Environmentally Sustainable and Healthy Urban Transport

A strategic focus for urbanization and health

DRAFT WORKING DOCUMENT
Updated 17 March 2010

World Health Organization
Western Pacific Region
Environmentally Sustainable and Healthy Urban Transport

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ESHUT Primer

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World Health Organization
Western Pacific Region
This ESHUT Primer provides background information on the Environmentally Sustainable and Healthy Urban Transport initiative and offers examples of specific ESHUT projects as well as resources to help cities embark on their journey towards collaborative planning and developing. It is currently considered a draft working document and will be published in its final version in the latter part of 2010.

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Section 1: About ESHUT

Environmentally Sustainable and Healthy Urban Transport: An Important Challenge of Urbanization and Health

We are moving towards an increasingly urbanized world. The year 2007 marked a historical event, as the world’s population living in cities surpassed 50% for the first time. By the year 2030, three out of five people across the world will be city dwellers, and by 2050, seven in ten. In the Asia Pacific region, more than 0.8 billion people live in cities. In the next 20 years, 60% of the increase in the global population is expected to be in this region.

In recognition of the profound impact urbanization can have on our health, both collectively and individually, the focus of World Health Day 2010 is on **Urbanization and Health**. As part of the global campaign, events will be organized worldwide to raise awareness about the dedicated theme – **1000 cities, 1000 lives**. In the Western Pacific Region, the goal is to mobilize and activate at least 200 cities to join the global campaign.

World Health Day may be a one-day event in some cities, but health issues and challenges related to urbanization will have to be addressed on the long term. To ensure continuity of focus throughout 2010 and beyond, the Western Pacific Region of WHO is highlighting **Environmentally Sustainable and Healthy Urban Transport** (ESHUT) as one of the main challenges of healthy urbanization.

In the Western Pacific Region, cities are encouraged to initiate a process that will facilitate the more detailed planning and implementation of ESHUT and ultimately lead to a long-term ESHUT output.

World Health Day 2010 is a launching pad for raising awareness about the selected theme **Urbanization and Health**. The **Environmentally Sustainable and Healthy Urban Transport** project seeks to ensure continuity and longevity of focus. Only then will we be able to implement environmentally sustainable and healthy urban transport within the Region. All cities are encouraged to register and sign up for World Health Day 2010 online (http://www.who.int/world-health-day/2010/registration_city/en/index.html).

We hope that cities throughout the Western Pacific Region will adapt a new paradigm for urban transportation, which places the environment and health at the centre of attention.
Background

One of the consequences of rapid urbanization is the development of an urban infrastructure, driven by uncontrolled motorization for transporting the ever-increasing number of people and goods to, from and within urban areas. The result is neither conducive to the health of the urban population nor environmentally sustainable.

Urban transport systems have significant effects on the health and safety of people

The policy, design and practice of urban transport systems all have significant implications for the health and safety of people because of air and noise pollution and greenhouse gas (CO₂) emissions generated by motor vehicles, road traffic crashes, physical activity or inactivity, exposure to second-hand smoke in confined public transport systems, lack of accessibility or barrier-free transport system for persons with disabilities and older persons, and so on.

In 2009, in close cooperation with the United Nations Centre for Regional Development (UNCRD)¹ and the Alliance for Healthy Cities (AFHC), the WHO Western Pacific Regional Office launched the Environmentally Sustainable and Healthy Urban Transport (ESHUT) initiative. In line with the theme of World Health Day 2010, Urbanization and Health, this long-term project has the overall objective to promote a win-win strategy for urban transport systems, focusing on the environment and health, as shown in Figure 1.

![Image](image.png)

The many impacts of unsustainable transport

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Air quality</strong></td>
<td>Vehicle emissions harm human health and the natural environment</td>
</tr>
<tr>
<td><strong>Noise and vibration</strong></td>
<td>Noise affects productivity and health</td>
</tr>
<tr>
<td><strong>Accidents</strong></td>
<td>Each year 1.2 million lives are lost due to vehicle accidents</td>
</tr>
<tr>
<td><strong>Global climate change</strong></td>
<td>Vehicles are responsible for roughly 25% of fossil-based CO₂ emissions</td>
</tr>
<tr>
<td><strong>Waste disposal</strong></td>
<td>The disposal of vehicles and vehicle parts contribute to landfill problems</td>
</tr>
<tr>
<td><strong>Congestion</strong></td>
<td>Time lost in congestion affects overall productivity</td>
</tr>
<tr>
<td><strong>Energy security</strong></td>
<td>Dependence on petrol-based mobility affects national security</td>
</tr>
<tr>
<td><strong>Economic efficiency</strong></td>
<td>Financial capital consumed by car expenditures reduces capital for other investments</td>
</tr>
<tr>
<td><strong>Severance</strong></td>
<td>Roadways separate communities and inhibit social interactions</td>
</tr>
<tr>
<td><strong>Visual intrusion</strong></td>
<td>Cars, roads and parking areas distract from a city’s natural environment</td>
</tr>
<tr>
<td><strong>Loss of living space</strong></td>
<td>Roads and parking areas consume large amounts of urban space</td>
</tr>
</tbody>
</table>


¹ More information about the United Nations Centre for Regional Development and their Environmentally Sustainable Transport (EST) Project can be found at URL: http://www.uncrd.or.jp/env/est/

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Improvemnts in urban transport systems lead to improvements in the health of urban populations.

Good urban transport systems impact positively on the health of urban populations. A new paradigm for urban mobility and access is needed, which must be based on an environmentally sustainable alternative, including, for example, easy access to barrier- and smoke-free public transport, non-motorized transport and road safety. Cities need an urban transport system that promotes health through the reduction of greenhouse gas emissions, increase of opportunities for physical activity and increase in health equity, by ensuring safe and equal access to environmentally sustainable and healthy urban transport.

The ESHUT project seeks to empower cities in Asia and the Pacific to build healthy urban transport systems that reduce greenhouse gas emissions, increase health equity and increase physical activity, thereby addressing climate change, health and urban transport in an integrated and strategic manner to achieve not only economic and environmental benefits, but also health and social benefits i.e. co-benefits. Currently, five cities are participating in the ESHUT initiative. They will serve as demonstration sites to inspire other cities in the Region to strive for environmentally sustainable and healthy urban transport systems.

On World Health Day 2010, the ESHUT demonstration sites will showcase their work by giving a presentation on the implementation and impact of their city’s ESHUT initiative at a City Forum hosted by the WHO Regional Office in Manila.

Figure 1: Win-win solutions to climate change and transport

Source: UNCRD (2009) Win-win solutions to Climate Change and Transport
Section 2: Implementing ESHUT Projects

Implementing ESHUT initiatives in the Western Pacific Region

In the Western Pacific Region, the plan is to seek the agreement of at least 200 cities (mayors, heads of city health departments and other development sectors) to join the global “1000 cities, 1000 lives” campaign. The WHO Regional Office will work closely with UNCRD and other partners to promote Environmentally Sustainable and Healthy Urban Transport (ESHUT).

All cities in the Region are called upon and encouraged to engage in activities related to ESHUT.

Figure 2. Six key steps towards ESHUT

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Identifying and engaging stakeholders are a crucial first step. Stakeholders include all those who affect and are affected by policies, decisions or actions within a particular system. They have an interest in an issue and/or have a potential to influence the success of addressing the issue. Stakeholders can be persons, groups or institutions and they can be at any level or position in society, from the global level, to the regional, national or local level.

**Figure 3. Examples of internal and external stakeholders for ESHUT initiatives**

- **External**
  - end-beneficiaries: pedestrians, cyclists, schoolchildren, commuters, women, persons with disabilities
  - motorists: car drivers, motorcycle drivers
  - downstream industries: local businesses, tourism shops
  - media
  - influential people, national and local “role models”
  - academia and research institutes
  - local nongovernmental organizations, civil society organizations

- **Internal**
  - colleagues from your team (department, unit or division)
  - immediate subordinates or superiors
  - internal supporters
  - the “boss”
  - other sectors: transportation, environment, urban planning, health and public information

Establishing an ESHUT Committee is also a crucial step in ensuring coordination between stakeholders and the pooling of resources. Below are a few of the possible responsibilities of an ESHUT Committee:

- Show political support for the ESHUT initiative and/or facilitate advocacy work for environmentally sustainable and healthy urban transport.
- Decide on priority work areas and agree on a work plan and/or action plan.
- Make decisions on the operation of possible subcommittees (working groups).
- Obtain and identify financial and other resources for the ESHUT initiative (including public and private sources).

The composition of an ESHUT Committee will be decided by the stakeholders. Here are some suggestions:

- Mayor or Vice-Mayor (possible role: Chairperson of the Committee)
- City Council members related to health and social affairs (possible role: Vice-Chairperson of the Committee)
• City Council members related to the transportation sector
• City Council members related to the environment sector
• City Council members related to the urban planning or urban development sector
• City Council members related to city management
• City Council members related to improvement of residential areas
• If available: health promotion fund
• If available: health promotion development and/or management centre
• youth groups and organizations
• private sector

All activities should be planned and implemented in partnership with interested nongovernmental organizations, community representatives, community groups (such as women, youth or development city committees) and, if applicable, universities and interested research institutes. This will help ensure that interventions are sustained throughout 2010 and are not only limited to one-day activities.

To enable sharing of experiences and support city-to-city learning, all activities implemented in relation to World Health Day 2010 should be documented.

**Examples of ESHUT Initiatives**

The following table provides examples of possible short-term activities and longer-term outputs. The main goal of the short-term activities should be to initiate a process (e.g. an advocacy or social mobilization process) that can facilitate the achievement of a long-term ESHUT output. Annex 1 provides examples of indicators to document the ESHUT initiative.

<table>
<thead>
<tr>
<th>Focus</th>
<th>Possible short-term activities</th>
<th>Possible long-term outputs</th>
</tr>
</thead>
</table>
| Tobacco-free public transport (TFPP) | - identify and engage stakeholders  
- organization of free meetings, discussions or seminars at various levels on TFPP  
- display posters and banners describing health risks associated with smoking at stations, stops, ticket booths, public toilets | - ensure a tobacco-free public transportation system (including areas inside buses, railways and subways, as well as within stations and waiting areas)  
- ensure enforcement is in place and functioning |
| Alcohol- and drug-free public transport (AFPP) | - identify and engage stakeholders  
- organization of free meetings, discussions or seminars at various | - ensure an alcohol- and drug-free public transportation system (including areas inside |
<table>
<thead>
<tr>
<th>Focus</th>
<th>Possible short-term activities</th>
<th>Possible long-term outputs</th>
</tr>
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</table>
| **Public sanitary conveniences in urban transport systems (PSC)** | - identify and engage stakeholders  
- organization of free meetings, discussions or seminars at various levels on PSC  
- display posters and banners describing health risks of unsanitary public facilities (e.g. transmission of disease through unsanitary, unhygienic public toilets)  
- provide hand sanitizers at stations | - introduce bicycle lanes throughout the city  
- develop easy-to-access and safe/secure parking facilities for bicycles throughout the city  
- provide bicycle rentals throughout the city  
- ensure hygienic and clean public sanitary conveniences are in place in urban transport systems (subways, buses, railways, etc.) |
| **Bicycle friendly city (BFC)** | - identify and engage stakeholders  
- organization of free meetings, discussions or seminars at various levels on BFC  
- block off streets for car-free days and organize a “bicycle rally”  
- convert parking spaces in car parks to bicycle parking  
- organize bicycle training at schools for children and parents | - increase the number of permanently car-free zones  
- increase pedestrian footpaths that are conducive to health (traffic lights for safe crossing, overhead bridges, benches, kiosks, etc.)  
- ensure safe walkways, especially for women, children and older persons |
| **Pedestrianization** | - identify and engage stakeholders  
- organization of free meetings, discussions or seminars at various levels on pedestrianization  
- block off streets for car-free days and organize a “city hike”  
- introduce amenities along existing walkways (benches, green space, kiosks, etc.)  
- install waste disposal bins along walkways | - ensure roads and walkways are accessible for everyone, including: older persons, children, persons with disabilities and persons pushing |
| **Barrier-free and safe roads and walkways (BFS)** | - identify and engage stakeholders  
- organization of free meetings, discussions or seminars at various levels on BFS  
- organize a walking event with | - ensure roads and walkways are accessible for everyone, including: older persons, children, persons with disabilities and persons pushing |
<p>| <strong>levels on AFPP</strong> | - display posters and banners describing health risks associated with alcohol and drug abuse at stations, stops, ticket booths, public toilets | - ensure enforcement is in place and functioning |</p>
<table>
<thead>
<tr>
<th>Focus</th>
<th>Possible short-term activities</th>
<th>Possible long-term outputs</th>
</tr>
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<tbody>
<tr>
<td></td>
<td><strong>families (using prams) and with</strong></td>
<td>prams or in wheelchairs</td>
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<tr>
<td></td>
<td><strong>persons in wheelchairs and</strong></td>
<td>- ensure roads and walkways are well lit and safe (e.g. for women at night)</td>
</tr>
<tr>
<td></td>
<td><strong>highlight/make visible all areas with</strong></td>
<td>- ensure road safety measures are in place and being enforced</td>
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<tr>
<td></td>
<td><strong>difficult access</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Bus stop redesign (BSR)</strong></td>
<td>- identify and engage stakeholders</td>
<td>- make bus stops easy and safe to access (e.g. safe crossings to the bus stop, lighting at night)</td>
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<tr>
<td></td>
<td>- organization of free meetings, discussions or seminars at various levels on BSR</td>
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<tr>
<td></td>
<td>- highlight current safety-related problems with bus stops</td>
<td></td>
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<tr>
<td></td>
<td>- highlight difficulties of accessing bus stops</td>
<td></td>
</tr>
<tr>
<td><strong>Increased connectivity (IC)</strong></td>
<td>- identify and engage stakeholders</td>
<td>- roadway and pathway system changes</td>
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<tr>
<td></td>
<td>- organization of free meetings, discussions or seminars at various levels on IC</td>
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<tr>
<td></td>
<td>- create awareness and raise public support for increased connectivity, by blocking off streets and organizing city walks</td>
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</tr>
<tr>
<td><strong>Increase access to (barrier-free and safe) public transport</strong></td>
<td>- (compare with “barrier-free and safe roads and walkways”)</td>
<td>- ensure public transport is accessible for everyone, including: older persons, children, persons with disabilities and persons pushing prams or in wheelchairs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- develop easy-to-access and safe parking facilities for cars and bicycles in close proximity to urban public transport</td>
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<tr>
<td></td>
<td></td>
<td>- ensure public transport is safe, especially for women, children and older persons</td>
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<tr>
<td><strong>Air quality (AQ)</strong></td>
<td>- identify and engage stakeholders</td>
<td>- ensure national air quality standards have effective enforcement measures in place</td>
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<tr>
<td></td>
<td>- organization of free meetings, discussions or seminars at various levels on AQ</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- assess whether or not a country or city has air quality standards (and whether they are being enforced)</td>
<td></td>
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</tbody>
</table>
Section 3: Practical ESHUT Tools

ESHUT Key Messages

Key messages are basic information upon which promotional materials can be developed, such as websites, press releases and statements, brochures. We encourage you to use the following key messages to promote Environmentally Sustainable and Healthy Urban Transport (ESHUT) initiatives in your city.

There are six ESHUT key messages:

- Urban transport systems have significant effects on the health and safety of people.
- Rapid and unplanned urbanization often results in the development of an urban infrastructure driven by uncontrolled motorization.
- Urban mobility can be achieved successfully through sustainable alternatives.
- Good urban transport systems impact positively on the health of urban populations.
- Environmentally Sustainable and Healthy Urban Transport (ESHUT) is a framework to guide multisectoral policy and action to promote a win-win strategy for urban transport systems.
- The ESHUT initiative will ensure continuity of focus beyond World Health Day.

Urban transport systems have significant effects on the health and safety of people.

The policy, design and practice of urban transport systems all have significant implications for the health and safety of people. For instance, road transportation has significant effects on the health of populations through road traffic crashes, air and noise pollution, greenhouse gas (CO₂) emissions resulting in climate change, noise and physical inactivity, among others. Poorly designed urban transport systems do not take into account accessibility for persons with disabilities or the elderly and can expose people to second-hand smoke in confined public transport areas.

Rapid and unplanned urbanization often results in the development of an urban infrastructure driven by uncontrolled motorization.

Rapid and unplanned urbanization means that an ever increasing number of people and goods require transportation to, from and within urban areas. Without appropriate planning, design and policies/regulations, rapid urbanization leads to uncontrolled motorized transport. The result is neither conducive to the health of the urban population nor environmentally sustainable.

Urban mobility can be achieved successfully through sustainable alternatives.

A new way of thinking about urban mobility is needed. Easy and barrier-free access to public transport systems is essential for people with disabilities and the elderly. Smoke-free public transport, stations and stops would protect health, considering more than 50% of youth aged
13–15 years are exposed to second-hand smoke in public places, including transport settings. Securing bicycle parking areas next to public bus and train stations would encourage people to use bicycles and meet their need for seamless mobility in the city. The design of urban transport systems should consider these user-friendly alternatives, which enhance mobility and accessibility to public transport by anyone in the society.

**Good urban transport systems impact positively on the health of urban populations.**

Cycling, walking and efficient public transport systems are environmentally sustainable and lead to improvements in the health of urban populations. If the situation does not improve, urban air pollution and road traffic crashes will cause more than 600,000 deaths every year. Non-motorized transport (e.g. cycling and walking) and efficient and well-coordinated public buses and trains will lead to a reduction in use of private motor vehicles, and hence reduce deaths and illness associated with air pollution, noise and traffic crashes. In addition, such transport systems will reduce greenhouse gas emissions from motor vehicles and promote physical activity among urban dwellers. These transport alternatives provide a win-win strategy, and bring not only economic and environmental benefits, but also health and social benefits to the society (i.e. co-benefits).

**Environmentally Sustainable and Healthy Urban Transport (ESHUT) is a framework for multisectoral policy and action to promote a win-win strategy for urban transport systems in Asia.**

Since 2009, the WHO Western Pacific Regional Office, the United Nations Centre for Regional Development (UNCRD) and the Alliance for Healthy Cities (AFHC) have been working together in developing a multisectoral (transport, environment and health) regional initiative to promote ESHUT in Asia. The overall objective of ESHUT is to promote a win-win strategy for urban transport systems, focusing on the environment and health. The specific objectives are to empower cities in Asia to build healthy urban transport systems and to address health, urban transport and climate change in an integrated and strategic manner to achieve co-benefits.

**The ESHUT initiative will ensure continuity of focus beyond World Health Day.**

World Health Day may be a one-day event in some cities, but health issues and challenges related to urbanization will have to be addressed in the long term. To ensure continuity of focus throughout 2010 and beyond, the Western Pacific Region of WHO is highlighting Environmentally Sustainable and Healthy Urban Transport (ESHUT) as one of the main approaches to achieving healthy urbanization for World Health Day 2010. In the Western Pacific Region, cities are encouraged to adopt ESHUT for World Health Day 2010 and beyond.

**Global Key Messages for World Health Day 2010**

These key messages, along with supporting messages and key facts, are found in Section Two of the World Health Day 2010 Toolkit for Event Organizers (http://www.who.int/world-health-day/2010/toolkit/en/index.html).
• Virtually all population growth over the next 30 years will be in urban areas.
• The urban poor suffer disproportionately from a wide range of diseases and health problems.
• The major drivers of health in urban settings are beyond the health sector.
• Actions and solutions exist to tackle the root cause of urban health challenges.
• Build partnerships with multiple sectors of society to make cities healthier.

Resources

<table>
<thead>
<tr>
<th>Title</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainable Urban Transport Projects</td>
<td><a href="http://www.sutp.org/">http://www.sutp.org/</a></td>
</tr>
<tr>
<td>Clean Air Initiative for Asian Cities</td>
<td><a href="http://www.cleanairnet.ca/asia/1412/channel.html">http://www.cleanairnet.ca/asia/1412/channel.html</a></td>
</tr>
<tr>
<td>Physical activity through transport as part of daily activities</td>
<td><a href="http://www.euro.who.int/document/TTrt/Booklet.pdf">http://www.euro.who.int/document/TTrt/Booklet.pdf</a></td>
</tr>
</tbody>
</table>
## Background Information about Possible ESHUT Initiatives

The following resources can be drawn upon to support the planning and initiation of an environmentally sustainable and healthy urban transport programme.

<table>
<thead>
<tr>
<th>ESHUT initiative</th>
<th>Resources</th>
</tr>
</thead>
</table>
Car-free days: [http://www.cleanairnet.caasia/1412/article-59629.html](http://www.cleanairnet.caasia/1412/article-59629.html)  
List of Possible ESHUT Indicators to Assess the Baseline Situation

Considering the importance of documenting, evaluating and monitoring the implementation of initiatives and programmes to generate evidence on their effectiveness, the following table provides examples of indicators to document the above-mentioned activities. It is highly recommended to assess the baseline situation prior to the implementation of new initiatives and programmes.

<table>
<thead>
<tr>
<th>Focus</th>
<th>Possible indicators for the documentation of short-term activities</th>
<th>Possible indicators for the documentation of long-term activities</th>
</tr>
</thead>
</table>
| Tobacco-free public transport (TFPP) | -number of stakeholders engaged  
- number of free meetings, discussions or seminars held  
- number of posters and banners displayed and number of locations at which they were displayed | -number of smoke-free public transport areas or number of tobacco-free places  
- number of law enforcement activities  
- number of smokers |
| Alcohol and drug free public transport (AFPP) | -number of stakeholders engaged  
- number of free meetings, discussions or seminars held  
- number of posters and banners displayed and number of locations at which they were displayed | -number of alcohol- and drug-free public transport areas or number of alcohol- and drug-free places  
- number of law enforcement activities  
- number of alcohol- and drug-related incidents in public transport areas |
| Public sanitary conveniences in urban transport systems (PSC) | -number of stakeholders engaged  
- number of free meetings, discussions or seminars held  
- number of posters and banners displayed and number of locations at which they were displayed | -number of hygienic and clean public sanitary conveniences in place in urban transport systems (subways, buses, railways, etc.) |
| Bicycle friendly city (BFC) | -number of stakeholders engaged  
- number of free meetings, discussions or seminars held  
- number of streets blocked off and estimated number of participants  
- number of bicycle trainings organized at schools | -length (in km) of bicycle lanes introduced throughout the city  
- number of parking facilities established for bicycles  
- number of bicycle rentals available for rent  
- number of bicycles rented per day or per week  
- number of people using the bicycle parking facilities |
| Pedestrianization | -number of stakeholders engaged  
- number of free meetings, discussions or seminars held  
- number of streets blocked off and estimated number of participants  
- number and type of amenities introduced along existing walkways  
- number of waste disposal bins installed along walkways | -number of permanently created car-free zones  
- number of traffic lights, overhead bridges, kiosks, etc.  
- number of incidences (related to violence, accidents) along walkways |
| Barrier-free and safe roads and walkways (BFS) | -number of stakeholders engaged  
- number of free meetings, discussions or seminars held  
- number of walking events organized | -number of walkways installed to ensure easy street crossing  
- number of street lightings installed  
- number of security guards working in public places  
- number of incidences (related to...
<table>
<thead>
<tr>
<th>Focus</th>
<th>Possible indicators for the documentation of short-term activities</th>
<th>Possible indicators for the documentation of long-term activities</th>
</tr>
</thead>
</table>
| Bus stop redesign (BSR) | - number of stakeholders engaged  
- number of free meetings, discussions or seminars held  
- number of public events held to raise public awareness on current safety-related problems with bus stops and difficulties of accessing bus stops | - number of street lightings installed  
- number of security guards working in public places  
- number of incidences (related to violence, accidents) in public places |
| Increased connectivity (IC) | - number of stakeholders engaged  
- number of free meetings, discussions or seminars held | - number of roadway and pathway system changes  
- number of traffic accidents |
| Increase access to (barrier-free and safe) public transport | - (compare with “barrier-free and safe roads and walkways”) | - number of infrastructure changes to increase accessibility to public transport  
- number of established parking facilities for cars and bicycles in close proximity to urban public transport  
- number of incidences in public places |

**References**
