been incorporated in the projects. The question guides included the following topics: (i) inclusion of requirements for persons with disabilities, (ii) any meetings with and involvement from organizations representing persons with disabilities, (iii) possibilities to include accessibility issues in the project, (iv) barriers to include accessibility issues in the projects, and (v) the outcome of the project regarding accessibility. For the organizations representing people with disabilities, there was one topic about their opinions regarding the accessibility in the transportation system in the city. (The assessment sheets are found in Appendix 5).

An assessment sheet was prepared to use for assessing how accessible the environment is either when it is already built or preferable when it is under construction. Furthermore, assessment of design drawings to make sure that the outcome will be accessible, was also prepared. The outcome of this assessment would give more information about the projects at site and how accessible the outcome from the project would be. This assessment sheet works like a checklist to see if a number of detailed designs have been incorporated. The assessment sheet covers pedestrian area, parking spaces and public transport. The assessment sheet is also found in Appendix 5.

Example of the format for the assessment sheet.

<table>
<thead>
<tr>
<th>Assessment sheet for pedestrian crossings</th>
<th>Date of inventory: _________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site: ________________________________</td>
<td></td>
</tr>
<tr>
<td>Are there curb stones at the crossings?</td>
<td>[ ] yes [ ] no</td>
</tr>
<tr>
<td>What height are the curb stones? _______ centimetres</td>
<td>[ ] yes [ ] no</td>
</tr>
<tr>
<td>Is the crossing in 90 degree angle to the road?</td>
<td>[ ] yes [ ] no</td>
</tr>
<tr>
<td>Are there any lowered curb stone at the crossing?</td>
<td>[ ] yes [ ] no</td>
</tr>
<tr>
<td>Width of lowered curb stone? _______ meters (0.0 meters)</td>
<td>[ ] yes [ ] no</td>
</tr>
<tr>
<td>Zero level between road surface and lowered curb stone?</td>
<td>[ ] yes [ ] no</td>
</tr>
<tr>
<td>Gradient of lowered curb stone? _______ %</td>
<td>[ ] yes [ ] no</td>
</tr>
<tr>
<td>Are there any tactile contrasts to guide to the crossing?</td>
<td>[ ] yes [ ] no</td>
</tr>
<tr>
<td>Are there any tactile warnings before the crossing?</td>
<td>[ ] yes [ ] no</td>
</tr>
</tbody>
</table>

In addition to this information, relevant written documents like laws, regulations, existing technical codes and standards, studies of disabled people’s needs and behavior, trials and studies of accessibility measures in the countries, best practice examples, etc, should be reviewed to provide a comprehensive understanding on were the country stands regarding accessibility, what is going on and what are the future steps.
The outcome from site reviews should be the following:

- Determine the barriers in the planning process for addressing accessibility issues (including legislation, design standards, funding, etc.);
- Review and comment on design standards and guidelines for accessible transport;
- Obtain information about awareness concerning accessibility requirements amongst government agency managers, public transport authority staff.

5.2 Implementation of World Bank projects in Vietnam

This sub-chapter presents the progress to date on country analysis of Vietnam. At this stage, a number of experts in the field of Accessible Transport have been identified, as well as active NGO. Initial discussions have taken place with these experts, all of whom are providing inputs to the Study. The current legal and regulatory framework has been assessed, and a preliminary assessment made of the current practices in the planning, design and implementation of accessible transport facilities and services. Key barriers to the provision of facilities and services have been identified in discussions with an established NGO.

Collaboration has been initiated with the Vietnam Assistance for the Handicapped (VNAH), and a discussion has taken place which has enabled an initial assessment to be made of:

- Barriers to addressing the needs of persons with disabilities;
- Good practices related to the provision of mobility services for the disabled in different communities in Vietnam; and
- Awareness of and attitudes to the transport needs of persons with disabilities amongst transport practitioners, operators and officials.

These discussions are continuing, with a view to identifying the survey work needed to make more in depth assessments.

Legal and Regulatory Framework

The legal provisions for persons with disabilities in Vietnam are currently being updated. A new Law for Persons with Disabilities (LPD) was passed in June 2010. The Ministry of Transport (MoT) is currently developing technical standards and guidelines to assist transport agencies and professionals in the implementation of the provisions of the law.

The MoT commissioned two universities – the University of Civil Engineering, (School of Highway and Traffic Engineering & Institute of Planning and Transportation Engineering) and the University of Transport and Communications, (Institute of Transport Planning and Management), as well as the Transport Development and Strategy Institute (TDSI) of the MoT to assist with these initiatives. Staff from the University of Civil Engineering expressed the view that there were currently no regulations or Vietnamese standards for the design of accessible transport facilities. The initiatives noted above were designed using French and
US accessibility standards. Staff from the University of Transport and Communications referred to the use of German standards\(^1\).

JICA (Japan) is currently funding a study examining the possible introduction of Universal Design principles into Vietnam, including for transport.

**Recent Experience**

**MoT Projects:** There have been some initiatives over the past five years by the MoT to introduce accessible transport, but these have had limited success. These include retrofitting of buses with wheelchair lifts, and introducing into service in Danang, Hanoi and Ho Chi Minh City (HCMC). Efforts were also made to modify rail carriages for wheelchair access. However, the designs were not effective, and operational problems resulted. Lack of funding for facilities was also cited as a reason that these initiatives were not continued.

**World Bank Projects:** VNAH indicated that they had been consulted in the past by the World Bank in the design of two previous urban transport projects in Vietnam - Vietnam Urban Transport Improvement Project (VUTIP) and Hanoi Urban Transport Development Project (HUTDP). However, they indicated that they had no knowledge of current World Bank projects. In other words, there appears to be no process within World Bank office to inform VNAH of projects. Rather it is up to individual Task Team Leaders to contact them, as had been done by the TTL for the HUTDP.

**Barriers**

One of the leading NGO in the field, the Vietnamese Association for the Handicapped (VNAH) considers that the key barriers limiting the provision of facilities and services for persons with disabilities are the following:

- Design for persons with disabilities is not institutionalized;
- There is a lack of knowledge amongst professional staff, including about standards;
- There is also a lack of consultation with persons with disabilities (in relation to design of infrastructure in projects);
- No implementation of standards, or enforcement of standards; and
- Lack of awareness and not enough awareness raising

Some initial comments on each of these barriers are provided below.

**Design is not Institutionalized:** The key reason for this barrier is that there are currently no approved Vietnamese Design Standards, and therefore no regulatory provisions to include consideration of accessibility in the design process. There is also therefore no requirement for city DoT as the design verification agencies, to include this aspect in their verification process.

\(^1\) 2003 Handbook on Barrier Free Public Transport (in English and German)
Lack of Professional Knowledge: Staff from the University of Civil Engineering said that they already provided a course on Accessible Transport for their undergraduate students. The students also undertake a case study – a recent study was on transport around Ho Kien Lake in the centre of Hanoi. They are interested in developing a training course for managers, officers and engineers working in transport, and are exploring the possibility of developing the course in conjunction with a Japanese university.

Lack of Consultation: Public consultation on planning and design is relatively new in Vietnam, and is not institutionalized. This applies to all aspects of planning and design, not just accessible transport matters. The exception is the consultation required on environmental and resettlement matters. However, World Bank staff did consult with persons with disabilities in the design of the VUTIP and HUTDP as noted above.

No implementation and enforcement of standards: There is a well defined institutional process for checking and verification of designs of civil works in Vietnam. Once Vietnamese standards on accessible transport are approved, this process should ensure that they are applied in the design of transport infrastructure. However, it is anticipated that training programs would be required to familiarize engineers with the standards and their application.

Nationally Experienced Vietnamese Experts:

The nationally experienced Vietnamese experts in the field identified to date are:

a. Nguyen Thi Phuong Hien – Head of the Transport, Environment and Development Center, Transport Development and Strategy Institute, Ministry of Transport

b. Dr. Ing Khuat Viet Hung, Chair Urban Transport Planning and Management, Dean Institute of Transport Planning and Management, University of Transport and Communications (UTC), Hanoi

c. Dr. Tung Hoang, Vice Dean of Transport Engineering, National University of Civil Engineering, Hanoi

d. Dr. Dinh Van Hiep, Executive Deputy Director, Institute of Planning and Transportation Engineering, National University of Civil Engineering, Hanoi

Key Organizations involved with disability issues in Vietnam:

National Coordinating Council on Disabilities is the Government of Vietnam coordinating agency, with representation from seventeen ministries. But this is not considered to be a strong agency.

Non Governmental Organisations (NGO) The key NGO involved in accessible transport have been identified by WB Hanoi Office as:

- Vietnam Association for the Handicapped (VNAH); and
- Hanoi Independent Living Center – which represents people with mobility impairments.

An initial meeting has been held with this NGO and further meetings were planned.
Policies, regulations and guidelines:

Policies and regulations on accessibility for urban transport:

- Law for Persons with Disabilities, Law No. 51/2010/QH12, 17th June 2010;
- The technical standards relating to disabled-friendly/inclusive design;
- Ministry of Transport (MoT) is currently developing technical standards and guidelines to implement the provisions of the Law; and
- UTC has developed in 2008 Guidelines/Textbook with 160 Million VND funding from the MoT.

As noted above, the experts whom the consultant has consulted indicated that French, German and US Guidelines had been used in Vietnam in different projects.

**Quality of Infrastructure and Services for the Mobility Impaired**

The quality of disabled-friendly infrastructure and mobility services customized for the mobility impaired is not good.

- There is very limited provision of infrastructure for persons with disabilities. Footpaths are uneven, broken up and occupied by parked cars and motorcycles, so that it is difficult for even able bodied people. There are drop kerbs at intersections which would allow persons in wheelchairs in cross. However these facilities are more used by motorcyclists for moving from the road carriageway to the sidewalk for parking, or access to adjacent properties.
- MoT and VNAH had a limited program of activities in the period 2006-2010 which included the following:
  ii. Production of Prototype Accessible Bus (2007)
  v. MoT Compilation and publication of the collection of legal documents on accessible transport (2009)
  vi. MoT conference on Accessible Transport Programs 2006-08 (2009)
  vii. VRC production of one carriage that meets specifications for accessible transport, and bringing into railway operation (2010).

Discussion with NGO suggests that items (i), (ii) and (vii) have not been successful even as pilot projects. The main text of a brief country report on the accessibility situation in Vietnam was prepared as part of this study, which is shown in Appendix 7.
The Vietnamese Law on Persons with Disabilities

A new Law on Persons with Disabilities (LPD) was issued in June 2010, adopted in Vietnam and was enacted from January 2011 (Law Nr. 51/2010/QH12, The National Assembly of the Socialist Republic of Vietnam). The Law regulates the rights and duties of persons with disabilities, responsibility of the State, the families of persons with disabilities and the society towards persons with disabilities.

In this Law, persons with disabilities are defined as those who have impairment of one or more parts of their body, or functional impairment, which are shown in different forms of disability, and may cause difficulties in work, daily life and learning. The concept of accessibility means to ensure that persons with disabilities have equal access to and use of public works, public transportation, information technology, culture, sports, etc., in order to be fully integrated into social life.

According to the Law Persons with Disabilities shall have the right to be entitled the policies and support of the State including for example health care and rehabilitation, employment, and accessibility in public construction and public transportation to the person’s type and level of disability.

In the chapter about housing, public buildings, public transport and information technology and communication it is stated that new constructions and upgrading of public infrastructures and buildings must comply with national construction code and standards to ensure access and use of persons with disabilities. Infrastructures and building which were constructed prior to the Law should be upgraded (within a regulated time schedule) to ensure accessibility. Train stations, bus stations and ports shall be renovation/upgrading as of January 2010.

Article 41 is regulating standards for persons with disabilities so they can use public transportation and personal means of transport. The Article states that persons with disabilities, who want to use personal means of transport shall be provided with training and driving license after training. If travelling in public transport they shall be entitled to use and carry along assistive devices free of charge, to exemption from or reduction of ticket fare and be given priority to buy tickets, be assisted and arranged comfortable seats.

Article 42 continue to regulate public transport stating that public transport must have seats reserved for persons with disabilities, be equipped with assistive devices to support persons with disabilities to get in and out, and other equipments necessary to assist persons with disabilities. The public transport system must comply with the national accessibility code and standards to ensure access and use by persons with disabilities. Transportation companies shall provide transport with accessibility features at a percentage regulated by the Government. The transport with regulated accessibility features shall be entitled tax exemption or reduction.

The Ministry of Construction and the Ministry of Transport are responsible for leading and coordinating with ministries and agencies to issue and implement national accessibility codes and standards to ensure persons with disabilities access and use in buildings and in the transport sector.
Study on improving accessibility of the bus system in Hanoi

A study on improving accessibility of the bus system was carried out in order to evaluate how to improve access to public transport for people with disabilities (wheelchair users and blind persons) in Hanoi. Bus route no. 34, which operates through the city centre, was selected for the study. It was assessed that the infrastructure was good enough for people with disabilities to access the bus stops along this route, and the General Transportation Company in Hanoi operated the bus route.

Suggested adaptations for blind people were oral announcements of the next stop onboard the bus and tactile surfaces at the bus stops to indicate the end of the sidewalk and the point where to board the bus. Suggested adaptation for wheelchair users was to construct a ramp on to the buses in order to make it possible to board and alight. There were also a number of suggestions for the sidewalks, including elevated sidewalks/bus stop to decrease the horizontal level difference between the bus entrance and the bus stop. This suggestion was based on the assumption that high floor buses will operate this line. Another suggestion was to use special curbstone at the bus stops to help the driver to stop very close along the bus stop, to minimize the vertical gap between the bus and the bus stop.

In the study, assessments of the environment along the route were made and a number of obstacles for improving the accessibility were found. One of these was the fact that the edge of the roads and the sidewalks often were occupied with parked vehicles, waiting people, market stands, trees, poles, etc. There was also often poor quality surface of the sidewalk and the curbstones. The buses were also sometimes in conflict with low speed vehicles which were running along the side of the lane, such as bicyclists, slow motorbikes or even pedestrians. Therefore, bus drivers would often stop in the middle of the street instead of along the curb at the bus stop. Suggested solutions for these problems were better law enforcement to clear the side of the lane and the sidewalk, and changing drivers’ behavior so they stop along the bus stop and not in the middle of the street.

The study suggested a number of typical designs for bus stops and guidelines for where to locate the bus stops. Designs for bus stops were prepared for using the center lane of the street and for curbside lanes. The suggested designs included enough width for a ramp and length for the whole vehicle to park along the bus stop, elevated bus stops and appropriate slopes between the bus stop and the sidewalk. Pedestrian crossings were proposed so that wheelchair users could reach the centre lane bus stops and the bus stops in opposite direction. The most critical part was to make sure that vehicles could get close enough to the curb stone to make sure the ramp can be used. Finally, the locations of the bus stops were checker if they were suitable or otherwise new bus stop locations would be selected. The locations for the bus stops were checked to see how they connected to the surrounded sidewalks, and the distance between the bus stops was sometimes found to be too long.
5.3 Implementation of World Bank projects in China

China issued the Specification on the Design of Urban Roads and Buildings for the Disabled (trial implementation in April, 1989). It targeted the urban roads and buildings for conveniences of the disabled people. In December, 1990, the first law for the disabled people was issued, Law of the People's Republic of China on the Protection of Disabled Persons. It was further modified in 2008 and emphasized more on the construction for barrier-free facilities for the disabled people. However, the National legislation has not been matched by adequately detailed regulatory frameworks at the Provincial and local level and so far there are no nation-wide administrative regulations in China for the barrier-free facilities. It should be mentioned that local governments like Beijing, Shanghai, Tianjin, Guangdong Province, Liaoning Province have issued or started their own administrative regulations. Some examples of the local achievements on the construction of barrier-free facilities are summarized as below:

- **Shanghai**
  In 2003, Regulation on the Construction and Usage of Barrier-free Facilities in Shanghai (No. 1 Order) was issued. The key areas for implementing the barrier-free facility construction in Shanghai include the downtown commercial district, major commercial streets and city-level public convention centers, as well as public convention sub-centers. Other areas include the municipal government, 19 district government buildings, 28 city-level hospitals, 19 district or county central hospitals, 15 cultural centers and 15 libraries, 20 post offices, 10 universities and colleges, 29 super markets and shopping centers, 20 residential communities, major service agencies for the disabled, 20 social welfare organizations, and stations of Metro Line 1. So far, Shanghai has constructed about 2035 km sidewalks for the blind and 44165 intersection ramps. With the advantage of hosting the Special Olympic Games in 2007, Shanghai has made full use of this opportunity to facilitate the construction of various barrier-free facilities. According to the Specifications of the Design of Temporary Buildings and Structures of Shanghai Expo in 2010 (chapter of barrier-free facilities), 18 kinds of barrier-free facilities were installed in 13 categories of districts and buildings. A large series of barrier-free facilities were installed in 30 sport museums, 155 communities, 96 hotels and roads. In 2010, the city also procured 80 low-floor buses for boarding conveniences of the vulnerable groups. Barrier-free entrances, exits and check-in services have also been implemented in the two international airports. Transportation/interchange hubs have also achieved the standard of barrier-free.

However, there are also some problems in barrier-free facility construction. For example, the quality of handset of ramps, grab bars in the toilets, sidewalks for the blind are still lower than the standard. There are still some issues remaining, such as sidewalks for the blind being occupied by other vehicles or the damage to some facilities not being repaired on time. More emphasis on education and enforcement is required to raise the whole society’s awareness to the disabled people.

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- **Dalian**

Dalian started barrier-free facility construction earlier than other cities in China. Dalian is also the first city in China to adopt the alarm-report system for the deaf and the blind, and the first guide dog base in China. In February, 2002, Dalian was awarded the first demonstration city for barrier-free facility construction by the former Ministry of Construction, Ministry of Civil Affairs, China National Committee on Aging and China Federation of the Disabled. After that, the construction of barrier-free facilities in Dalian has entered into a new stage. Dalian has also issued the Regulations on the Construction and Management of Barrier-free Facilities in 2003.

In recent years, Dalian has several highlights in the barrier-free facility construction, for example, sign language ticket checking in the Dalian Railway Station and the barrier-free facilities in the new airport terminal have reached the advanced international level. The barrier-free standard has been reached in 14 health care organizations, 42 banks, 14 post offices, 6 cultural facilities, 2 long-distance transport hubs, 37 public toilets and 16 large and medium size shopping centers. 80 low-floor buses with onboard lift platforms have been put into use, and Braille/raised-letter signs are provided at most of their stations. Pedestrian crossing has been equipped with audio system. Moreover, in the recent mid-term examination on building the national barrier-free city, Dalian was evaluated as reaching the objective of the 11th-five year plan for the barrier-free facility construction, and the blind guiding system “Tian’er” was confirmed by the examination team. Currently, the “Tian’er” system for the blind to look for bus stops and buses has been updated. The blind could use the remote control to identify the direction and pass through underpasses and overpasses successfully.

- **Changzhou**

Starting in the middle 1990s, Changzhou has installed barrier-free facilities in the construction or reconstruction of 18 roads in response to the Specification on the Design of Urban Roads and Buildings for the Convenience of the Disabled. By now, the length of the sidewalks for the blind of the whole city has reached 220 km and 80% of the urban arterial roads have being equipped with sidewalks for the blind. There are over 3200 places with barrier-free curb ramps along urban roads. The construction of barrier-free facilities in urban arterial roads in downtown areas reached 95%. Over 80% of all buses are equipped with audio bus stop broadcasters and electronic stop displaying boards in large buses.

Barrier-free facilities are installed in all newly built or reconstructed large-scale public buildings. A special barrier-free design is also conducted at main stops of BRT Line 1 and 2. Disabled people with wheelchair can go to the platform directly and special wheelchair seats are also equipped in BRT buses.

Although the barrier-free construction in Changzhou has made some achievements, it still faces some challenges. For example, barrier-free facilities are often occupied or changed for other purposes. The supply of barrier-free facilities lags behind the real demand. The maintenance and management on barrier-free facilities also need to be strengthened.
In recent years, Jinzhou City has actively learnt about successful international experiences of barrier-free facilities. The barrier-free concept has been integrated into the process of urban planning and engineering design. These barrier-free facilities include sidewalk for the blind, ramp and other facilities for the disabled people. For example, the pavement of sidewalks for the blind is constructed for visual disabilities by tactile materials, which are divided into direction-leading strips with convex bars and stopping strips with dots indicating obstructions ahead. In addition, the sidewalk for the disabled has also been built with ramps in major exits, intersections and flat entrances for disabled people with wheelchairs, the elderly, women and children.

With the support of the World Bank, the total length of the sidewalks for the blind has been extended. More sidewalks for the blind have been constructed, reflecting the civilization and humanistic care of the city. The colorful skid-proof sidewalk for the blind has added the beauty to the city and also showed the consideration of city managers for the disabled people.

The project was designed to improve the pedestrian safety situation and the project design was refined through extensive consultations with user groups. The travel needs of the disadvantaged and vulnerable road users were mentioned in the project documentation. Focus groups, open meetings and questionnaires were used to obtain feedbacks on the transport services and road infrastructure from the elderly, migrant workers, the mobility impaired and the poor. Two rounds of public participation meetings were arranged to discuss concerns regarding project components. These meetings focused on ensuring that the people most affected by the project would be fully aware of the mitigation measures to be implemented. The views of the vulnerable groups were then taken into consideration by the appropriate authorities.

In the process of barrier-free facilities construction, organizations for disabled people were represented in the public participation activities arranged for the World Bank Jinzhou urban transport project. Comments and suggestions were received from the public regarding 14 streets/roads, the First Bridge (Gongtie Overpass of Hankou Street) and sidewalks for the blind, ramps, civil affairs facilities and bus lines. The Municipality responded by incorporating in the implementation process the comments and suggestions proposed by the disabled in the “Roundtable Discussion on the Barrier-free Facilities of Jinzhou Urban Transport Project”. The actions include reducing obstructions in the whereabouts of the ramp curbs, expanding the sidewalk for the blind and marking the line of travel, etc.

Furthermore, the Federation of the Disabled of Jinzhou, also worked closely with the project to bring the disabled people to the streets for “field test” to identify the accessibility of road infrastructure.

However, there are also problems existing in the construction of sidewalks for the blind. For example, some sidewalks for the blind are blocked by vehicles or occupied by utilities poles.
Again, it is still very important to strengthen the enforcement and more emphasis should be given to raise the whole society’s awareness to the disabled people.

5.4 Reflections on the information from the countries

The information from the two countries indicates that the awareness about accessibility in the transport sector is improving. In both Vietnam and China there is now legislation about the rights of people with disabilities. At least the law from Vietnam is comprehensive and also provides quite detailed information for some parts of the transport sector. According to the law, concerned Ministries like the Ministry of Transport and the Ministry of Construction shall produce standards for accessible designs. Whether this has been done or not is not clarified and thus the content and level of such standards are unknown.

Local governments in Beijing, Shanghai, Tianjin, and the provinces of Guangdong and Liaoning have issued or started preparation of their own administrative regulations for accessibility, but so far there are no nation-wide administrative regulations in China for barrier-free facilities. A modified version of the Law for disabled people emphasized more on the construction for barrier-free facilities than the earlier version. What the law and regulations actually include is, at the moment, not known to the project team. Except from the unknown content of the standards and regulations in both Vietnam and China, there is little information about the impact on the built environment from these documents.

In Vietnam, there seems to be some organizations representing people with disabilities which are quite active. Organizations like Vietnam Association of the Handicapped and the Hanoi Disability Forum have been working together with concerned Ministries and they have also been involved in meetings related to the World Bank funded Hanoi urban transport project. Several universities have also been involved in studies regarding accessibility in the transport sector. For example, a study for a project trying to improve accessibility along one major bus routes in Hanoi was carried out, as described above.

In China, there has also been work carried out on the accessibility of disabled persons. Related to the World Bank project in Liaoning Province, a number of public participation
meetings were held. Groups of blind people and mobility impaired people were invited to discuss and test out the pedestrian environment.

Indications from the two countries show that so far the World Bank funded projects cannot be seen as having improved accessibility to any large extent. What will come out of the ongoing projects are still not known. One exception is the Liaoning project where the projects has implied some improvements in the pedestrian environment, mainly tactile guiding for people in some cities we have knowledge about. The main improvements are tactile surfaces for blind people and improved crossings for persons using wheelchair and persons having problems with walking.

There seems to be some good examples from the two countries both related to the World Bank projects and other initiatives, but they seem to be scattered and irregular. In Vietnam, there are concerns expressed that the accessibility work which has been done, has been depending on special interest from the TTL. It is therefore necessary to establish institutional frameworks for monitoring accessibility to ensure that the work will continue and be sustainable. In both China and Vietnam, NGOs and Ministries need help to continue the accessibility work on all levels to ensure that accessibility measures are properly implemented, Technical and institutional improvements are still required in order to achieve a fully accessible environment in these two countries.

It can be concluded from the field reviews, there is a lot more that can be and should be done, and it should not only depend on a certain interest among one TTL, some organizations or some government officials. There must be a more continuous and guided way of working with these questions if the goal is to develop an accessible transport system.
6. Conclusions and recommendations

The chapter presents conclusions from the data that has been reported in this review and recommendations regarding how the World Bank could work in the future to support and promote accessibility in the transport sector.

6.1 Conclusions from existing projects

Is accessibility included in World Bank funded projects?

From the projects that have been reviewed, it does not seem like accessibility has been of any major concern either in the planning phase or in the implementation phase. Very little information was included in the PADs and in the ICRs about work on accessibility issues. From the interviews with the TTLs there is not much information either about working with accessibility issues.

There are a few assumptions, for example one TTL was involved in working with public participation regarding accessibility issues and he also prioritized these questions. Some of the projects, such as Xi’an, Liaoning and the second Vietnam project, include some accessibility aspects either regarding public participation or design standards that can improve accessibly in pedestrian environments.

From the field review, there is some information about work regarding accessibility. It is mainly in the Liaoning project. From other projects the information is limited, but it is assumed that accessibility has not been an issue.

Most of the projects included improvements of the sidewalks and pedestrian crossings, and in some projects footbridges and subways. In some of the projects, the accessibility aspect of the pedestrians is clearly addressed (Wuhan and Hanoi), e.g., removal of obstacles from the sidewalks, dropped curbs, ramps, and tactile surface markings. Otherwise the improvements for pedestrian have been input in the projects more from a safety point of view and prioritized non-motorized traffic rather than from an accessibility point of view.

Even if the main part of the projects, included in the review, were improvements in the road system, all projects also had components regarding pedestrian environments or public transport travelers, and it can be concluded that so far the World Bank has not acting in the best way to promote and support accessibility in the transport sector.

What are the conditions for transferability of “Best Practice”?

Since there is not many good examples coming from the World Bank funded projects, it is difficult to talk about “Best Practice”. There are a few good examples of including needs from people with disabilities and other groups’ special needs into the projects, but from these examples we do not yet know if they also have an influence on the actual outcome from the projects. There are few examples and little knowledge about the outcomes from the projects regarding accessibility and therefore it is difficult to say if this is “Best practice”.

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Why has accessibility not been included in the reviewed projects?

According to most of the interviews with the TTLs, accessibility has not been included in the projects because the borrowers had to focus on so many other things. So did the TTLs, who were focusing on what the Borrowers wanted and they also had to comply with Bank’s project requirements concerning environment, resettlement and road safety. The awareness about accessibility among the borrowers seemed quite limited according to most of the interviewed TTLs. Since either the Bank or the countries themselves had any demands regarding accessibility, it was simply not taken into account in the projects.

The TTLs also talked about the costs of making things accessible and that developing countries have so many other things to care for. Often, building accessible environments for pedestrians do not cost more than building not accessible, so the worries about extra costs might have been sometimes misguided.

Worldwide issues of accessibility have become much more prioritized and the awareness among officials has increased the last years. There has been much more focus on these issues with laws and recommendations regarding accessibility for people with disabilities being implemented in different countries, developed countries general being ahead of developing. So for the earliest projects that were reviewed, it is not very surprising that there is not much talk about accessibility.

For the later projects, however, it is more surprising that there is not more accessibility included in these projects. However, this statement is mainly based on information from the PADs. Since there are indications of new laws and regulations about accessible environment in Vietnam and China, it could have been expected that these laws and regulations should have been mentioned in the PADs.

Has the internal work within the World Bank highlighted accessibility measure?

According to the interviews with the TTLs, the Bank did not have much focus on accessibility before and the TTLs were, according to most of them, not very encouraged to work with accessibility issues. Since it is the Borrowers themselves who define their projects, most of the TTLs felt that it would have been somewhat difficult to force them to include accessibility since most of the TTLs apprehended that it was not an issue either in Borrower’s country or within the Bank. However, since the Bank enforces Operational Procedures (OP 4.1), this could also be done regarding accessibility in future projects.

For most of the projects, there was no person in the Bank with special knowledge or special responsibility to check that accessibility was taken into account in a proper way, like there are people responsible for the resettlement for example. The TTLs for the reviewed projects were very experienced transport specialists, but still there was no person with specialized knowledge in accessibility to provide assistance or guidance with the preparation phase and appraisal of the projects.
What are the barriers to address the needs of disabled people and ensuring accessibility?

The barriers could be several different types and are of course also for the different countries and in different projects. Considering the legal aspects, the legislation should not hinder the authorities to work with accessibility in these countries. In both China and Vietnam, there is a law about people with disabilities and their rights. At least in Vietnam, the law is quite strong regarding accessibility in the transport sector. This means that legal aspects should not be hindering, but support the work with accessibility in both countries.

On the other hand, it does not seem to be any commonly used design standards in either country and the lack of such documents might be hindering the work with accessibility. There is probably not any regulation in place in the countries either, which probably has a negative impact.

Some TTLs emphasized that as long as accessibility is not regulated from the state authority or at least the municipality authority, the Borrowers will not involve accessibility in their projects. There must be a stronger incentive for them to include accessibility.

The largest barrier is probably lack of awareness of the importance of building accessible environments among officials. Many TTLs said that the Project Management Unit staff from the Borrower often had so much work to deal with that they do not manage to include another aspect like accessibility.

Lack of financial resources might be a reason for not implementing accessibility to a higher degree. However, building accessible environment compared to building not accessible environment is not so costly. Lack of financial resources, might be an easy way of explaining way accessibility is not included in the projects. Saying that it will not cost more to build accessible is often true when it comes to pedestrian environment, but of course to implement an accessible bus system this will cost more, due to high vehicle costs and specialized technology costs, e.g., kneeling buses, electronic sign boards on bus and terminal, special ticket machines, etc.

Lack of personnel resources or inadequate expertise would be one reason for not working so much with accessibility issues. Again, when there are so many components in the projects, it is not easy to have experts for all different project components and experienced generalists must work with all the tasks. However, there could probably be an upgrade of the accessibility knowledge among the consultants doing the work and also among the technical staff from the World Bank and the Borrowers.

Which are the success factors?

To create accessible transport environments there should be:

- Design standards for different modes of transports;
- Awareness among the officials, planners and builders;
Involvement of NGOs for people with disabilities in the planning and implementation process to make sure it is customized to the actual country and site.

From the reviewed projects, there were some good examples of involvement from people with disabilities and some examples of descriptions of special measures improving for people with disabilities like lowered curb stones and provision of tactile surfaces for blind people. The information about the outcomes from these incentives was limited, but they have most definitely improved the accessibility for people with disabilities.

Good design standards are important to have since they will make the planning and design phases easier. Having the same design everywhere in a certain country will also help people to recognize the measures. We have not really seen any of them in the preparation documentation for the projects, but there might be standards used in some of the projects which are under implementation.

Awareness among different stakeholders is very important to get improvements in accessibility. This was something some of the TTLs were quite concerned about, because they felt that the awareness among the Borrowers was limited. It could be a big job to promote accessibility if there is no awareness about the importance of the problem. Some TTLs also hesitated to say whether they can force the Borrowers to include accessibility in their projects or if it has to come from the Borrowers themselves.

Involvement from people with disabilities or representatives from organizations for people with disabilities is essential. This will secure that the outcome from the project will fit the needs from people with disabilities in that specific country or site. There are a couple of good examples among the reviewed projects about involvement from people with disabilities, specially the field trial that was included in one of the projects.

6.2 Recommendations for future projects

According to most of the TTLs, the reason for that accessibility has not been included or focused on in World Bank projects, is that accessibility has not been an issue among the Borrowers they worked with nor to any large degree within the Bank. The country themselves and the management teams for the projects had no intension to work with accessibility aspects. Furthermore, accessibility has not been an issue within the Bank until recently and therefore there have not been any directives about how to work with accessibility issues Bank projects.

Apart from the internal Bank document: “Transport strategy to improve accessibility in developing countries”, there have not been any directives from the Bank about how to work with accessibility issues in the transport sector, like there are directives for some other areas, such as environment or resettlement. Even if the document above was prepared some years ago it seems like it needs to be communicated more internal in the Bank. This document should also be supplemented by more hands on practical guidelines about how to work to improve accessibility in the transport sector.
The World Bank should take responsibility and promote and support accessibility in all transport projects which the Bank is involved in. There are worldwide declarations about the rights of people with disabilities and which are promoting accessibility in the built environment and for the transport sector. Therefore, the World Bank with its influence should take the lead in working with accessibility issues.

There might be limited knowledge about accessibility for people with disabilities among TTLs in the transport sector since most of those interviewed argued that it would be too difficult and too expensive to include accessibility aspects. Through information and training it will be obvious for all TTLs that there are reasons to stress the importance of accessibility and that many improvements can be done without being too complicated or making the projects more expensive than planned from the beginning.

**To take steps forward the World Bank should work with three aspects:**

- **Raise awareness and knowledge among the World Bank’s TTLs about accessibility in the transport sector;**
- **Enforce the Borrowers to implement accessibility measures;**
- **Make sure public participation meetings for groups of people with disabilities are held during the project.**

Raised awareness and knowledge will be reached through internal training courses and workshops as well as through written documents and checklists which are easy to follow. The strategy document is in place, but this must be communicated and followed by more practical documents to be used by the TTLs during the project. Information about how accessibility could be improved without letting the projects be too difficult or expensive should be given to the TTLs.

The Bank should enforce the Borrowers to include accessibility measures. This could be done through the process of clearing procurement documents, e.g., designs before appraisal (according to OP 4.01) and demand accessibility to be included in the Transport Strategy. It is important that accessibility is not only required in strategic documents, but also in design documents so there is a real outcome. Of course the level of accessibility that can be reached may vary, but as soon as pedestrian environments are included these should be built accessible using standards from the Borrower country, from other countries or international.

The process with public participation meetings is already very developed within the Bank. These should also include meetings with people with actual disabilities, and not only representatives for these groups but the people themselves. Through these meetings, it will be possible to find out the needs and requests from the people living in that country or area, since there could differences between people depending on cultural difference, habits etc.

The Bank should set targets for its work with accessibility in the transport sector. With defined goals the chance to reach improvements in accessibility will be much greater. To work towards a defined and agreed vision will also lead the accessibility work forward.
The following recommendations for actions are made from the information that was collected in this study.

- The Bank should develop guidelines for project preparation which explain how to address the accessibility issues in future transport sector projects and develop a checklist to make sure accessibility is properly addressed (see Appendix 6 for an example of such a checklist).

- National and regional regulations regarding accessibility in transport systems should be implemented in Bank loan projects whenever there are such regulations in the country.

- At least one person with specialized knowledge within the area of accessibility should be involved in the preparation of the project for a Bank loan. This could be a person from the Social Development Group of the Bank or from the transport anchor.

- All transport projects for a Bank loan should be approved by an appointed person in order to ensure that accessibility issues are addressed in a correct way during the following project cycle stages: (i) the project preparation phase; (ii) the detailed design phase; and (iii) supervision during the project implementation phase.

- Public participation meetings should be mandatory also regarding accessibility issues as it is for environmental and resettlements issues. One useful way of carrying out public participation meeting regarding accessibility is to make field surveys where people with different disabilities try out the designs to make sure that these design solutions are accessible.

- There should be close involvement with organizations representing people with disabilities throughout the whole project, in the planning phase, during implementation and to audit the environment after completion.

- Staff at the government established Project Management Units for urban transport projects should receive some awareness training in accessibility aspects.

- The institutional development components of urban transport project loans should also include accessibility training for the bus drivers and other staff at public transport companies and government officials, who are likely to deal with persons with disabilities.

- Special reviews or accessibility audits should be carried out during the project to secure that new development will be built accessible. This implies that drawings must be checked before they are approved for implementation.

- Special reviews or accessibility audits should be carried out for the completed project to secure that new developments are built accessible.

- The World Bank could set up a website of good examples of accessibility work from around the world with focus on good examples from the developing world. The
website could be set up in a way so everybody who wants can also add their own good practice accessibility examples.

**Table: Framework showing specific tasks to be made and in what phase.**

<table>
<thead>
<tr>
<th></th>
<th>Planning phase</th>
<th>Implementation phase</th>
<th>Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>World Bank</strong></td>
<td>Checklist for accessibility</td>
<td>Promote that accessibility standards are used</td>
<td>Assessing accessibility at site</td>
</tr>
<tr>
<td></td>
<td>Awareness raising for governmental staff</td>
<td>Support training courses about accessibility</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Promote the Borrower to include accessibility in their Transport Strategy</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Promote the Borrower to use standards for accessible transportation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approval of document</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Borrower</strong></td>
<td>Meetings with relevant NGO</td>
<td>Use design standards (national or best practice)</td>
<td>Discussions with relevant NGOs for persons with disabilities</td>
</tr>
<tr>
<td></td>
<td>Public Participation meetings with people with disabilities</td>
<td>Courses in awareness for governmental officials</td>
<td>Public Participation meetings with people with disabilities</td>
</tr>
<tr>
<td></td>
<td>Produce standards for accessible environment or include existing ones</td>
<td>Courses in awareness for traffic planners and public transport staff</td>
<td>Promote the new system to people with disabilities</td>
</tr>
</tbody>
</table>

The Bank can and should promote and support accessibility. Through new directives from the Bank the situation can be improved so that accessibility could become a natural part of the projects. Many of the TTLs interviewed put a lot of trust in the Social Development Department for preparing guidelines regarding accessibility.

What is needed according to many TTLs interviewed is advocacy for accessibility in the transport sector. This will be a big help for the TTLs to promote and to work more extensively with accessibility components of transport projects in the future. The Bank must therefore start to promote accessibility among the Clients.

Projects that are supported by the World Bank should always use some standards for accessible environment to secure that the implemented system will be accessible. If the
country does not have any or does not want to produce any, the project should at least use the
design standards that are found in the ISO standard for built environment or decide to use
existing design standards from other countries. The use of these standards should be included
in the financing agreement to ensure that they are applied in the project.

The World Bank should work with awareness raising both internal and among the Borrowers.
This should be done through a number of workshops where facts about mobility for people
with disabilities are presented, the state of the art regarding accessibility inclusion in World
Bank projects and good and bad examples of accessible environments. If the Bank decides to
work goal oriented to create more accessible transport systems, the proposed
recommendations and actions need to be outlined in more details.
References


Appendices

- List of Reviewed Urban Transport Projects in China and Vietnam
- Accessibility checklist for urban transport projects
- Questionnaire for interviews with Task Team Leaders (TTLs) at the World Bank
- Background information – to be filled in by Local Expert
- Assessment sheets for built environment
- Checklist – Accessibility for people with disabilities, for the preparation phase
- Country Report on Accessibility in Vietnam
- International Examples
Appendix 1

- List of Reviewed Urban Transport Projects in China and Vietnam
# List of Reviewed Urban Transport Projects in China and Vietnam

<table>
<thead>
<tr>
<th>No.</th>
<th>Project ID</th>
<th>Project Name</th>
<th>Country</th>
<th>Loan Amount (US$ mill.)</th>
<th>Loan Approval Date</th>
<th>Status</th>
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<tbody>
<tr>
<td>1</td>
<td>P003614</td>
<td>Guangzhou City Center Transport Project</td>
<td>China</td>
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<td>29/5/1998</td>
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<td>2</td>
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<td>19/12/2000</td>
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<td>China</td>
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<td>6</td>
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<td>P099992</td>
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<td>Active</td>
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<td>P093963</td>
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<td>China</td>
<td>100</td>
<td>8/1/2008</td>
<td>Active</td>
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<td>10</td>
<td>P092631</td>
<td>Xian Sustainable Urban Transport Project</td>
<td>China</td>
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<td>24/6/2008</td>
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<td>11</td>
<td>P112838</td>
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<td>30/3/2010</td>
<td>Active</td>
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<td>12</td>
<td>P111421</td>
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<td>China</td>
<td>100</td>
<td>April 2010</td>
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<tr>
<td>13</td>
<td>P081615</td>
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<td>China</td>
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<td>Fuzhou Urban Development Project</td>
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<td>11/05/2005</td>
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</tbody>
</table>
Appendix 2

- Accessibility checklist for urban transport projects
Appendix 2

Accessibility checklist for urban transport projects

A. “Planning phase”

1. What modes of transport are included in the project? (Bus, tram, metro, water transport, car traffic, pedestrian environment, Special Transport Service (STS))?

2. Are the needs from persons with disability mentioned in the WB documents?
   (i) In what way have the needs been expressed?
   (ii) Which types of disabilities are mentioned? (physical impairments, hearing impairments, vision impairments, cognitive impairments)
   (iii) Are needs from other groups mentioned?
   (iv) In what way are these needs reported?

3. Are the needs from persons with disability included specifically in the project?
   (i) In what way are these needs expressed?
   (ii) Which types of disabilities are included? (physical impairments, hearing impairments, vision impairments, cognitive impairments)

4. Are there any components focusing on needs from people with disabilities?
   (i) If any, what are these components?
   (ii) If any, for which type of disability?

5. Have there been any specific meetings with groups of people with disabilities?
   (i) Has any written documents from groups of people with disabilities been included in the documentation?

6. Are there any national or regional documents about the rights of persons with disabilities mentioned in the documentation?

B. “Implementation phase”

7. Will there be any cooperation with stakeholders concerning the accessibility issue?
   (i) If yes, which stakeholders?
   (ii) If yes, in what way?

8. Are there any national or regional documents (declarations/bills about rights of persons with disabilities) which are mentioned and needs to be considered when implementing the project components?
9. Are there any design manuals or guidelines for the transport sector that are mentioned and needs to be considered when implementing the project components?

10. Is there any procurement for vehicles regarding accessibility standards included in the project description?

11. Are there any design standards for stops/stations and terminals regarding accessibility standards included in the project description?

12. Are there any design guidelines for pedestrian environment included in the project description?

13. Are there any design guidelines for information systems connected to the transport modes in the project description?

14. Are the World Bank guidelines for public transport driver behavior included in the project?

15. Will there be any training programs for public transport drivers in order to provide service for persons with disabilities?

16. Will there be any training programs related to provide service for persons with disabilities for other staff in the transport system?

C. “Outcomes from the project”

17. Are persons with disabilities mentioned as a group that will benefit from the project?
   (i) If yes, which groups of disabled?
   (ii) If yes, in what way?

18. Are other groups of people (elderly, children, pregnant women, commuters etc) mentioned as a group that will benefit from the project?
Appendix 3

- Questionnaire for interviews with Task Team Leaders (TTLs) at the World Bank
Appendix 3

Questionnaire for interviews with Task Team Leaders (TTLs) at the World Bank

Country and city: __________________________________________________

WB Project: ____________________________________________________________

Name of TTL: ________________________________________

A. Questions about inclusion of requirements for persons with disabilities in the project

1. Do you know of any existing legislation/transport strategy/guidelines and standards/other documents or work/dialog about designing for accessibility for persons with disabilities in the country or in the area of the project? If not, why is that do you think?

2. Has there been any discussion within the project organization about accessibility issues and the projects influence on persons with disabilities? If yes, what kind of discussion and what was the outcome?

3. Have needs from persons with disabilities/accessibility issues been included in the project in any way, as far as you know? (Describe in what way?)

4. If these needs have not been included in the project or there have not been any (or very little) involvement on accessibility issues for persons with disabilities, why do you think this has happened?

   e.g. - no legal requirement to do so
   - in legislation but no specific guidance is provided
   - no one in the project organization with this knowledge/awareness/interest
   - not relevant in this project/persons with disabilities will not use the system
   - etc

5. Could you have done anything to involve these matters in the project? If yes, how and in what way?

6. Do you think the outcome of the project will be of importance for persons with disabilities?

B. Questions about Project Design

1. Do you think that the Bank should require that the Transport Strategy for the cities where the Bank is funding urban transport projects, should also include accessibility for persons with disabilities? If you do not think so, why?
2. Do you believe that the extensive public participation events, which now focus mainly on environmental and resettlement aspects should also include officials from NGOs and other civil society organizations representing the disabled persons and persons with special needs? If yes, in what way should they be involved?

3. Do you think that government officials and public transport authority representatives involved in Bank funded urban transport projects should take a greater interest in the accessibility aspects of such projects? If yes, how could this be encouraged and how could they make a difference?

4. Do you think that the institutional strengthening or institutional development component of the Bank funded urban transport projects should also include training regarding accessibility aspects? If not, why not? If yes, how could this training be implemented?

5. What is your opinion about the Borrower having twinning arrangements with an overseas public transport authority, which have good experience in addressing transport accessibility issues?

. Questions about the process within the World Bank regarding inclusion of accessibility issues in transport projects

1. In your experience is there normally any competence included in the consulting team with knowledge about transport accessibility requirements for persons with disabilities?

2. Did anyone with knowledge/awareness about transport accessibility issues review the project proposal before the loan was approved?

3. In your view, what measures could the World Bank take in order to involve this aspect in their future transport projects?

D. Personal background

1. How would you define your own competence/knowledge/awareness regarding special needs for people with different disabilities and accessibility issues?

2. Do you know about the;

(a) World Bank accessibility guidelines for BRT (Bus Rapid Transit) systems? If yes have you used it? If yes, do you have any comments?

(b) Transit Access Training Toolkit? If yes have you used it? If yes, do you have any comments?

3. Are there any particular references or websites you would recommend to other TTL that you have found useful regarding accessibility issues?
Appendix 4

- Background information – to be filled in by Local Expert
Background information – to be filled in by Local Expert

Country and city: __________________________________________________

WB Project: ______________________________________________________

A. Accessibility measures for persons with disabilities in existing official documents

Is accessibility for persons with disabilities included in any way in the following documents? Please review documents and briefly describe what is included relevant to accessibility and usability for persons with disabilities.

(If documents are found in electronic versions please sent to Team Leader.)

- Laws (any paragraphs stating the right of persons with disabilities)
- Policies and Regulations related to the transport system
- Other official documents
- Technical standards and design guidelines (e.g. road design manual, pedestrian design manual, traffic safety manuals)
- Regulations for providing public transport services

B. Surveys about travel habits and travel possibilities for persons with disabilities

1. Has there been any surveys carried out focusing on the needs of people with disabilities for accessible transport in the countries of the study?
   (If yes, either review and send in a summery or send the report to the Team Leader.)

2. Has there been any surveys that highlight the interaction between disability and access to work, economic opportunities and social and health services in the region?
   (If yes, either review and send in a summery or send the report to the Team Leader.)

C. Barriers to address the needs of disabled people and ensuring accessibility of transport systems

1. What do you think are the largest barriers for this project to be an accessible transport project or to include more accessibility measures?
   - legal
   - project-based
   - lack of financial and/or technical resources
   - inadequate expertise
- no political and official willingness
- etc

2. What could be done to include accessibility issues in a broader sense and secure the outcome of the project to be more accessible for persons with disabilities?

**D. Awareness of the importance of accessibility measures**

1. How do you apprehend the awareness of the importance of an accessible transport system among the following:
   - project team leader
   - official representative
   - persons at the Public Transport Authority
Questions to the Consultant’s Team Leader

Name of consulting company: ____________________________________________
Country and city: _____________________________________________________
WB Project: ___________________________________________________________

A. Questions about inclusion requirements for persons with disabilities

1. Are there any existing documents about designing for accessibility for persons with disabilities in the country or in the area of the project? (What you know about?)
   1 a) If yes, are these design standards incorporated in the project design and implementation?
   1 b) If they are not incorporated, what is the reason?

2. Have needs from persons with disabilities been included in the project in any way? (Describe in what way?)

3. How would you define your own competence/knowledge/awareness regarding the special needs for people with different disabilities?

4. Are there any competence included in the consulting team with knowledge about special needs from persons with special needs?

B. Meetings with organizations representing persons with disabilities

1. Have there been any meetings or discussions with organizations representing persons with disabilities during the project? (Please describe with which organizations, what kind of meetings and at what stage in the project implementation?)

2. Have organizations sent in any accessibility related requests or suggestions in relation to the project?

3. Do you know if there are any NGOs or other organizations which are active in this city regarding transportation issues or any other issues concerning persons with special needs?

C. Reason for not involving organizations representing persons with disabilities (if there has been no involvement)

1. Why has there not been any involvement from these organizations?
   - The project does not involve accessibility issues
   - They cannot give any input
- There is no organization/I do not know about any such organization
- etc

2. Could you have done anything to involve such kind of organization in the project? If you think about it, in what way should that have been?

3. What input/benefits do you think these kinds of organization could have given to the project?

*Please continue on next page.*

**D. The team leader’s opinion about possibilities to include persons with disabilities or other special needs in the project**

1. How could the transport system be improved in this direction?

2. Why do you think there has been no input from the handicap organizations?
Questions to Ministry representative

Position and Ministry: ______________________________________________

Country and city: __________________________________________________

WB Project: ______________________________________________________

A. Questions about accessibility requirements for persons with disabilities

1. Are there any official documents regarding inclusion of persons with disabilities and design standards for accessibility for persons with disabilities in the country or for the municipality where the WB project is implemented?

1 a) If yes, where these incorporated in the WB project?

1 b) If they are not incorporated, why is that?

2. Were there any discussions, when applying for the loan of this project, to include accessibility facilities for persons with disabilities?

3. Have needs from persons with disabilities been included in this WB project in any way? (if so, describe in what way.)

4. Has the ministry or the government made any statements about inclusion for persons with disabilities in the society or their possibilities to use the transport system?

B. Relations with organizations representing persons with disabilities

1. Do you have regular meetings or discussions with organizations for persons with disabilities?

2. Have there been any meetings or discussions with organizations representing persons with disabilities during the preparation of this specific WB financed project? (Please describe with which organizations, what kind of meetings and at what stage in the project preparation.)

2a. If not, why has there not been any involvement or input from these organizations?

C. Special needs from persons with disabilities

1. Does this WB project takes into account special needs from persons with disabilities when it comes to physical environment, travel possibilities, services etc? In what way?

2. Would you say that the outcome from this project would benefit persons with disabilities in any way? If yes, what is that?
3. Would you think the transport system could be improved in the direction to be more accessible and usable for persons with different disabilities? In what way?
Questions to representatives of organizations for persons with disabilities

Name of organization: ______________________________________________

Country: _________________________________________________________

City: ____________________________________________________________

A. Questions about the organization and persons with disabilities

1. Which group of people do you represent (e.g., type of disabilities)?

2. How many persons are members of the organization?

3. How many in the population have this kind of disability (for example, if many different disabilities, specify)?

4. What are the main focus of the work you are doing?

B. Internal work in the organization with transportation issues

1. Have you discussed the traffic environment within your organization (e.g., pedestrian environments, possibilities to cross streets, the public transport system and possibilities to use a private car)?

2. Have your organization produced any documents about the accessibility issues of the transport system (e.g., what kind of documents and when were they produced)?

3. Have you exchanged these documents with any relevant governmental official?

4. Have your organization been involved (e.g., been invited to meetings, being discussion partner) in any preparation work for transport facilities in the city (e.g., walking environments, public transport systems, new road projects, etc)?

C. Opinions regarding the transportation system in the city

1. How does your organization apprehend the walking environment in this city for the group of people you are representing (e.g., walkways, crossings, pedestrian bridges/tunnels, stairs and ramps etc)?

2. How does your organization apprehend that the public transport system works for the group of people you are representing (e.g., possibility to use, boarding and lighting, drivers attitudes and service, buying tickets, etc)?

3. What accessibility improvements does your organization think are necessary in the transport system in order for it to being usable for the people you are representing?
Questions to Public Transport Authority Staff

(Ask if public transport component is included in the WB project and if it is at a stage where the public transport system has started to operate).

Position and Authority: ______________________________________________

Country and city: __________________________________________________

WB Project: ______________________________________________________

1. What are your policies regarding service for persons with disabilities? (Written documents, official statements, etc)

2. Are there any special service or design features to facilitate for persons with disabilities within your public transport system (e.g. tactile guiding for blind persons, priority seats for frail people, low floor vehicles and lifts/ramps for persons using wheelchairs)?

3. Would you say this public transport system is accessible for persons with disabilities?

3a. In what way is it accessible?

3b. In what way is it not accessible?

4. Do you provide any other public transport system (like dial a ride or Special Transport System (STS) with taxis or small buses) for persons with disabilities?

5. Have the bus drivers, transit personnel, ticket office personnel attended any awareness course about how to meet and serve persons with disabilities?

6. Have your Authority had any meetings or discussions with organizations representing persons with disabilities within the scope of this project or regarding other projects?
Appendix 5

- Assessment sheets for built environment
Appendix 5

Assessment sheets for built environment

Project name: __________________________________________________________

City and country: ______________________________________________________

Assessment made by: _______________________________________

Assessment sheet for pedestrian environment

Date of inventory: _________

One inventory is made for every pedestrian link, i.e. along one block of houses and includes the crossing at the end. If the crossing includes a zebra crossing or a crossing with signals, an inventory guide for this is used, if there are no marking the last section of this inventory guide is used.

Is the surface even, firm and non-slippery?  □ yes □ no

What surface is the pavement? ___________________________

Is the width of the pavement at least 0.9 meters?  □ yes □ no

Are there any obstacles along the pavement?  □ yes □ no

(like poles, advertisement, dust bins etc. that stands in the way and implies that the free width is less than 0.9 meters)

Are there obstacles that are not marked with visual contrast?  □ yes □ no

Are there curb stones along the pavement?  □ yes □ no

Are there visual contrasts between the pavement and the road?  □ yes □ no

(should be 0.4 on the NCS)

Are there any tactile guidance for persons with reduced sight along the pavement?  □ yes □ no

Are there natural guiding possibilities?  □ yes □ no

(a wall or a different surface, for example grass, without more than 0.9-1 meters interruption and no obstacles along the way)

Are there benches along the pedestrian environment?  □ yes □ no

Are there ramps as a complement to the stair in the
pedestrian environment?  □ yes  □ no

Are there handrails at the ramps?  □ yes at both sides  □ yes at one side  □ no

Are there any lowered curb stone at the end of the pavement?  □ yes  □ no

Appr. width of lowered curb stone? ____________ meters (0.0 meters)

Are there visual contrast between pavement and road?  □ yes  □ no

(should be 0.4 on the NCS)

Are there any tactile guidance at the end of the pavements?  □ yes  □ no

Are there any speed reducing measures for vehicles at the crossing?  □ yes  □ no

Comments

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________
**Assessment sheet for pedestrian crossings**

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are there pedestrian crossings?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Pedestrian crossing painted across the whole road?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Crossing marked with appropriate sign at both sides? (if not signals)</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Any speed reducing measures at the crossing?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Traffic signals for pedestrians?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Is the green light time suitable for all pedestrians, even if you walk slowly?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Are there any obstacles at the crossing? (like poles etc.)</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Are there audible signal boxes at the crossing? (at both sides and island)</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Are there push bottoms to call for green light? (at both sides and island)</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Is it possible to come close to the push bottom? (for example with a wheelchair)</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Are there tactile maps of the crossing? (at both sides and island)</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Are there curb stones at the crossings?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>What height are the curb stones?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Is the crossing in 90 degree angle to the road?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Are there any lowered curb stone at the crossing?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Width of lowered curb stone?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Zero level between road surface and lowered curb stone?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Gradient of lowered curb stone?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Are there visual contrast between paving and road? (should be 0.4 on the NCS)</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Are there any tactile contrasts to guide to the crossing?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Are there any tactile warnings before the crossing?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Are there lights at the whole crossing?</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

**Comments**
Assessment sheet for pedestrian tunnels and bridges  

Date of inventory: __________

Are the any tunnels in the pedestrian environment?
Are there any bridges in the pedestrian environment?
Do they have ramps?
Is the slope of the ramps appropriate for wheelchair users?
Are the ramps equipped with tactile guidance?
Do they have lifts?
Are the lifts large enough for accommodate wheelchair users?
Are the ways to the lift equipped with tactile guiding?

Assessment sheet for bus stops  

Date of inventory: __________

Are there a standardised design for the bus stops?  □ yes □ no
Are the bus stops’ platform of appropriate width?  □ yes □ no
Height of platform: _____________ meters (0.0 meters between platform and road surface)
Is the width of the bus stop enough for a wheelchair to turn around?  □ yes □ no
Is there clear information?  □ yes □ no
Is there any tactile information?  □ yes □ no
If yes, what kind? ____________________________

Is the platform surface even, firm and non-slippery?  □ yes □ no

What surface has the platform? ____________________________

Is it possible to board a bus from the bus stops with a wheel-chair?  □ yes □ no
Are there visual contrasts between bus stop and road?  □ yes □ no
(should be 0.4 on the NCS)
Are there visual contrasts to guide to the boarding spot?  □ yes □ no
Are there any tactile contrasts to guide to the boarding spot? □ yes □ no
Are there any tactile warnings at the boarding spot? □ yes □ no
Is it possible to reach the bus stops with a wheelchair? □ yes □ no
Is there a ramp to the bus stop? □ yes □ no □ not needed
Is it possible for a blind person to reach the bus stop □ yes □ no
Are there seats at the bus stop? (either inside shelter or outside) □ yes □ no
Are there lights at the bus stop? □ yes □ no
Are there bus shelters at the bus stops? □ yes □ no
Are these possible to enter for a person in wheelchair? □ yes □ no
Is there any accessible walkway to the bus stop? □ yes □ no

(Make a personal assessment.)

Comments

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

112
Assessment sheet for buses

Date of inventory: __________

Are bus operating buses low floor or low entrance buses? □ low floor □ low entrance □ no

Do the buses have a kneeling function? □ yes □ no

Do the buses have ramps for wheelchairs to board? □ yes □ no

Are there special seats for persons with disabilities? □ yes □ no

Are there special places for persons using wheelchairs? □ yes □ no

Are there audible information inside the bus? □ yes □ no

Are there audible information outside the bus? □ yes □ no

Are there visual information inside the bus? □ yes □ no

Are there visual information outside the bus? □ yes □ no

Are the stop buttons possible to reach for a person using a wheelchair?

Is the width inside the bus enough for a wheelchair?

Is it possible for persons with disabilities to pay for the fair?

Are there handrails appropriate for all people including persons using wheelchairs?

Are the handrails in a contrasting colour easy to see?
Appendix 6

- Checklist – Accessibility for people with disabilities, for the preparation phase
Checklist – Accessibility for people with disabilities

For the preparation phase

Is there any component in the project about pedestrian facilities, public transport, parking or other implementation affecting individual’s mobility?

☐ yes  ☐ no

Is there any Law on the rights for people with disabilities existing in the country?

☐ yes  ☐ no

Is the Law referred to in the PAD?

☐ yes  ☐ no

Are there any regulations/standards regarding accessibility for the built environment in the country?

☐ yes  ☐ no

Are these referred to in the PAD?

☐ yes  ☐ no

Are there any cooperation with NGOs for people with disabilities included in the project?

☐ yes  ☐ no

Are there public participation actions with people with disabilities included in the project?

☐ yes  ☐ no

Are there descriptions of designs for the pedestrian environment?

☐ yes  ☐ no

Are these designs supporting accessibility?

☐ not applicable

☐ yes  ☐ no

Are there descriptions of designs for facilities in the public transport system, e.g. bus stops, stations, information?

☐ yes  ☐ no

Are these designs supporting accessibility?

☐ not applicable

☐ yes  ☐ no

Will the procurement documents for public transport vehicles secure an improved accessibility?

☐ yes  ☐ no

Are there descriptions included in the planning document regarding accessibility measures that will be incorporated in the project?

☐ yes  ☐ no

Indicate what measures: _____________________________

_________________________________________________

_________________________________________________

Are there any person included in the project preparation team with Expressed knowledge about accessibility issues?

☐ yes  ☐ no
Appendix 7

- Country report on accessibility in Vietnam
Introduction

1. This report presents the findings and conclusions of the country analysis of Vietnam, in a similar order to the tasks set out the TOR for the Study (shown in Annex 1). As an initial step stage, a number of experts in the field of Accessible Transport were identified, as well as Non Government Organisations (NGO), and government agencies active in the field of Accessible Transport. The discussions that took place with these experts, together with the reports provided by them formed the key inputs to the Study. The list of persons met is shown in Annex 2, and the references assembled are listed in Annex 3.

2. The current legal and regulatory regime has been assessed, and a preliminary assessment made of the current standards and practices in the planning, design and implementation of accessible transport facilities and services. Key barriers to the provision of facilities and services, and awareness of the transport needs of persons with disabilities have been identified with the NGO.

3. The report presents a summary of the findings, and a set of recommendations, which includes next steps for the continuation of the work of mainstreaming accessible transport into transport regulations, plans, programs, projects and services in Vietnam. A workshop (as indicated in the TOR) would be one of the logical next steps. A workshop on the new Law of Disabilities was held in September 2010. This fact and the findings of this analysis, led to the conclusion that a workshop should be held to launch a more intensive five year program of activity on accessible transport, provided that the World Bank is willing to provide knowledge and limited financial support.

Documentation of the Current Situation in Vietnam

Nationally Experienced Vietnamese Experts

4. The nationally experienced Vietnamese experts in the field identified were:
   a. Nguyen Thi Phuong Hien – Head of the Transport, Environment and Development Center, Transport Development and Strategy Institute, Ministry of Transport. Ms Hien participated in the 2005/06 US AID funded studies of Accessible Transport, and has been working in the field since then.
   b. Dr. Tung Hoang, Vice Dean of Transport Engineering, National University of Civil Engineering, Hanoi
   c. Dr. Dinh Van Hiep, Executive Deputy Director, Institute of Planning and Transportation Engineering, National University of Civil Engineering, Hanoi
   d. Dr. Ing Khuat Viet Hung, Chair Urban Transport Planning and Management, Dean Institute of Transport Planning and Management, University of Transport and Communications (UTC), Hanoi
Key Organisations

5. **National Coordinating Council on Disability (NCCD)** is the Government of Vietnam coordinating agency, with representation from seventeen ministries. This Council coordinates the work of government agencies, but is not considered to play a strong role in policy formulation or advocacy. The Ministry of Transport (MoT) is a member of the NCCD. Representatives of non government organisations consulted consider that NCCD should play a more active role in working with the MoT, city DoT and donors, advocating for persons with disabilities and monitoring projects and programs.

6. **Vietnam Federation of Disabled People** is the peak body for Non Government Organisations (NGO). National and local NGO’s representing people with different kinds of disabilities – not just those that are mobility impaired - are members. Representatives of NGO’s consulted consider that the Federation should also play a more active role in working with the MoT, city DoT and donors, advocating for persons with disabilities and monitoring projects and programs.

7. **Non Governmental Organisations (NGO)** The key NGO involved in accessible transport have been identified by WB Hanoi Office as:
   a. Vietnam Assistance for the Handicapped (VNAH) and
   b. Hanoi Independent Living Center – which represents people with mobility impairments.

A meeting was held with these NGO and by mutual agreement, further discussions on the topics discussed at the initial meeting has taken place by email

Policies and Regulations on Accessibility for Urban Transport


9. There are two sets of regulations and guidelines in use which predate this law:
   a. Compendium of Regulations (316 pages) published by MoT in 2009 with financial assistance from US AID and VNAH.
   b. Guidelines/Textbook (150 pages) developed in 2008 by UTC with 160 Million VND funding from the MoT.

Experts consulted indicated that French, German and US Guidelines had been used in Vietnam in the design of different projects.

10. The Ministry of Transport (MoT) is currently developing new technical standards and guidelines to assist transport agencies and professionals in the implementation of the provisions of the law. Urban road design standards, including for accessible transport are the responsibility of the Ministry of Construction. These are also in the process of being updated.
11. The MoT commissioned two universities – the University of Civil Engineering, (School of Highway and Traffic Engineering & Institute of Planning and Transportation Engineering) and the University of Transport and Communications, (Institute of Transport Planning and Management), as well as the Transport Development and Strategy Institute (TDSI) of the MoT to assist with these initiatives. Staff from the University of Civil Engineering expressed that view that there were currently no regulations or Vietnamese standards for the design of accessible transport facilities. The initiatives discussed below were designed using French and US standards. Staff from the University of Transport and Communications also referred to the use of German standards.

Quality of Infrastructure and Services for the Mobility Impaired

12. The quality of disabled-friendly infrastructure and mobility services customized for the mobility impaired is not good. There is very limited provision of infrastructure for persons with disabilities. Footpaths are uneven, broken up and occupied by parked cars and motorcycles, so that it is difficult for even able bodied people. There are drop kerbs at intersections which would allow persons in wheelchairs in cross. However these facilities are more used by motorcyclists for moving from the road carriageway to the sidewalk for parking, or access to adjacent properties.

13. **MoT Initiatives** There have been some initiatives over the past five years by the MoT (as set out in Annex 5) to introduce accessible transport, but these have had limited success. These initiatives included
   ii. Production of Prototype Accessible Bus (2007)
   v. MoT Compilation and publication of the collection of legal documents on accessible transport (2009)
   vi. MoT conference on Accessible Transport Programs 2006-08 (2009)
   vii. VRC production of one carriage that meets specifications for accessible transport, and bringing into railway operation (2010).

14. **World Bank Projects** VNAH indicated that they had been consulted in the past by the World Bank in the design of two previous urban transport projects in Vietnam - Vietnam Urban Transport Improvement Project (VUTIP) and Hanoi Urban Transport Development Project (HUTDP). However they indicated that they had no knowledge of current World Bank projects. In other words, there appears to be no process within WB to inform VNAH of projects. Rather it is up to individual Task Team Leaders to contact them, as had been done by the TTL for the HUTDP.

---

3 2003 Handbook on Barrier Free Public Transport (in English and German)
Surveys

16. Discussions with the national experts, government agencies and representatives of the NGO’s and World Bank staff did not reveal any documented surveys of the transport needs of persons with disabilities. There had been no surveys that highlight the interaction between disability and access to work, economic opportunities and health services. World Bank staff working on disability issues considered that data on these interactions is too limited to permit meaningful analyses to be undertaken.

Discussions with NGO’s and Government Agencies

Barriers

17. One of the leading NGO in the field, the Vietnamese Assistance for the Handicapped (VNAH) considers that the key barriers limiting the provision of facilities and services for persons with disabilities are:
   a. Design for persons with disabilities is not institutionalised
   b. There is a lack of knowledge amongst professional staff, including about standards
   c. There is also a lack of consultation with persons with disabilities (in relation to design of infrastructure in projects).
   d. No implementation of standards, or enforcement of standards
   e. Lack of awareness and not enough awareness raising

Initial comments on each of these barriers are provided below.

18. Design is not Institutionalised  The key reason for this barrier is that there are currently no approved Vietnamese Design Standards, and therefore no regulatory provisions to include consideration of accessibility in the design process. There is also therefore no requirement for city DoT as the design verification agencies, to include this aspect in their verification process.

19. Lack of Professional Knowledge Staff from the University of Civil Engineering said that they already provided a course on Accessible Transport for their undergraduate students. The students also undertake a case study – a recent study was on transport around Ho Kien Lake in the centre of Hanoi. They are interested in developing a training course for managers, officers and engineers working in transport, and are exploring the possibility of developing the course in conjunction with a Japanese university.

20. Lack of Consultation Public consultation on planning and design is relatively new in Vietnam, and is not institutionalised. This applies to all aspects of planning and design, not just accessible transport matters. The exception is the consultation required on environmental and resettlement matters. However WB staff did consult with persons with disabilities in the design of the VUTIP and HUTDP as noted above.

21. No implementation and enforcement of standards.  *This is to be discussed in a meeting with MoT.* There is a well defined institutional process for checking and verification of designs of
civil works in Vietnam. Once Vietnamese standards on accessible transport are approved, this process should ensure that they are applied in the design of transport infrastructure. However it is anticipated that training programs would be required to familiarise engineers with the standards and their application.

**Good Practices**

22. **Current Situation** The outcomes and current situation relating to the activities that have taken places since 2005 are discussed below.

   a. **Pilot Accessible Bus Routes.** There is an accessible bus service from Danang to Hoi An, and there are two accessible bus routes in HCMC. However only some of the buses have lifts. The pilot has not led to the introduction of other accessible bus services.

   b. **Accessible Buses** – There has been no purchase of accessible buses with the reason given that these are more expensive than standard buses. Operators are not compensated by city governments for purchasing more expensive buses, or consider that they cannot recover the higher purchase cost from fares. Low floor buses are not currently manufactured in Vietnam, and imported low floor buses attract import duties which increase the costs. As a demonstration project, IMV are to trial use of an imported low floor bus in Hanoi shortly. Part of the reason cited for the trial is to reduce the injuries and deaths to able bodied passengers that occur while boarding and alighting from the current high floor buses.

   c. **Accessible Railway Carriage** – The view expressed by NGO’s was that this had not been successful as a pilot project, in part because no provisions has been made for getting persons in wheelchairs from the current low station platforms to the carriage.

Views expressed by NGO’s were that the regulations and guidelines listed in paragraph 20 had in themselves limited impact on the quality of infrastructure and services for persons with disabilities, as there had been limited application of them.

23. **Follow-up to good practices.** In discussions the national experts, government agencies and representatives of the NGO’s did not identify any measures that had been implemented that they would consider good practices that would merit further study as mini case studies. The possible exception was the two accessible bus routes in HCMC. However, it was considered there would be limited value added to the findings of this review in conducting a case study. Such a case study (as well as a more in depth review of the experiences with accessible bus services in Hanoi) could from part of the next stage of work on accessible transport in Vietnam.

24. **Workshop.** The TOR called for organisation of a workshop to disseminate identified good practices and to develop a consensus for recommendations/agenda to improve the quality of mobility services and outcomes for the mobility impaired in Vietnam. The World Bank Hanoi Office organised a workshop in September 2010 to discuss the June 2010 Law for Persons with Disabilities with invitees from all concerned government agencies and NGO’s. The MoT and representatives from NGO’s with an interest in accessible transport were amongst the attendees. One of the outcomes of this workshop was that each government agency would develop a program for 2011 – 2020 to implement the provisions of the Law in their area of responsibility. The MoT has done this, but the program is somewhat limited.
25. Given there has recently been a workshop, and that there are limited good practices to disseminate, it is considered that there was no value in holding a further workshop as part of this study. There is support (amongst NGO’s, government officials and others working in the area) for holding a workshop, to launch a program of activities to implement the provisions of the Law on Disabilities in the Transport Sector. World Bank support for such activities would be welcomed. This consultant considers such support could be provided with limited expenditure of staff time and resources, but would require a continuous commitment for up to five years. Initial resource inputs would be required to assist in organising the workshop, and then to provide knowledge and financial support as discussed in the recommendations section below.

Summary of Findings

26. **World Bank Projects** There is one completed urban transport project (VUTIP) and one project in implementation (Hanoi). Two other projects are moving implementation (Danang and Haiphong). The scope of the VUTIP project was limited to traffic management. Within this limited scope, provision was made for accessible transport through the installation of drop kerbs. The poor level of maintenance of footpaths means that they are impassable by persons with physical disabilities, and so the drop kerbs are used mainly for motorcyclists to access on footpath parking.

27. The Hanoi Project includes components for the construction of a Bus Rapid Transit (BRT) line (the first in Hanoi) and a section of the second ring road (RR2). Extensive consultation took place with representatives of persons with various disabilities during preparation of the Hanoi Project in 2005 and 2006. This corresponded with a period of considerable interest and activity by the World Bank (and USAID) for accessible transport. As a result, the road and BRT components in the project were designed to be accessible. During the detailed design stage in 2009 and 2010, designs were checked to ensure these objectives were maintained. The civil works contracts for the construction of the initial sections of the BRT and the Ring Road 2 are expected to be let in 2011.

28. The Haiphong project is at the feasibility study stage. The project includes components for the construction of a 20 kilometre section of arterial road, and a pilot project for the transformation of public transport services in one 26 kilometre corridor. No consultation with persons with disabilities (or other members of civil society) has so far taken place. However consultation should take place during the forthcoming detailed design stage. The Haiphong project was presented to the Board in March 2011. Detailed design for the works is to commence in 2011.

29. **Legal and Regulatory Framework** There is a recent Law on Persons with Disabilities (June 2010), but no supporting national level enabling regulations. These are currently being prepared, (by consultants commissioned by MoT), but no completion date has been indicated. A set of technical standards and guidelines prepared by the MoT in 2007 is in use, but these have no legal status. So design engineers are not required to use them. There is a small and active accessible Transport unit within MoT, which has good working relations with VNAH. There appear to be no separate regulations or guidelines at a city government level.
30. **Awareness**  Within professionals engaged on urban transport projects, there is an awareness of accessible transport, of the needs of persons with disabilities and of the co-benefits to other members of society of accessible transport measures – particularly the elderly, and pregnant women, but bus users more generally. VNAH also indicated that some operators were aware. However the general view was that decision makers were not sufficiently aware, nor many design professionals or bus operators.

31. **Budgets.** Budget restrictions were cited as a reason for pilot schemes not being implemented or maintained, or for a more proactive approach to provision of accessible transport facilities. However with the exception of purchase of low flor buses, the amounts of money were quite small.

32. **Overall Assessment.** WB has made a contribution towards accessible transport in Vietnam through urban transport project s. The conditions are in place that would allow WB with limited effort and resources to continue to support accessible transport in Vietnam, or to expand this support.

**DRAFT Recommendations**

33. The following draft recommendations to improve the quality of mobility services and outcomes for the mobility impaired in Vietnam are made after initial discussions with the persons listed in Annex X. It is proposed that further discussions take place with these same people and with World Bank Task Team Leaders and management before they are finalised. Most of these recommendations are framed as actions to be taken by persons, agencies or NGO’s already working in the field of Accessible Transport in Vietnam. All would benefit from the support of the World Bank as a facilitator or catalyst, as well from direct financial support.

34. **Regulatory Framework, Standards and Guidelines**
   a. MoT and consultants commissioned by MoT complete the preparation of enabling regulations for the implementation in the transport sector of the provision of the Law on Persons with Disabilities (Law Nr. 51/2010/QH12 – 17 June 2010)
   b. MoT to update (using international references as appropriate), the design guidelines published in 2009, publication (in paper and electronic formats), dissemination them and encourage their use.
      World Bank could provide knowledge and financial support.

35. **Plans and Programs.** MoT should formulate a five year program for planning, design and implementation of accessible transport, including preliminary costs and budgets. The program could include these activities:
   a. Completion of regulatory framework, standards and guidelines
   b. Establishment of accessible transport programs in cities and transport agencies
   c. Inclusion of budgets for accessible transport in national budget processes
   d. Pilot projects
   e. Facilitating the production of low floor buses in Vietnam
f. Facilitating the production of accessible railway carriages in Vietnam

g. Creation of a peak body for Accessible Transport – to fulfil a role for accessible transport similar to the role of the National Road Safety Committee in relation to road safety.

h. Awareness raising

i. Development of training programs

j. Capacity building and institutional development of central and local government departments and agencies

World Bank could provide knowledge and financial support.

36. **Awareness Raising:**
   
a. MoT, VNAH and other agencies should continue the planning, design and implementation of campaigns to raise awareness of the needs of persons with disabilities, and the benefits of accessible transport. The target audiences for the campaign would include national and city level government officials and decision makers, engineers and other professionals involved in the design and verification of the design, of accessible transport facilities, and operators of transport services.

b. Universities and other academic institutions should assess the need for upgrades in the design of undergraduate courses in accessible transport, and then providing support to upgrade the course content.

c. MoT and academic institutions should assess the need for training courses in accessible transport for
   
i. Engineers and other professionals involved in the design and verification of the design, of accessible transport facilities
   
ii. Transport operators, particularly bus, taxi, Vietnam Rail and future metro
   
iii. Bus and taxi drivers.

World Bank could provide knowledge and financial support.

37. **Toolkit for World Bank Task Team Leaders (TTL)** Ensuring that accessible transport is considered in the planning, design and implementation of projects need not place great demands on the resources available to TTL, provided they are given some assistance to facilitate the task. A toolkit should be prepared which provides information on Vietnam, including:

a. Law on Persons with Disabilities

b. Regulations

c. Design Standards in current use (whether Vietnamese or overseas)

d. Details of MoT and other government agency units/focal points for accessible transport

e. Names of NGO representing persons with disabilities, including contact persons

f. Copies of useful background and reference material on accessible transport programs or projects in Vietnam

38. **World Bank Projects:** For current and pipeline projects, TTL, County and Sector Managers should:
a. Ensure that the accessible transport measures included in the current Hanoi UTDP are implemented.
b. Ensure that the projects currently in preparation include design for accessible transport in the components.
c. Arrange for the participation of and consultation with representatives of persons with disabilities in the planning and design of accessible transport facilities in projects.
d. In projects with public transport components, undertake and operational, financial and economic evaluation of the use of low floor buses for regular bus routes, and as an option for BRT routes. (Low floor of 250 mm or 320 mm at least between front and middle doors). The evaluation should take into account the impact on the city budget and the potential for obtaining reasonably priced low floor buses made in Vietnam.
e. Consider inclusion of low cost demonstrate projects in existing projects and those under preparation to pilot various aspects of accessible transport, with funding provided from within existing or proposed project finance.
f. Include monitoring of the impacts of the interaction between the improvements to accessible transport, disability, and access to work, economic opportunities and health services.

39. **Donor Coordination**  The World Bank could act as the lead in coordination of the inclusion of accessible transport in the transport programs of other donors. A number of donors including from France, Germany and Japan, both official central government ODA and other agencies are working in Vietnam. It would be beneficial to ensure these efforts are coordinated to ensure the best use is made of the scare resources. As a first step, an effort could be made to coordinate the efforts on the various public transport projects being planned, designed or implemented in Hanoi, HCMC and other cities.

40. **Workshops** – Workshops should be organised on an annual basis involving participants including civil society, representatives of organisations for persons with disabilities, central and local government agencies, international agencies and vehicle manufacturers. It is proposed that an initial workshop be organised soon after the start of an World Bank agreement for active support to accessible transport in Vietnam to:
   i. Review what has happened since 2005
   ii. Recognize and disseminate identified good practices
   iii. Discuss the proposals for World Bank support
   iv. Discuss the programs of other donors
   v. Develop a consensus on the actions/agenda to improve the quality of mobility services and outcomes for the mobility impaired in Vietnam
   vi. Agree a desirable staging of actions

Subsequent annual workshops would review progress and adjust the scope and timing of the program.
Appendix 8

- International examples
Planning Guidelines

Introduction
The issue of providing accessible public transport services for people with disabilities is widely considered internationally. It is regarded such an important issue that many countries and institutions have required specific legislations, regulations, guidelines and compliance mechanisms. However without any kind of action plan or instrument and easily viewed goals - the laws and regulations are often meaningless. There are also requirements of public funding in order to have measures of accessibility implemented.

This section provides an overview of some countries’ action plans for making the public transport accessible for all.

Summary
Most countries have produced vision, mission and goals towards a more accessible society, which often includes public transport. It is not necessarily the fact that those countries having laws and regulations from early 1970’s have come further in their work with accessibility. To reach full success with such work one has to be realistic and draw up an action plan that works over time and also securing funding of the system.

Most countries in Europe have action plans and goals for accessible public transport implementation including actions and timing:

- Sweden most part of public transport 2010;
- Netherlands train system 2030;
- France, TGV system (high speed train system) 2019;
- Norway - some priority areas in 2009.

There also has to be some kind of system for monitoring, evaluation and review to follow up action plans and measure progress.

An Action Plan for Accessible Public Transport in the ACT, Australia
The Action Plan in Australia was established in 2000 and is most specific in those modes of transport for which the ACT Government has a clear and well established regulatory responsibility i.e. buses and taxis. The goals, targets and solutions for these are grouped in terms of:

- physical barriers - access to and within vehicles;
- physical barriers - access to infrastructure;
- communication barriers; and
- attitudinal barriers.

The ACT Government will progressively upgrade bus stops to parallel the introduction of accessible buses. The planning and management of parking and access near taxi ranks, bus interchanges and bus stops will also be investigated.

The Action Plan will identify barriers for people with a wide range of disabilities, including not only physical, but also vision, hearing, cognitive and intellectual. Whilst physical access to transport vehicles and infrastructure is the most visible barrier to be overcome, issues of policy and planning,
access to infrastructure, information, communication and attitudes are more important for some people with disabilities. It is expected that any improvements in accessibility of public transport will also benefit the wider community, such as the frail aged, parents with young children, people carrying luggage and those having difficulties in reading or speaking clearly. The key areas identified for reforms are:

- The availability of information for journey planning by customers (including information on interim services until a fully-accessible system has been achieved) which recognizes that some customers (e.g. the blind and vision impaired) will always require alternative formats;
- Physical access to vehicles, through a continuous and convenient level or ramped access infrastructure which is continuous from the external environment into the vehicle;
- Physical access within the vehicle, including adequate manoeuvring space, allocated space for mobility aids, seating configurations (e.g. for those who have difficulty with low seats or for accommodating a guide dog), storage for mobility aids (e.g. walking frames), positioning of grab rails, call buttons and ticket validating machines;
- Sensory access to and within vehicles, including identification of access paths, vehicles and routes, colour contrast and tactile information, appropriate signage and predictability of the public transport environment;
- Cognitive access to transport, especially in the case of transport options, such as the TSS for which there are special requirements.
- Attitudes and behaviour of the travelling public and of staff providing services to customers with disabilities;
- Pedestrian environment through the ACT Code guidelines for planning of residential areas including pedestrian networks;
- Community transport, where the ACT Government has little or no formal role and where it must rely on communication strategies to influence others.

**Short Term Evaluation**

The Action Plan will be reviewed annually. The annual review will include:

- customer ‘walk-troughs’ of targeted parts of the transport system to assess accessibility improvements;
- operating staff (e.g. bus drivers) input to identify operational problems and enhancements; and
- consultation with a Steering Committee on Accessible Public Transport.

**Long Term Evaluation**

Urban Services will periodically (every three to five years) evaluate, using an external consultant, the extent to which the implementation of the Action Plan has impacted on the equal use of all transport services by people with disabilities. While the terms of reference for the evaluation will be decided at that time, the principles for the evaluation will include:

- Responsibility for planning, developing and managing the evaluation process by Urban Services;
- Participation by people with disabilities in determining the terms of reference, including scope, objectives, key issues, benefits and commitment to professional standards of evaluation;
- A review of the Plan by a steering committee which includes participation by people with disabilities;
- Employment of an independent external evaluation expert to conduct the evaluation;
- Use of information gained through the monitoring process to identify key issues;
- Consultation with all key stakeholders;
- Use of quantitative and qualitative data, including special data collection where necessary;
A commitment to using evaluation findings to improve services and to amend the Action Plan as necessary.

New buses purchased by the service provider will be fully accessible and allow for compliance with the standards and will eliminate these barriers over a 20 year time period. The standards currently require that 25% of the total service provider bus fleet will be accessible within 5 years, 55% within 10 years, 90% within 15 years and 100% within 20 years. Dedicated school bus services and charter coaches are exempt from this timeframe.

- City of Sydney Action Plan for People with Disabilities 2002-2005. This takes the form of identifying objectives e.g. enhancing travel paths, identifying barriers and stating performance indicators.

- Accessible Transport Action Plan for NSW Transport Agencies, December 2002. Useful as an example of a State-wide approach to planning for accessible public transport to comply with the Disability Standards.

- An Action Plan for Accessible Public Transport in Victoria, November 1998. Developed when the Disability Standards were still in draft form.

New Zealand

The Government 10 Year Plan for Transport

This plan is available from the Department for Transport (DfT) and is entitled “Transport 2010: The 10 Year Plan”. In Chapter 6, ‘Investment’, the Government reinforces its commitment to making public transport accessible to disabled people by stating “Building in accessibility for disabled people in all new investment is a condition of public money being spent”. Local authorities and transport operators should ensure that the transport needs of disabled people are factored into their plans and the full benefit of improved public transport is accessible to all. By using the standards and services specified in this code when building, renewing or enhancing facilities, operators will be helping to achieve this blueprint. In July 2004 the 10-Year Plan was supplemented by “The Future of Transport – White Paper”, which has specific sections for different modes.

Sweden

The Swedish Parliament has decided to make Sweden accessible to everyone by 2010. The demands are meant to “simply eliminate obstacles in official premises and public spaces” for everyone.

The overall policy concerning accessibility to public transport for persons with reduced mobility is outlined in the Government bill 1999/2000:79 From patient to citizen – an action plan for disability policy. The bill says that increased accessibility improves the conditions for disabled persons to study, work and an independent living. This is in the interest of the individuals as well as of the society. Regarding policy in relation to accessible public transport, the bill says that:

- Accessibility to the transport system should continuously improve;

- Accessibility should be taken into consideration in all planning and purchasing of infrastructure, means of transport, traffic and other services;

- Public transport should be accessible for disabled and persons with reduced mobility at the latest in 2010. Public transport relations with high traffic flows should be prioritized.

Through the “Door-to-door” project (2000-2002), the main strategy for achieving more accessible public transport systems in Sweden was developed. The project was carried out in cooperation between Swedish Public Transport Agency, Swedish Road Administration, National Rail Administration, National Civil Aviation Authority, Swedish Maritime Administration, Swedish
Association for Local Transport Authorities, Vinnova, Trains in Bergslagen and Swedish Disability Federation. **The joint strategy to achieve the objective of an accessible transport system within 2010** was presented for the Swedish Government in March 2003 (Rikstrafiken 2003).

As result of or part of the Door-to-door project, the Government commissioned The Swedish Road Administration and National Rail Administration to **put forward an action plan** for the long-term development of public transport. One of the priorities in the action plan is an accessible public transport for disabled and persons with reduced mobility. Another priority area is to apply measures to improve information concerning public transport.

The Swedish Road Administration, National Rail Administration, Civil Aviation Authority and Maritime Administration are all steered by the Parliamentary transport policy goals. One of six main goals in **The National Plan for the Swedish Road Transport System 2004–2015** is an accessible transport system. This means that the transport system should be designed to meet the basic transport requirements of citizens and the business sector. The accessibility goal also includes that public transport should be accessible for disabled and persons with reduced mobility by the year 2010.

Policies regarding accessible public transport systems are mainly set at national level. The policies do not favour urban or rural areas.

**Finland**

The main policy and strategy document regarding accessible public transport systems in Finland, **Towards accessible transport. Accessibility Strategy of the Ministry of Transport and Communications**, was published by the Ministry of Transport and Communications in August 2003. This policy paper was prepared in cooperation with different Ministries, the Association of Finnish Local and Regional Authorities as well as public organisations operating within the administrative sector of the Ministry. The policy paper is drawing up the policy and strategies in this field, and it has a detailed and thorough action programme.

The policy and strategy part of the document says that the possibility of independent mobility is an important factor affecting the quality of life. An accessible environment suitable for everyone offers citizens a possibility to live independently and on their own initiative to work, use services, enjoy free time and meet other people. The long-term transport policy guidelines of the Ministry of Transport and Communications emphasise the right of everybody to mobility and the opportunity to exert that right. Moreover, the transport system shall also be designed and constructed so that children, elderly and people with reduced functions can safely manage their daily travel needs.

The goal, the strategy plan says, is a transport system suitable to all. Achieving the goal requires that the administrative sector of the Ministry of Transport and Communications in its normal activities takes into account the mobility needs of all population groups – for example in preparing legislation and planning instructions as well as in maintaining and building the transport infrastructure – and works actively to remove existing shortcomings.

The action programme included in the strategy-document covers all modes of public transport and all parts of the journey. It also includes service and maintenance, which several other action plans in this field are lacking.

To support the implementation of the strategy, the three years **Research and Development Programme ELSA** was started in the autumn 2003. The objective of the ELSA-programme is to activate the municipal sector, producers of transport services, authorities and the general public to see the importance of accessibility, to motivate to take it into account in their daily work and to produce and disseminate information about good practices. The focus of the programme is especially on the accessibility of public transport and pedestrian environment.
The aim of the programme is to gather research and development relating to accessibility under one umbrella. Examples of the topic areas for research and development projects possibly financed from the programme are:

- A more accessible pedestrian environment;
- Public-transport passenger information, payment systems, terminals and vehicles;
- Assistant services and travel dispatch centres;
- Transfer of passengers to aircraft;
- Passenger terms of maritime transport and rail transport and equal rights of passengers;
- Clarity and manageability of the road transport environment;
- Driver’s requirements for a disabled person as well as approval of a vehicle for transport;
- The economic significance of accessibility and effectiveness of measures promoting accessibility; and
- Development of evaluation methods for accessibility and user-friendliness.

Policies regarding accessible public transport systems are set at all political levels (national, regional, municipal). The policies do not favour urban or rural areas.

**Norway**

The White Paper nr. 40 (2002 – 2003) Reduction of Disabling Barriers and the White Paper nr. 24 (2006 – 2015) National Transport Plan, both with action plans, are among the most important works carried out in this field in Norway during the last few years.

**White Paper nr. 40 (2002 – 2003) Reduction of Disabling Barriers** was presented for the Norwegian Parliament in 2003. It gives a supplementary description of the situation and a broad review of strategies, goals and initiatives in the Government’s policy for disabled people. The aim for the transport sector is to improve and to take into consideration accessibility to public transport systems, both in planning and designing infrastructure, means of transport, traffic and remaining services.

Following the White paper on reduction of disabling barriers, **The Government Action Plan for increased accessibility for persons with disabilities – Plan for universal design in key areas of society (2004 - 2009)** was introduced.

The action plan aims to enhance accessibility for all, and directs special focus towards persons suffering from functional impairments. This includes disabilities affecting vision, hearing, mobility, cognition and sensitivity to environmental factors (individuals with asthma/allergies).

The action plan is designed to unify and strengthen efforts to increase accessibility to transport, buildings, outdoor environments, products and other important areas of society. It is built upon five main principles: All important areas of society are to be included - Each sector is responsible for implementation within their own areas of responsibility - the Governmental efforts should be coordinated - Participation and involvement on all levels and - The effects will be evaluated.

The action plan was drawn up by the Ministry of Environment and the Ministry of Labour and Social Affairs, in close cooperation with other relevant ministries – among them the Ministry of Transport
and Communications. The plan incorporates initiatives from 15 different Government ministries. In 2005, NOK 189 million was allocated to projects within the action plan.

The Norwegian Government presented White Paper nr. 24 (2006 – 2015) National Transport Plan for the Parliament in March 2004. This plan is presenting the Government’s proposal for transport policy for the period 2006 – 2015 and is a strategic document for the development of the transport system including road, railway, aviation and sea-transport. Increased accessibility of public transport systems and Universal design is among the fields focused in the plan. In the course of the parliamentary debate on the White Paper, a new political main objective (of five such objectives) was agreed upon: A transport system that is accessible and a transport system that makes it possible for everyone to live an active life.

The White Paper introduced a new action plan for accessibility Action Plan for the BRA – programme (2006 – 2009) concerning public transport. A working group with representatives from the Ministry of Transport and Communications, the Norwegian National Rail Administration, the National Public Road Administration, the Norwegian state owned company for developing and running airports, Avinor AS and the Norwegian State Railways has drawn up the action plan for the BRA – programme. The action plan was concluded in January 2006 and is also a part of the Government’s action plan for increased accessibility for persons with disabilities.

Main goal for the action plan is: Increased accessibility for everyone to public transport, with special focus on disabled persons. The action plan outlines the Government’s political priorities in this area as well as specific actions within the various sectors of transport. The programme will be implemented during the period 2006 – 2009 and includes improved transport infrastructure, rolling stocks, buses and logistics. The aim is to make the total transport chain accessible. The first evaluation of the effects of the BRA-programme is due in 2007.

Policies regarding accessible public transport systems are set at all political levels (national, county, municipal). The policies are mainly focused on urban areas.

**Denmark**

Due to lack of published information, we are not able to say how complete our review of Danish policies and strategies is.

It seems like the Government’s Action plan for disability policy (Handlingsplan for handicapområdet) from 2003 is the prevailing policy document. The action plan points at five focus areas: Housing - Employment and education - Accessibility to physical environment (transport included) - Public administration - and Leisure and quality of life. The action plan states that the overall policy objective in this field is an accessible society, where people with disabilities may participate in the society in an equal way. It is referred to the UN Standard Rules. When discussing transport, “the whole journey” approach is the ideal. Several ongoing and accomplished initiatives are mentioned, such as procurement of low floor trains for the intercity traffic, changes in stations, improved accessibility on new train and subway materiel.

We cannot say at what levels policies are set at regarding accessible public transport systems, or whether such policies are focused on urban or rural areas.

**Design Guidelines**

**Introduction**

The issue of provision of accessible public transport services for people with disabilities is widely considered, internationally, to be so serious as to require specific standards and guidelines. This is the case not only in countries usually labelled ‘developed’ but also in many countries commonly labelled as ‘developing’ or ‘underdeveloped.’
In this section we are presenting a generic evaluation of a few of existing designing guidelines in the World. The evaluation and the examples from the guidelines show a general high level regarding accessibility and usability requirements. Usually there are just small differences in measurements or in solutions between different guidelines and such small measurements can make the difference between accessible and not accessible.

The following guidelines and standards cover a wide range of subjects and areas in built environments including public transport. This first section will give a comprehensive overview of some existing and coming standards and in the coming sections a deeper look into some areas.

**Summary**

Many countries have some kind of regulation and designing guidelines for the built environment. Most of these regards consider accessibility for disabled persons. For some issues an ISO standard has been developed, e.g. built environment, symbols and wheelchairs. Some countries or groups of countries have gone further from this and strengthen standards into regulations. Existing guidelines are often stronger in European countries and North America than in some Asian countries, regarding e.g. ramps and elevators.

**Built Environment**

**ISO CD 21542 - draft**

An ISO working group, see below, has during the last five years been working and drafting a new standard, *Building constructions – Accessibility and usability to the built environment*. In October 2007 the draft was to be handed out to the ISO members for voting - but postponed.

The objectives of this standard and its recommendations are intended to demonstrate ways to provide an accessible and usable built environment that meets the needs of the greatest feasible number of people. An essential part of that provision shall be that a built environment shall be developed in which individuals need to place as little dependence as possible on others and on assistive technology. Whilst the objectives will remain unchanged, the means of achieving those will be part of a continuous process of change, as human knowledge and building technology improve and the relationship between generally accepted building practice and assistive technology alters.

ISO’s technical committee on building construction has set up subcommittee ISO/TC 59/SC16 to proceed with the development of this standard. The subcommittee sees this further development from ISO/TR 9527:1994 as a basis for the formulation of Member Nations’ own regulations, standards and codes of practice.”

This standard sets out those objectives, design considerations and recommendations that the International Standards Organization believes will result in a generally acceptable level of accessibility and usability within the built environment. Though aimed, principally, at wholly new construction, it is conceivable that there will be circumstances in which the guidance can be used when existing environments are being altered. Those responsible for commissioning, designing and carrying out alterations to existing environments shall ensure that they have done everything feasible to adopt the recommendations included in this standard.

That said, it is inevitable that compromises will have to be made when attempting to alter existing environments. These may, also, imply accepting a lower order of provision than expected in *new economical dwellings, especially in the developing countries*. These alternative technical criteria are presented as "alternative considerations". Such compromises may involve making provision to mitigate the effects of one impaired ability but not of another. Such alternative provisions shall not form part of the objectives or the recommendations of this standard, but are presented for consideration by countries’ own building legislations and regulations and examples of good practice.
Comments: The ISO standard is issued to be used by countries usually labelled ‘developed’ but also by countries commonly labelled as ‘developing’ or ‘underdeveloped’. Some of the proposed standards can be improved for use in Dubai. The ISO standard makes a difference when it comes to new buildings and existing buildings. The working group consists of members from Japan, Australia, Norway, Denmark, Sweden, UK, Spain, Canada, USA and Argentina.

Evaluation: This standard can be used as a minimum standard for the built environment in Dubai.

ISO - other
Other ISO standards that may be important for this work are:

- ISO 7000, Graphic symbols to be employed in indices and synoptic tables;
- ISO 7001, Public information symbols. International symbol of Accessibility;
- ISO 9386-1, Power-operated lifting platforms for persons with impaired mobility-Rules for safety, dimensions and functional operation – Part 1: Vertical-lifting platforms;
- ISO 9386-2, Power-operated lifting platforms for persons with impaired mobility-Rules for safety, dimensions and functional operation – Part 2: Powered stair lifts for seated, standing and wheelchair users moving in an inclined plane;
- ISO/IEC Guide 71, Guidelines for standards developers to address the needs of older persons and persons with disabilities;
- IEC 60118-4, Hearing aids. Part 4: Magnetic field strength in audio-frequency induction loops for hearing aid purposes;

ADA
The Americans with Disabilities Act 1990 (ADA) is probably the most world known regulation and guideline for accessibility requirements. ADA covers a wide range of different situations in the society from employment rights to built environment and public transport. There are different acts, standards and guidelines for different purposes. ADA often refers to other standards or guidelines in America, for example documentation from the American National Standard Institute.

ADA has specific accessibility requirements for public bus and rail mass transportation, intercity rail, and private motor vehicle transportation services. It applies to bus and rail transit facilities and vehicles. It covers state and local government (“public entities”) and private entities providing specified public transportation.

ADA standards important for this project are:

- 28CFR 36 ADA standards for Accessible Design;
- Accessibility Guidelines for transportation vehicles, part 1192, draft July 2007;

Comments: ADA makes a different between new buildings/vehicles/constructions and existing where the standards according to the later may be lower.

Disability Standards for Accessible Public Transport 2002, UK
The standard and the accompanying guidelines came into effect in October 2002. These cover such matters as access paths, manoeuvring areas, ramps, waiting areas, allocated space, handrails and grab
rails, doorways and doors, lifts, stairs, toilets, symbols, signs, tactile ground surface indicators, alarms, furniture and fittings, payment of fares, information, booked services and compliance requirements.

The standards apply to:

- public transport services provided with:
  - newly constructed premises or infrastructure; or
  - conveyances entering service after these Standards come into effect; or
  - premises, infrastructure or conveyances that have undergone substantial refurbishment or alteration; or
  - additional or replacement equipment in premises and infrastructure or on conveyances; and
- new or revised ancillary services that are provided as an adjunct to the public transport operation; and
- new or updated information provided to the public.

**The Swedish West Coast Provinces Guidelines for Accessible Public Transport**

The Swedish west coast provinces, Västra Götalandsregionen (VGR) has adopted a standard for its public transport (road, rail, sea and air) regarding accessibility for disabled people. The standard is based on Swedish domestic regulations for public buildings as well as on recommendations from several organisations for disabled people in Sweden, e.g. immobility, blind, deaf, allergic and mentally impaired. The first edition of the standard was published in 2002. The latest revised edition appeared in June 2006. It contains specific measures for a large number of features in terminals, for busses, trams and trains, large and small passenger ships.

The strength of this standard is the incorporated recommendations from all organisations with expertise regarding specific needs for persons with certain disabilities, e.g. people in wheelchair, people with impaired sight, etc.

**Public Transport**

Since a number of years both research and practical work have been undertaken to improve public transport by buses for people with different kinds of disabilities. Improvements have been made regarding the design of buses, information, services, route networking, etc. Along with improvements in the actual services a number of changes have been made regarding laws and regulations as well.

The most legible sign of improvements is introduction of low-floor buses. Today almost no high floor buses for city traffic are produced and a large number of cities around the World have implemented low floor buses.

Except from that a number of standards have been added to make the buses more accessible, for example designated areas for wheelchair users, special seats for elderly and disabled people, measures of width and heights, improved signs and information, etc. Some examples of standards are presented below in this section.

A number of studies have shown there are difficulties for persons with disabilities to use public transport buses. The difficulties are found in each stage during a trip starting with information about the transport, the way to the bus stop, boarding and alighting, onboard the bus and at the destination. The importance of for example condition of walking paths to and from bus stops, standard of bus stops, standard of vehicles with low floors, information (visual and audible) and available seats during a trip have shown to have large impact on the possibility to travel by bus (references - Ackerman, 1998; Mckenna & Lavery, 1998; Nitta & Do, 1998; Ståhl, 1997; Ståhl et al., 1993).

Even though improvements have been made in bus traffic at many places there are remaining obstacles for persons with disabilities. This is due to for example fast tempo of buses, overcrowded buses and
too long or not accessible walkways to bus stops. The demands from people with disabilities can also sometimes be in conflict with demands from other categories of travellers, for example those travelling to work who often want as quick transport as possible, while persons with special needs might need more time to board and alight and short walking distances to bus stops.

Knowledge about the special requirements from persons with disabilities has lead to implementation of different forms of public transport in many cities around the World. Different forms attract different kinds of travellers and are focusing on different services. This is a way of planning of public transport, when improvements are not enough in one type of vehicle.

For example in Sweden today the public transport systems are organized in a number of ways focusing on standards that attract different categories of travellers. The systems can operate either in a complementary manner or as the only ones provided in a city. Special Transport Service is provided in all municipalities according to Swedish law, regardless of what other systems operating.

<table>
<thead>
<tr>
<th>traffic system</th>
<th>priorities</th>
<th>target traveller group</th>
</tr>
</thead>
<tbody>
<tr>
<td>trunk route traffic</td>
<td>as short travel time as possible, short headways</td>
<td>those going to work and school, car users</td>
</tr>
<tr>
<td>ordinary routes</td>
<td>no specific</td>
<td>all</td>
</tr>
<tr>
<td>service route traffic</td>
<td>short distances to bus stops, less than 150 meters, high level of service from the driver</td>
<td>elderly people and people with disabilities who can manage to walk a short distance and who can manage without special service from the driver during the trip</td>
</tr>
<tr>
<td>flex route traffic</td>
<td>demand responsive service with very short distances to the vehicle, a personal kind of service from the drivers, the driver look after the passengers</td>
<td>STS entitled persons who feel they want and can travel with public transport as an alternative when they feel healthier, elderly people with disabilities but not entitled to STS</td>
</tr>
<tr>
<td>Special Transport Service (STS)</td>
<td>door to door service, individual kind of transport, the driver looks after the passenger</td>
<td>elderly people and people with disabilities who can not use any kind of public transport, entitlement necessary</td>
</tr>
</tbody>
</table>

Table: Urban public transport systems. A schematic summary of different public transport systems operating for local trips in Swedish cities today. The table summarizes the priorities made in the different systems and their target traveller groups.

The concept of trunk route traffic focuses on high priority routes with short headways and short travel times. These routes are often equipped with high-tech information systems, such as real-time information and detection systems. The bus stops are often of a high standard and, like the vehicles, are easy to recognize. In order to create short travel times, bus priority measures are important, e.g. detection for priority in signals, left-turn signal priorities, bus lanes and buses stop in the street lane. Short travel times are also achieved by means of less frequent bus stops than on ordinary routes, which mean longer distances between the bus stops and longer walking distances to the bus stops. The trunk routes operate between residential areas and city centre, where the largest travel flows exist.

These so-called trunk routes are often complemented by feeder routes and/or local routes, which are more or less like ordinary routes with longer headways, no priority or advanced information systems, and more bus stops along the routes. Bus feeder routes only operate in a certain area and feed passengers to the trunk-bus routes, i.e. a transfer must be made to reach the town centre. Local bus routes operate between a residential area and the city centre, but have much longer travel times and do not represent the fastest route, which also implies that walking distances to the bus stops can be of various lengths.
Routes that are not planned to meet the demands of any specific traveller group, but to serve as many categories of travellers as possible, can be called “ordinary routes”. These routes often have good area coverage and are planned as tangential, radial or circle routes. Walking distances to bus stops are shorter than for trunk routes, and transfers are more seldom necessary, while on the other hand travel times can be longer. A system of ordinary routes often includes many route numbers for the good area coverage, which is often followed by long headways - between 15 and 60 minutes. This system, characterised by a large number of routes operating with different headways, can be difficult to understand due to its complexity. It is often a compromise between the demands of different groups of travellers. In order to meet the demands of elderly people and people with disabilities these routes are nowadays mainly operated by low-floor vehicles. Ordinary routes are sometimes organised as special routes, such as industrial routes, direct routes and night-traffic routes.

Service route traffic was introduced to meet the demands of elderly people and people with disabilities. This kind of traffic is focused on short walking distances and a high level of service, which also implies longer travel times. The route network is adapted to the target groups’ destinations, such as shops, health-care centres, hospitals and so on. The bus stops are often located near frequently visited locations, preferably just outside the entrance. The driving time is planned so that drivers can provide a high level of service, and so there is time for boarding, alighting, paying and finding a seat before the vehicle starts to move. The headway in this type of traffic is often as low as one hour.

Flex route traffic, which so far has only been introduced in a few places in Sweden, has developed from service route traffic. The concept of this type of traffic, aside from the standards in service route traffic, is its responsiveness to demands, which allows it to provide even shorter distances to the bus stops or meeting points. The service offered by the driver is higher in the sense that the driver is responsible for the passenger being picked up and left at the right destinations. The buses leave at fixed starting times and must be at an end point at a certain time. The headway in this system is usually one hour. In between, the routes are planned according to where the travellers are to be picked up and left. Travellers must book their trip in advance, but the booking time can be quite short thanks to modern technology. This traffic is planned for travellers for whom it is very difficult to use other kinds of public transport. The system is quite reminiscent of STS, but the vehicles used are small, adapted buses.

This traffic system has proved to have an impact in terms of decreasing STS travelling, and results also show that the service is highly appreciated by the travellers.

Except for public transport, which everyone is allowed to use, there is the system of Special Transport Service (STS), which can only be used by those who have been entitled to do so. Since its introduction in the 1970’s in Sweden, it has functioned like a personal transport service often undertaken in an ordinary taxi or in a special vehicle for wheelchair users. Nowadays many municipalities try to co-
ordinate several people’s trips with these vehicles, which means that travellers do not travel on their own and that travel times can be longer. Overall, the criteria for being entitled to STS seem to have been tightened in the last few years, but every municipality individually determines the criteria for a person to be entitled. The STS includes a very high level of service from the driver; for example, the passengers can get assistance all the way from the vehicle to the entrance at both the origin and the destination of the trip.

The costs for providing the systems vary considerably. In brief, it can be concluded that STS is the most expensive system per trip for society, followed by flex route traffic. Service route traffic is somewhat less expensive than flex route traffic, while ordinary routes and trunk route traffic are more cost-effective systems per traveller compared to the other systems.

Systems of Service Route Traffic are mainly found in Sweden, Canada and USA. Systems of Special Transport Service exist around the World in developed countries. This system can be organized in a number of ways, regarding what kind of vehicles that are used, the cost for using the service, the regulations regarding how long in advance you have to order your trip, how many trips you are allowed to make per years etc. The financing of the systems varies considerable between countries. For example in the Scandinavian countries the service often is subsidized by society implying that the passenger only pays a small part of the actual cost, while in North America some of these systems work on a voluntary basis.

**Australia**

In Western Australia the Taxi Users Subsidy Scheme (TUSS) is available to people who have a "severe disability that will always prevent you using a conventional public transport bus service". The severe disability must be one of: a mobility disability, legal blindness, or severe "cognitive/intellectual disability". The scheme provides a 50% subsidy up to a maximum of $25 for each single trip. Those who use a wheelchair or scooter and take it with them while travelling in a taxi are entitled to a 75% subsidy up to a maximum of $25 for each single trip. Users must carry a membership card with photographic identification.

The South Australian Multi Purpose Taxi Scheme (MPTS) includes an annual trip maximum for people who are permanent users of wheelchairs are exempt from the annual maximum and the means test. The MPTS also provides a $25 maximum subsidy for each single trip.

A national scheme of reciprocity means that those in other States for a limited time can retain the level of subsidy that applies in their home State.

**Information System**

Before you are buying a ticket to a longer journey you often need to plan your trip in advance and make a lot of decisions from your point of view, maybe you need some kind of aid, e.g. a wheelchair or a white cane, for the trip. How do I know that I am able to use the station or bus stop? Does the vehicle suite my needs? Am I able to board the vehicle?

There has been a lot of research about the obstacles in the door-to-door trip. One subject that always appears to be a problem is traffic information, pre-trip information and information during a trip. Traffic information is essential for all travellers but even more important for people with special needs.

To make it easier for all passengers to plan their trip, most public traffic providers have some kind of system to inform their passengers. There is often more than one way to find out about existing conditions on a special place or about a special vehicle. Some countries have constructed travel planner for a more wide range of public transport, often on the Internet, to help people with special needs to find pre-travel information about a journey. If this information does not exist or if it is hard to
find or to use, it is likely that many potential passengers choose not to go by public transport or choose not to travel at all.

In the following sections we will show some existing systems and existing guidelines used to make the information more accessible.

The disability standards for accessible public transport, Australia 2002
Information during the trip - people who are deaf or have a hearing impairment must be able to receive a message equivalent to the message received by people without a hearing impairment.

Train and Station Services for Disabled Passengers A Code of Practice, SRA UK (2005)
There must be audible announcements and visual displays inside each carriage for passenger information. Displays should be visible from most seats, including priority seats. They must be used to give the destination or route of the train, to announce next stop at least five minutes prior to arriving, to give details of delays or diversions, and to make emergency announcements.

Hong Kong Metro
On their internet site you can find information about the existing conditions and planned construction works that may affect your journey.

<table>
<thead>
<tr>
<th>Station</th>
<th>Citinet No.</th>
<th>Street / Concourse</th>
<th>Concourse / Platform</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shek Kip Mei</td>
<td>2928 2300</td>
<td>Stair lift access with staff assistance at entrance C</td>
<td>Public lift</td>
</tr>
<tr>
<td>Kowloon Tong</td>
<td>2926 7310</td>
<td>Public lift</td>
<td>Public lift</td>
</tr>
<tr>
<td>Lok Fu</td>
<td>2926 7311</td>
<td>Ramp at entrance A</td>
<td>Public lift</td>
</tr>
<tr>
<td>Wong Tai Sin</td>
<td>2927 6320</td>
<td>Stair lift at entrance C1</td>
<td>Public lift</td>
</tr>
<tr>
<td>Diamond Hill</td>
<td>2927 6321</td>
<td>Wheelchair Aid (maximum loading is 200kg) with staff assistance through entrance A1</td>
<td>Public lift</td>
</tr>
<tr>
<td>Choi Hung</td>
<td>2927 6322</td>
<td>Ramp at entrance C2 &amp; C4</td>
<td>Public lift</td>
</tr>
<tr>
<td>Kowloon Bay</td>
<td>2927 4330</td>
<td>Public lift and ramp from Telford Plaza</td>
<td>Public lift</td>
</tr>
<tr>
<td>Ngau Tau Kok</td>
<td>2927 3340</td>
<td>Ramp at entrance B</td>
<td>Public lift</td>
</tr>
</tbody>
</table>
London Metro

At London Metro website you can find a map that shows which stations that are accessible with wheelchair.

Key to symbols

- A wheelchair symbol means you can use this station without using stairs or escalators from street level to platform
- An empty blue circle means you might be able to change trains without using stairs or escalators (check overleaf! You will not be able to get in or out of the station without using stairs or escalators
- A filled blue circle means you cannot catch a train or change trains at this station or by these lines without using stairs or escalators

Metro and Trains


The most important objective of the underlying Directives 2001/16/EC and 96/48/EC is interoperability. The aim of the TSI is to harmonise the provisions to be made for persons with reduced mobility travelling as passengers on the conventional and high speed railway system. Trains, train stations and relevant parts of the infrastructure, that comply with the measures in the TSI, will permit interoperability and offer a similar level of access to persons with reduced mobility across the trans-European network. The TSI does not prevent Member States from introducing additional measures for improving access, as long as it does not impede interoperability or place undue cost on Railway Undertakings. Improved accessibility to rolling stock and stations for disabled and persons with reduced mobility could potentially increase the number of passengers that are currently forced to use other modes of transport.

Entrances and doors, lifts, handrails, passageways, vehicles, platforms, passenger information, washrooms and more, shall have the same “lowest” standard for the movement of persons with reduced mobility.

Code of Practice on Train and Station Services for Disabled Passengers, The Strategic Rail Authority (SRA)

Code of Practice on “Train and Station Services for Disabled Passengers” covers access to trains and stations. All railway operators, as a condition of their licence to operate, are required to have a
Disabled People’s Protection Policy (DPPP). Under the Code, passenger train and station operators must review their DPPP to ensure that there is a commitment to accessibility wherever new work or a refurbishment takes place. As part of the review, train operating companies must identify current levels of accessibility at their stations and detail what short-term solutions have been identified to provide alternative means of using the train service where physical barriers preclude this. This code has been updated in 2005 draft, and will also be updated according to TSI in the near future.

Metro – Hong Kong (MHK)

Facilities for Passengers with Disability as quoted:

“New and Improved Facilities Mean Better Service for All Our Customers. MHK are striving to improve access and facilities for all our passengers - not only those registered as disabled, but the elderly, people travelling with babies or small children, and those who need step-free access. MHK are making improvements to many of our existing stations”. And all their future lines will incorporate easy access facilities. Stations on three lines are accessible to all passengers with disabilities. Some of the improved accessibility comes from the following measurements.

**Facilities for Visually Impaired Passengers:**

- TACTILE GUIDE PATHS have been installed at all stations.

- MODIFICATION OF OBSTRUCTIONS such as litter bins, payphones and fare maps has been carried out to make them easily detectable to cane users.

- ESCALATOR AUDIBLE SIGNAL has been installed at all seven lines on stations to help passengers locate escalators at platform level. The new type of escalator audible device has been installed at some stations to help passengers locate escalators in stations.

- Tactile Station Layout Maps are provided at ten stations.

- An audible device in the exit gate led by tactile guide path has been installed at all stations to provide audible Octopus Card information.

- BRAILLE has been added onto Octopus Add Value Machines at all stations.

**Facilities for Hearing Impaired Passengers:**

- AUDIO INDUCTION LOOPS to assist hearing aid users have already been installed at selected payphones and Customer Service Centers of all stations.

- INFORMATION CARDS to facilitate communication between staff and passengers are available at all Customer Service Centers of seven lines stations.

- PASSENGER INFORMATION DISPLAY SYSTEMS have been installed at all entrances of underground stations to give timely notice of incidents. Information displays at concourses and platforms have been provided in all stations.

- FLASHING SYSTEM MAP/ACTIVE LINE DIAGRAMS to show the location and direction of the train have been provided. Flashing system maps have been provided in URL trains. Active line diagrams have been installed in the Airport Express trains and TCL trains.
- INFOPANELS which display messages have been installed in all URL trains.

Facilities for Mobility Impaired Passengers

- MULTI-USE SPACES have been provided in Tung Chung Line, Airport Express Line and Disneyland Resort Line trains. For KTL, TWL, ISL and TKL trains, all cars have been provided a multi-use space in the modernization trains.

- BI-DIRECTIONAL WIDE GATES that allow wheelchair users and passengers with baby prams to pass through the paid areas without staff assistance have been provided at all stations concourse.

- PORTABLE RAMP that allows wheelchair users for easy boarding between the platform and front carriage of train has been provided at all stations.

- MTR System Accessibility

Metro Copenhagen
The metro system in Copenhagen is rather newly built and some of the stations have opened in September 2007. The metro is designed as a totally accessible metro to all passengers from the entrances via the concourse to the platform, boarding and inside the train.

Buses
The following part will highlight some of the standards that exist around the World concerning bus traffic.

Americans With Disabilities Act (ADA) Accessibility Guidelines for Transportation Vehicles – Part 1192
Se 9.7.1 ADA Accessibility Guidelines for transportation vehicles, part 1192, draft July 2007

There are a number of pieces of legislation stemming from Part 5 of the Disability Discrimination Act 1995 in the UK relating to buses and coaches. In the following section some examples of what is included regarding buses are presented.

WHEELCHAIR ACCESSIBILITY REQUIREMENTS
Wheelchair spaces

- A regulated public service vehicle shall be fitted with not less than one wheelchair space;

- Forward-facing wheelchairs - Any wheelchair space fitted to a regulated public service vehicle shall comply with the following requirements:
  
  o a wheelchair space shall not be less than:

  - 1300 mm measured in the longitudinal plane of the vehicle;
  - 750 mm measured in the transverse plane of the vehicle; and
  - 1500 mm measured vertically from any part of the floor of the wheelchair space;
- A wheelchair space shall be fitted with a wheelchair restraint system suitable for general wheelchair application;

- There shall be a sign on or near a seat specified stating the following "Please give up this seat for a wheelchair user" or stating words of equivalent meaning;

- Boarding lifts and ramps;

- A regulated public service vehicle shall be fitted with not less than one boarding lift or one boarding ramp, or shall carry not less than one portable ramp;

- Any boarding lift or boarding ramp fitted in accordance shall:
  - have a safe working load of not less than 300 kg;

- Any boarding ramp fitted to a regulated public service vehicle shall:
  - have a surface of not less than 800 mm in width;
  - no part of the surface in sub-paragraph (3)(a), and no part of the vehicle, shall present an obstruction greater than 15 mm in height measured along a plane parallel to, and above, the surface of the ramp, and in the direction of travel of a reference wheelchair when moved into or from the vehicle;

- Entrances and exits:
  - Any entrance or exit which is intended to provide access for a wheelchair user shall have a clear unobstructed width of not less than 800 mm.

- Priority seats:
  - regulated public service vehicle shall have not less than 4 seats designated by signs for use by disabled persons;
  - a priority seat shall not be a seat which is capable of being tipped, folded or otherwise moved;
  - a priority seat shall face only the front or the rear of the vehicle;
  - a priority seat shall be as close as practicable to a priority entrance;
  - there shall be adequate space for a dog trained to assist a disabled person;
  - any armrest fitted to a priority seat shall be moveable;
  - height of seat shall not be less than 400 mm and not more than 500 mm above the floor;
  - there shall be a sign on or near a priority seat indicating that disabled persons have priority for the use of that seat;

- Handrails and handholds;

- Kneeling Systems:
  - a switch shall be required to be used to enable operation of the kneeling system;
- Route and destination displays:
  - a route number display and a destination display in the following positions;
  - on the front of the vehicle, as close as practicable to that part of the windshield which is within the driver's field of vision and a display on the rear of the vehicle;
  - any destination display.

**Low-Floor Buses, UK**

In single-deck vehicles at least 50% of the floor space available for passengers (i.e. excluding driver's cab and wheel arch boxes) must form a single area, without steps, with access to at least one door (or two where entrance and exit are separate):

- With the vehicle in its normal ride position, this area should ideally be flat;

- All seats in the area described above (with the exception of those mounted on wheel arches) must be fitted in such a way that there is no footstool;

- A minimum clear width of 800 mm at floor level must be provided from the entrance through the wheel arch area, and therefore of 750 mm at floor level and at least 800 mm from a height of 450 mm above the floor, so that a user of a wheelchair to ISO Standard 7193 (1200 mm long by 700 mm wide) is able to manoeuvre between the bus entrance and the designated space.

**Wheelchair Space:**

- A space must be provided into which a wheelchair-user may manoeuvre and travel safely, facing the rear of the bus, parallel to its body-side, and backed up to a transverse padded backrest. This space must be level and free of obstructions and at least 1300 mm long and 750 mm wide at floor level, to accommodate wheelchairs to ISO Standard 7193. Any additional space(s) for wheelchairs or pushchairs should be located to the rear of the first space (on either side of the bus) so that the first fixed transverse seats are as near as possible to the bus entrance;

- The padded backrest;

- A horizontal handrail should be fitted at the sidewall 850 mm to 1000 mm above the floor, horizontal handrail should be fitted 1200 mm to 1500 mm above the floor to be within reach of any passengers standing in this area;

- A separate push button to request the operation of the wheelchair access ramp (see 4.2) should be fitted within reach of the wheelchair user;

- Tip-up seats may be fitted in the wheelchair space longitudinally along the sidewall or transversely at the opposite end from the padded backrest.

**Boarding Aids:**

- Kneeling suspension is essential on all low-floor buses and must always be used to ensure that the step height at any door does not exceed 250 mm. Care needs to be taken to ensure that the selected kneeling configuration does not worsen the gradients in the door area on the access ramp, or at the interface between the two;
The access ramp must be capable of taking a minimum weight of 300 kg and should ideally be designed to ensure that, when the bus is kneeling, there is a maximum gradient of 8% (about 5% or 1:12) from the curb. The ramp must be capable of extending to ground level;

- The ramp must be not be less than 800 mm wide and not more than 1050 mm long, and have a surface which provides good grip in all weather conditions;

- If a power-operated lift is used as an alternative to a ramp it must be capable of taking a minimum weight of 300 kg, and be at least 750 mm wide and 1200 mm long when deployed.

Doorways:

- clear width of at least 800 mm and if not within the driver's direct field of view;

- a push button must be provided on the outside of the vehicle adjacent to the door to request operation of the ramp.

Seating:

The specified provision of priority seats may need to be adjusted to ensure adequate manoeuvring space for wheelchairs. As a minimum, three fixed seats (forward or rearward facing) which meet the requirements of the Specification must be clearly designated for use by elderly and ambulant disabled passengers.

Exterior Signing:

The standard international wheelchair symbol (white on blue) should be displayed on the front of the bus so that wheelchair users are able to recognize accessible vehicles.

2001/85/EG European Parliament Instructions about buses with more than 8 passenger seats

This instruction is based on some UN regulations and has the purpose to harmonize between the European countries regarding the bus standard. The instructions are valid for buses in city traffic but not long-distances buses. The instructions cover a number of issues about the bus construction, but the focus is on the safety for passengers and the accessibility for persons with disabilities.

The instructions have a large impact for persons with disability, since it is compulsory that all new buses in city traffic should be accessible for persons with disabilities.

Except for instructions about certain tests a vehicle must pass the instruction including such things as design of steps, equipment for boarding and alighting like elevator, ramp and kneeling function, designated areas for wheelchairs and the stability of the wheelchair and communication equipment.

The special regulations for accessibility for persons with disabilities are found in the appendix 7, called “Requirements for technical equipments which facilitate the accessibility for passengers with reduced mobility”. A number of conditions and measures are described, for example regarding:

- Maximum height between ground and floor (250 to 340 mm);

- Floor (non-slippery, maximum gradient 8% etc.);

- Steps (height and width, contrast design);

- Handrails (contrast in colour, diameter of 20 to 45 mm etc.);
- Number and design of the seats (minimum 2 to 4 depending on bus type. Height of seats between 400 and 500 mm, they should not be able to fell up or down);

- Armrests (to be moveable, at certain heights);

- Space for guide dogs;

- Communication equipment (stop-buttons, door-opening buttons etc.);

- Designated areas for wheelchairs (750 mm width and 1300 mm length);

- Doors (at least one door minimum 900 mm);

- Kneeling functions;

- Elevators.

**The Swedish Regulation BUS 2000**

This is a national regulation based on the EU directives and the National Road Administrations Regulation (VV 2003), which further describes the requirements for accessible buses to be procured for public transport.

The regulation highlights areas such as symbols, boarding and alighting, signs, doors, spaces for seats and wheelchairs, light and air, information indoors and outdoors.

**International Accessibility Websites**

2. Institute of Transportation and Development, U.S.A.: www.itdp.org
5. World resource Institute (EMBARQ), U.S.A.: www.embarq.wri.org
9. UN Disabilities: www.un.org/disabilities
13. Victoria Transport Policy Institute, Canada: www.vtpi.org
15. European Union: www.access-to-all.eu
16. European Union: www.euro-access.org
24. Institute on Independent Living, Sweden: [www.independentliving.org](http://www.independentliving.org)
25. Handicap International, Belgium: [www.handicap-international.org](http://www.handicap-international.org)