

National Strategy of Development of Cycling Transport and Cycle Touring in the Slovak Republic



MINISTERSTVO DOPRAVY, VÝSTAVBY
A REGIONÁLNEHO ROZVOJA
SLOVENSKEJ REPUBLIKY

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Resolution of the Government of the Slovak Republic

No. 223

of 7 May 2013

To the draft “National Strategy of Development of Cycling Transport and Cycle Touring in the Slovak Republic”

Document No.: 11993/2013

Submitted by: the Minister of Transport, Construction and Regional Development of SR

The Government

A. approves

A.1. The draft National strategy of development of cycling transport and cycle touring in the Slovak Republic

B. imposes

On the Minister of Transport, Construction and Regional Development of SR

B.1. In cooperation with the vice prime minister and minister of finance, the vice prime minister for investment, the vice prime minister and minister of interior, the vice prime minister and minister of foreign affairs and European matters, the minister of labour, social affairs and family, the minister of education, science, research and sport, the minister of economy, the minister of environment, the minister of justice, the minister of health, the minister of culture, the minister of agriculture and rural development, the minister of defence to ensure the fulfilment of tasks and measures resulting from the National strategy of development of cycling transport and cycle touring in the Slovak Republic

Inspection date: by 31 December of every year

B.2. To submit to a government meeting the Draft permanent financial mechanism for the implementation of the National strategy of development of cycling transport and cycle touring in the Slovak Republic

By 31 December 2013

B.3. To submit to a government meeting the report on the implementation of individual measures resulting from the National strategy of development of cycling transport and cycle touring in the Slovak Republic

By 30 April 2016

C. recommends

The presidents of the self-governing regions
The President of the Association of Towns and Communities of Slovakia

The President of the Union of Towns and Cities of Slovakia

The President of the National Union of Employers
The President of the Federation of Employers' Associations of the Slovak Republic

C.1. In cooperation with the Minister of Transport, Construction and Regional Development of SR to ensure the implementation of measures resulting from the National strategy of development of cycling transport and cycle touring in the Slovak Republic and their translation into regional, local and business strategies.

Persons responsible for implementation:

The Minister of Transport, Construction and Regional Development of SR

The vice prime minister and minister of finance

The vice prime minister for investment

The vice prime minister and minister of interior

The vice prime minister and minister of foreign affairs and European matters,

The minister of labour, social affairs and family

The minister of education, science, research and sport

The minister of economy

The minister of environment

The minister of justice

The minister of health

The minister of culture

The minister of agriculture and rural development

The minister of defence

To attention:

The presidents of the self-governing regions

The President of the Association of Towns and Communities of Slovakia

The President of the Union of Towns and Cities of Slovakia

The President of the National Union of Employers

The President of the Federation of Employers' Associations of the Slovak Republic



1 Introduction

With the development of living standard the individual motoring has been gaining ground to the detriment of other transport modes over the last decades. It caused a decrease of physical activity – both walking and cycling. The result is deterioration of physical, mental and health condition of population, as well as negative effects on the environment. In developed countries this situation can be improved by promotion of environmentally friendly transport modes as an alternative to conventional means of transport that use fossil fuels. For this reason these countries have witnessed the development not only of a more environmentally acceptable mass transport, but also of the non-motor transport, in particular cycling.

The West European countries have in place their national cycling strategies for several decades. By their implementation some of these countries have achieved a double-digit share of the cycling transport on the mobility of urban population, for example the Netherlands (27%), Denmark (19%) and Germany (10%). Several Dutch cities achieve a 35 to 40 per cent share of cycling transport on all drives. A high share (more than 30%) is observed in cities where the cycling transport has always been an equal part of the transport policy¹. On the contrary, the Slovak Republic is at the beginning of a way, where it is necessary to take concrete measures in order to put the cycling transport and cycle touring to the foreground and to use their potential.

The submitted document briefly describes the present, basic state of cycling transport and cycle touring in SR. The Slovak cities and communities have only discontinuous sections of cycle touring routes, which were mostly built up without a clear conception and not in compliance with foreign good practices. The possibilities of bicycle parking (at public institutions, railway and bus stations, shopping centres etc.) and access of cyclists to public transport are not consistent with recent trends either. Development plans of cities and communities often do not take into account the design of required infrastructure, which makes the prospective planning of the development of cycling transport impossible. On the other hand, in the open country there is a network of more than 10 000 km of marked cycle touring routes which predominantly use roads that primarily serve for other purposes. These require regular reconstruction and replacement

of marking to actually serve for their intended purpose.

Several documents adopted by the European Commission, e.g. the White Paper – Roadmap to a Single European Transport Area, the Green Paper – Towards a new culture for urban mobility and its Action plan of urban mobility and other documents plead in favour of the development of cycling transport. These documents set many ambitious aims – such as the phase-out of conventionally fuelled cars in cities by 2050 – which will require a much more extensive use of bicycles, walking and public passenger transport.

Not only the European aims, but especially the ambition of SR to ensure a well-balanced and sustainable development of mobility and to create conditions for the increase of living standard of population, will require much higher support of cycling transport in Slovak cities, too. The government of SR committed itself to the development of non-motor, in particular cycling transport, in its Manifesto for the years 2012 - 2016.

The vision of this document is the emancipation of the cycling transport with other transport modes for it to become a regular part of urban and regional transportation systems. It is also necessary to improve the general awareness of population of advantages of the cycling transport and cycle touring as a form of transport to school, work and for recreation, which is more beneficial to the environment, economy and human health.



2 Basis and vision of the national Cycling Strategy



2.1 Basic “cycling vision”

The basic vision of the cycling strategy is **recognition of cycling transport as equivalent transport mode and its integration with other transport modes**, and improvement of perception of cyclists as full-fledged road users.

The vision includes a significant strengthening of cycle touring as an important segment of tourism with large potential, particularly for rural areas, their development and the increase of

2.2 Background to the Cycling Strategy

Main reasons for the support of cycling transport and cycle touring can be divided into 4 groups:

ECONOMICAL REASONS

The continuous rise of fuel prices and fare, frequent traffic congestion and resulting time loss in individual or public passenger transport increasingly highlights the advantages of cycling transport. They are often manifested there where conditions for its safe use exist. Up to 30% of all drives by car are shorter than 3 km. On the other hand, a bicycle may be faster than a car in the city up to the distance of 5 km.

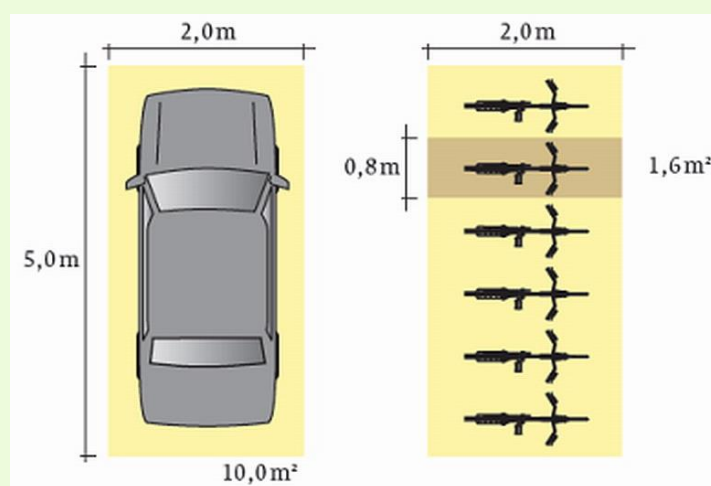
The cycling transport is an economic option not only for road users, but also for the state, regions or cities and communities. The development of cycling transport infrastructure is impossible without investment of public funds, but it is also an alternative in the process of gradual reduction of individual automobile transport with a long-term objective to continuously decrease the number of parking areas for motor transport.

Fully different economic reasons exist in favour of the development of cycle touring. This extends the possibilities of learning the country and spending a holiday in Slovakia, which provides an opportunity for the development of services and growth of employment, in particular in rural areas, predominantly in small and medium-sized enterprises. Also in the neighbouring Czech Republic the cycle touring has an important share in tourism and contributes to economy

employment and competitiveness, i.e. their **sustainable development**.

In line with the basic vision of the Cycling Strategy and in the effort to move closer to the neighbouring European countries we must do whatever is needed to achieve a **10% share of cycling transport on the total division of transport labour by 2020**.

COMPARISON OF REQUIRED AREA FOR A CAR AND BICYCLE



Note: Schematic representation, calculated values may differ due to the environment and conditions.

Source: the Central MeetBike project; specialised German publications for cycling transport

of the state, self-governing regions and enterprises. It offers an alternative in the form of sustainable development of tourism and provides jobs in different areas of cycling-related services.

ENVIRONMENTAL REASONS

A bicycle is a means of transport that does not produce any harmful emissions. Its operation is accompanied by much lower level of noise and vibrations compared to the motor transport. The use of bicycle does not require any energy consumption (with the exception of the human one) and thus contributes to two objectives of EC: to decrease the dependency on fossil fuels and to reduce greenhouse gas emissions.

HEALTH REASONS

In individual EU countries, 30 to 80% of the adult population are overweight (BMI greater than 25). The problem of obesity among

children becomes increasingly acute, because approximately 20% of children are overweight and one third of them are obese. In the same time, cycling is recommended as an excellent preventive method, which decreases the risk of cardiac-vascular disease by 50%, the risk of the type II diabetes mellitus by 50%, the risk of obesity by 50% and the risk of hypertension by 30%. All it takes is 30 minutes of fast waling or cycling for several days in the week.¹ Emissions from traffic in settlements are regarded as the main cause of respiratory failures, so the limitation of the growth of automobilization in the cities will positively influence the health of population.

a cycling-friendly climate and a large number of cyclists in the streets you cannot fail to see how positively this phenomenon influences the community and the quality of life. Cycling namely creates conditions for larger socialization and establishment of closer interpersonal contacts.

A comprehensive evaluation of the strengths and weaknesses, opportunities and threats of cycling transport and cycle touring is shown in the SWOT analysis in Annex 1.

SOCIAL REASONS

A bicycle is a suitable and affordable means of transport for all layers of the society and supports the independence of children and young people. During a visit of a city with

¹ Documents of the World Health Organisation





3 Evaluation of situation of cycling transport and cycle touring

3.1 Strategic documents of EU and SR

- **White Paper: Roadmap to a Single European Transport Area**

- *“Facilitating walking and cycling should become an integral part of urban mobility and infrastructure design.”*
- *In the list of initiatives planned for the area of transport safety the priority is given to tasks resulting from Objective 1.4 - Acting on transport safety: saving thousands of lives. The need to pay particular attention to vulnerable users such as pedestrians, cyclists and motorcyclists, including through safer infrastructure and vehicle technologies is highlighted.*

- **Green paper**

- Towards a new culture of urban mobility (2007) and its Action plan (2009). In this document EC identifies five challenges facing European cities which need to be met as part of an integrated approach. The first challenge concerns the fluidity of road traffic, where potential solution is the support of environmentally friendly transport modes, such as walking, cycling and public transport.

- **European Parliament Resolution of 27 September 2011 on European road safety 2011 – 2020 (2010/2355(INI))**

- *“Strongly recommends the responsible authorities to introduce speed limits of 30 km/h in residential areas and on all one-lane roads in urban areas which have no separate cycle lane, with a view to protecting vulnerable road users more effectively.”*
- *“Welcomes the fact that the Commission is focusing its attention on the most vulnerable user groups (two-wheel vehicle users, pedestrians, etc.), where accident figures are still too high; calls on the Member States, the Commission and the industry to bear these kinds of users in mind when designing*

road infrastructure and equipment, so that roads built are safe for all users; calls, in the context of road planning and maintenance, for greater consideration to be given to infrastructure measures to protect cyclists and pedestrians, e.g. traffic separation measures, the expansion of cycle path networks and barrier-free access arrangements and crossings for pedestrians.”

- *“Calls on the Commission and the Member States to support cycling and walking as mode of transport in their own right and an integral part of all transport systems.”*

- **EU Physical Activity Guideline (October 2008)** is a document calling for enhancement of physical activity among children, youth, but also adult people for the reason of the growing trend of sedentary, physically inactive way of spending working and free time. The support of active cycling transport significantly contributes to the implementation of the Political Declaration of the UN General Assembly on chronic non-communicable diseases and the Action Plan of the European Office of the World Health Organisation for implementation of the European Strategy for the Prevention and Control of Noncommunicable Diseases 2012 – 2016.

DOCUMENTS CONCERNING THE CYCLING TRANSPORT IN SR

Also Slovakia has in place important strategic documents concerning the cycling transport. They include the Transport Policy of the Slovak Republic until 2015 and the Road Safety Enhancement Strategy in the Slovak Republic in the years 2011 – 2020 (National Road Safety Plan of SR 2011 – 2020).

- **The Transport Policy of the Slovak Republic until 2015** contains 2 specific aims and 6 priorities concerning the development and support of cycling transport, especially modernisation and development of cycle infrastructure and limitation of negative environmental impacts of transport. It

states that “the assumed main contribution of non-motorized traffic (pedestrian, cyclists, etc.) to the infrastructure development is the substantial transition of a part of carriage of passenger within towns and municipalities from individual car transport to ecologically clean and economically efficient non-motorized transport.”

As early as in 2005, the Transport policy of the Slovak Republic until 2015 states that “the current conditions of non-motorized transport infrastructure can be evaluated as insufficient. Its major disadvantage is the incoherent communication network for non-motorized transport with a number of local discontinuities, poor quality of construction finishing, connection to public transport networks and a low level of pedestrian and cyclist safety.” At present we can state that minimum improvement has been achieved, only thanks to the enthusiasm and commitment of zealous individuals, interest groups and non-government organizations. A more significant improvement can only be achieved with the active support of the state and self-governments.

- **Road Safety Enhancement Strategy in the Slovak Republic in the years 2011 – 2020**

contains 1 objective and 1 area, which directly affect cyclists and support of cycling transport. It is the general “Objective C – Reducing road accidents involving vulnerable road users” and its area “C2 – Increasing the level of cyclist safety”. The specific measures include:

- Defining the criteria and technical requirements for safe movement of cyclists on roads (methodology based on actual behaviour of cyclists)
 - Supporting construction of cycle paths in communes and cities
 - Supporting safe cycling through digitalisation of information for cyclists - creation of a digital map (GIS) of the cycle path network
 - Campaigns and educational measures aimed at use of crash helmets for cycling and reflexive elements under reduced visibility conditions
 - Efficient supervision of observance of generally binding legislation and restrictions on cyclists' movement.
- **Manifesto of the Government 2012 – 2016** deals with the commitment of the government “... to support the development of non-motorized, in particular cyclist transport.”

3.2 Legislation, technical standards and technical conditions

The national legislation relating to cyclist transport and cycle touring should provide a framework enabling and facilitating their support and development at all levels and in all aspects. Although improvement of legislation will also be necessary, the currently valid wordings of laws and other norms create basic conditions for cycling transport and cycle touring.

Legislation relating to cycling transport and cycle touring includes among others:

- **Act No. 135/1961 Coll. – Act on Land Communications (the Road Act)**, as amended: it defines individual categories of roads, including local roads, where cycle communications are non-motorized local communications in accordance with STN 73 6110.
- **Act No. 8/2009 Coll. on Road Traffic and on Amendments of Certain Acts**, as

amended: The act and its decree describe the organisation of transport and transport regulations for all road users. This act was amended on several occasions in the previous years.

- **Decree of the Ministry of Interior of the Slovak Republic No. 9/2009 Coll. implementing the Road Traffic Act and amending some acts**, as amended: The decree was last changes by amendment 361/2011 Coll., which entered into force on 1 November 2011. Particularly this last change brought for the Slovak Republic new elements in the organisation of cycling transport (especially in the area of cycling traffic signs).
- **Act No. 50/1976 Coll. on Land-Use Planning and Building Order (the Building Act)**, as amended: The Building Act generally regulates the rules of land-

use planning and authorisation of construction and thus directly affects the planning of cycle network deployment, authorisation of construction of cycling infrastructure and its approval procedure.

- **Act No. 326/2005 Coll. on Forests**, as amended: The act delimitates the terminology, describes state authorities and forest guard. It defines their competences, clearly determines the obligations of the public in use of forests and defines the procedure of granting exemptions from prohibited activities and the relationship to owners and state authorities.
- **Other acts** that marginally concern the issues of cycling transport and cycle touring:
 - Act No. 543/2002 Coll. on the Protection of Nature and Landscape, as amended;
 - Act No. 91/2010 Coll. on the Support of Tourism, as amended;
 - Act No. 274/2009 Coll. on Hunting and on Amendments of Certain Acts, as amended;

- Act No. 40/1964 Coll. – the Civil Code, as amended;
- Act No. 364/2004 Coll. on Water and Amending the Act of the Slovak National Council No. 372/1990 Coll. on Offences, as amended (the Water Act).

- **Technical standards and technical conditions**

Two basic (most important) technical standards concerning the planning, construction and marking of cycle infrastructure are applied in SR:

- STN 73 6110 Local road design
- STN 01 8028 Cyclo-touristic marking

In the interest of the development of cycling transport and cycle touring it is necessary to draw up a **comprehensive and integrated technical standard or technical regulation** laying down the procedures for planning and construction of cycle transport infrastructure in urban and rural zones.

3.3 Cycle infrastructure

3.3.1 Cycle infrastructure in the cities

According to the European Commission's Handbook on Cycling "in the city the hourly transport capacity of a 3.5 m wide lane (normal lane) is 22 000 persons by tram, 19 000 persons by foot and 14 000 persons by bicycle, but only 9 000 persons by bus and 2 000 persons by car." Many Slovak cities and communities have not a single kilometre of cycle paths, and if cycle paths are available, their utilisation is often limited by unsatisfactory technical solutions. It is caused by the absence of a quality and detailed technical regulation dealing with cycling infrastructure design and by minimum attention paid to cycling transport.

Even more widespread problem in the Slovak cities is the poor condition of road infrastructure as a whole, because with the absence of a network of segregated cycle paths the cyclists have to use roads dominated by automobile transport. Uneven or decayed road pavement as well as often interventions of parking vehicles into the cycle paths not only deteriorates the cycling comfort, but also

increases the risk of accident and injury, which discourages many people from the regular use of a bicycle.

The underrating of the potential of cycling mobility in SR is proved by the fact that at least basic data on cycling infrastructure have not been collected. For the purposes of the analysis of condition of cycling infrastructure in the cities a survey was conducted, in which the Transport Research Institute included 138 Slovak cities. A total number of 67 cities with less than 150 km of cycle paths participated in the survey.

Up to three fifths of these paths are detached – either reserved for cyclists (15%) or, more frequently, reserved for pedestrians and cyclists, with separate (23%) or combined (22%) operation. One third of the total length consists of footpaths built up in the adjacent communication area, of which nearly 16% is used exclusively by cyclists and more than 18% is used by both cyclists and pedestrians. Only 6% of the length of cycle paths in the cities that participated in the survey is situated in the main communication area (cycle lane, belt, corridor).

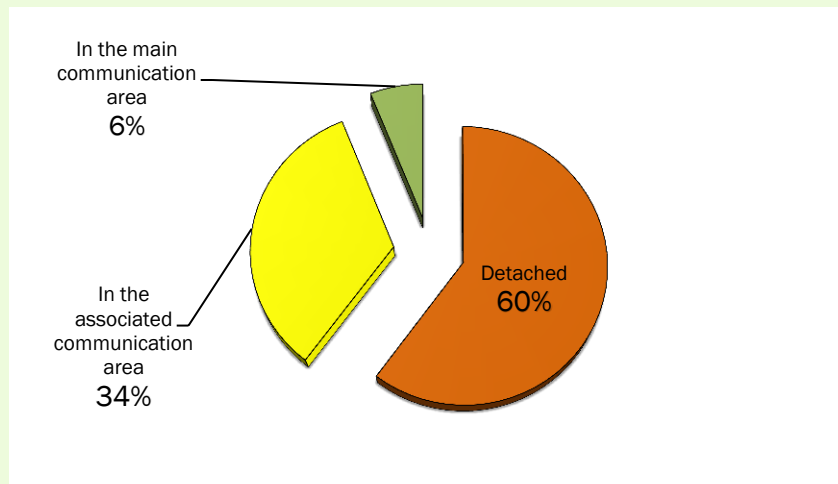
More comprehensive data on the length and structure of cycle paths in Slovak cities and communities will be collected in 2013, for the first time ever. The statistical statement Local Roads will be used for this purpose. It is completed by all communities once every three years. MoTCRD SR will thus create the initial database that can be also used for setting of objectives and indicators for the following period, which is particularly important in connection with the preparation of the Partnership Agreement of SR with EU for the programme period 2014 – 2020.

vehicles from pedestrian zones and thus contribute to the decrease of the accident rate. In particular pedestrian zones with their confined space are unsuitable for supply by traditional means, not talking about pollution and occupation of the parking space.

Planning documentation of cities from the view of cycling transport

The binding parts of planning documentation of the cities often do not deal with cycling transport. The cycling transport is mentioned only in development plans of 29 cities from all 67 cities that participated in the survey. Only four cities – Trnava, Moldava nad Bodvou, Piešťany and Banská Bystrica – have elaborated a separate master plan of non-motorized transport and 19 cities have implemented a technical study of cycle paths. Only Moldava nad Bodvou and Banská Bystrica dispose of a study of static transport for bicycles. The position of cycling transport coordinator currently exists in the municipalities of Banská Bystrica, Bratislava and Trnava.

GRAPH 1: DISTRIBUTION OF CYCLE PATHS IN THE CITIES OF SR



Source: Transport Research Institute, survey implemented for MoTCRD SR

The excessive fragmentation of land in the Slovak Republic and related costs of settlement of property rights to land and the ruggedness of landscape, especially in mountain regions, result in higher costs of implementation and construction of cycle paths. In the first years of development of cycling infrastructure a significant extension of supply of cycle paths can therefore be achieved by the implementation of cycle lanes and cycling corridors on existing roads together with traffic marking and supplementary cycling infrastructure. Moreover, the potential of these cheaper measures, that can be implemented faster, is still underused in Slovakia.

The European union in its strategy supports the development and extension of “cargo” bicycles for transport of larger loads and for supply of zones closed for motorized traffic or traffic-calmed down zones with exclusion of motorized traffic. Cargo bicycles are environmentally friendly, eliminate the need of supply by motor

3.3.2 Cycling infrastructure

Cycle touring route (cycle track) is a route intended for cycling tourists that uses existing roads marked according to STN 01 8028. A cycle track can run through an urban or rural zone, a forest, mountain or field. Cycling direction signs must be installed along the cycle touring routes after their legalisation according to Slovak legislation.

In Slovakia these signs are installed on 530 cycle touring routes in a total length of more than 10 000 km. The main axes are national long-distance cycling arteries with total length of 2 926 km (Annex 6) and international routes and Eurovelo routes (Annex 5), of which 82.6 km are routes marked in the territory of SR.

Their development plans and cycling transport master plans are defined, taking into account wider relations and main national corridors. Regional and local routes account for 70% of all cycle touring routes with a length of nearly 7 000 km.

The network of cycle tracks in Slovakia is maintained by 74 entities, mostly citizens' associations.² A major part of this network is administered by associations that are members of the Slovak Cycle Club. To a smaller extent, self-governments – city of Bratislava, city of Vysoké Tatry, city of Spišská Belá, Association of Communities of the Tokaj region, community of Píla and city of Skalica – took over the administration of cycle touring routes.

accounts for 43% of the total length of cycle tracks in Slovakia.

Cycle touring routes are classified as follows:

- By character of landscape: road and mountain cycle touring;
- By importance expressed by colour marking: red – blue – green – yellow;
- By difficulty: recreation – sport – expert.

The marking for cycle touring purposes is governed by STN 01 8028 – Cyclo-touristic marking. The largest number of cycle tracks in Slovakia is marked red (long-distance cycle touring routes, 2926 km), followed by cycle tracks marked blue (routes parallel to long-distance cycle arteries – 2 896 km), green (2 588 km) and yellow (1 220). From the total length of marked cycle tracks about 47% are suitable for road bikes and 53% for mountain bikes.

TABLE 1: CYCLE TOURING ROUTES BY REGIONS

Self-governing region	Number of administrators	Number of routes	Length (km)
Bratislava region	12	41	749
Trnava region	7	56	804
Nitra region	6	21	387
Trenčín region	6	64	1 178
Žilina region	6	112	2 200
Banská Bystrica region	11	106	2 140
Prešov region	13	76	1 350
Košice region	13	54	1 291
Total	74	530	10 099

Source: Slovak Cycle Club, Žilina self-governing region

3.3.3 Supplementary cycling infrastructure

Supplementary cycling infrastructure includes e.g. bicycle parking stands, bicycle rest areas, stands with large-size maps, information boards, cyclo-tourist signs, etc.

BICYCLE STANDS

Slovakia has not in place a technical standard or guidance dealing with location or technical parameters of bicycle parking facilities. However, citizens' associations issued several publications that can be inspiration for planners or designers of cycling infrastructure, e.g. the "Parking Manual" published by the citizens' association Cycling Coalition. Another interesting publication appeared in the framework of the BICY project under the title "Easy Bicycle parking" and provides guidance for construction of bicycle parking facilities.

Based on the interview survey implemented in Slovak cities costs of installation of one stand with capacity of 10 bicycles lie within the range of EUR 200 to EUR 2 500. The largest number of bicycle stands exists in Kosice (134). Only 16% of bus and railway stations and stops in Slovakia are equipped by parking areas or bicycle stands.

The largest number of marked cycle tracks exist in the mountain or forest areas of the Žilina region (112) and the Banská Bystrica region (106 routes). These two Central Slovakia's regions dominate also by the length of cycle tracks – each has more than two thousand kilometres of cycle touring routes, which

² The most important administrators of cycle touring routes in Slovakia by regions (source: Slovak Cycle Club):

Bratislava region: AŠK Inter, SCK, SCK Záhorák Malacky;

Trnava region: KST Horná Nitra, SCK, SCK Stará Turá;

Nitra region: KST Zlaté Moravce, Sotdum;

Trenčín region: Bicyglo Trnava, SCK, SCK Záhorák Malacky;

Žilina region: TBS JUS Martin, SCK Liptov, SCK Turzovka;

Banská Bystrica region: SCK Dumbier, Cykloklub Poľana Detva;

Prešov region: SCK – Slovak Cycle Club, PBS Kostitras, SCK Saris;

Košice region: SCK Gemerská Hôrka, Rozvoj Spiš, SCK

BICYCLE REST AREAS

Bicycle rest areas are areas that serve for rest and sitting of cycling tourists, but also as shelters in bad weather. Slovakia only has a relatively high density of rest areas along some cycle tracks in the Trenčín, Trnava, Bratislava and Prešov regions. They are represented for example by the rest areas on the dam of the hydraulic works Gabčíkovo, wooden rest areas on the Morava cycle path and some rest areas along the Danube cycle path. Rest areas are also situated along the cycle tracks in Skalica. A network of 40 bicycle rest areas exists in the Trenčín region, near Myjava. Stylish rest areas are built along the difficult mountain MTB cycle track Alžbeta in the Slanské Hills. In other locations of Slovakia rest areas are built only individually.

WELCOME CYCLISTS PROJECT

One of the most important projects aimed to the support of services for cycling tourists in SR is the project "Welcome Cyclists". Four groups of facilities are included in the project: accommodation facilities, camping sites, restaurants, tourist destinations and services. A total number of 67 facilities in the territory of Slovakia are included in this network and registered in the online database Welcome Cyclists.

The network of bicycle shops and repair shops, situated predominantly in larger cities and communities, is sufficient and the construction of new shops follows the market needs. They are supplemented by self-service repair shops that work thanks to

enthusiasts – only two of them have been operated so far – in Bratislava and Žilina.

3.3.4 Transport of bicycles by means of public passenger vehicles

Another service supporting the use of bicycles is the transport of bicycles by public passenger transport (PPT).

The transport of vehicles in selected wagons is operated by two licensed providers of railway passenger transport services – Železničná spoločnosť Slovensko and Regiojet. In view of the growing interest of cyclists in the transport of bicycles it will be necessary to extend and improve the offered services.

The possibility to take a bicycle to the bus of PPT is not common in Slovakia. It is regulated in transport regulations of individual carriers, who usually do not permit the transport of bicycles. The exception is e.g. the urban mass transport in Bratislava, where bicycles can be transported in each vehicle and at any time, subject to observance of the transport code, from 1 August 2012. The transport of bicycles by PPT is also permitted in Kosice, but only on a single line and weekend days.

A special service offered to cyclists by several cities is the possibility to transport bicycles in buses adapted for this purpose. These buses serve for safe and comfortable transport of cycling tourists from city districts to neighbouring areas that offer safe cycle touring routes. In the recent years this special service has been offered in the cities of Bratislava, Nitra and Dunajská Streda.

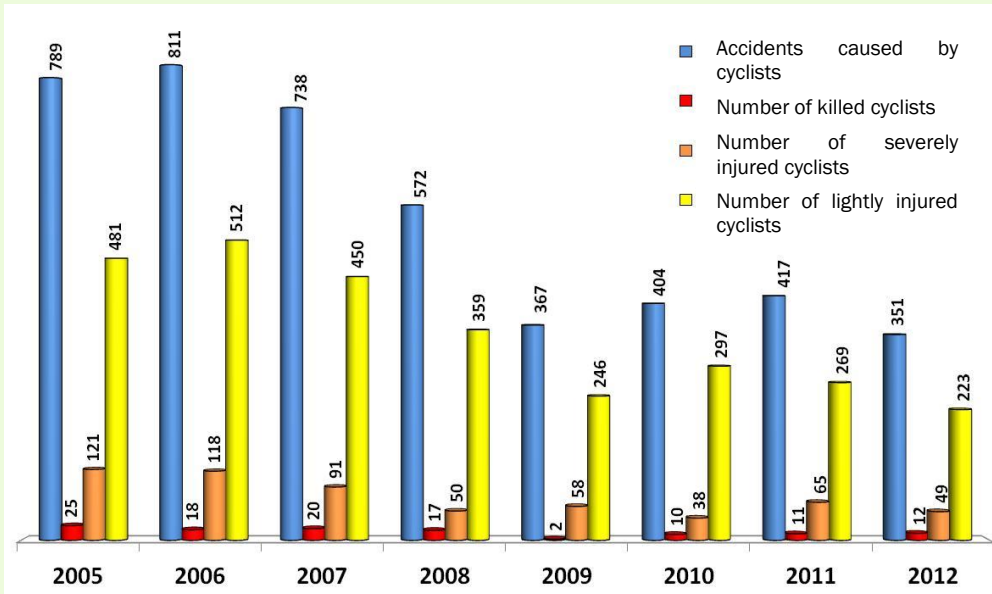
3.4 Cycling transport safety

In view of the absence of national cycling traffic censuses and studies it is impossible to determine the number of kilometres covered by cyclists every year and thus the number of accidents involving cyclists as a percentage of the number of kilometres covered by them for one year, which is common indicator used abroad. However, the statistics of road accidents kept by the police corps of SR shows the trend of decline in total number of road accidents. In the years 2008 and 2009 the number of road accidents involving cyclists decreased too (from 2010 the Presidium of the Police Corps does not keep detailed records of

road accidents involving cyclists, only the "offenders" are registered).

The most significant decrease in the number of accidents was registered in 2009. According to the Presidium of the Police Corps of SR this decrease was caused by the introduction of the new Act No. 8/2009 Coll. on road traffic, as amended, with higher sanctions, more frequent police checks on the Slovak roads, but also with the reduction of the speed limit in the city from 60 km/h to 50 km/h. When riding a bike outside of a community, a cyclist is obliged to protect his head by a properly fastened helmet.

GRAPH 2: DEVELOPMENT OF THE NUMBER OF ACCIDENTS INVOLVING CYCLISTS IN SR CAUSED BY CYCLISTS



Source: Ministry of Interior of SR, Presidium of the Police Corps of SR

road accidents in SR in the years 2005 – 2009, of which a half was caused by cyclists. A half of road accidents involving cyclists were caused by other road users. The main causes of road accidents caused by cyclists are violation of basic obligations by road users and improper style of driving, which means that it is necessary to put higher emphasis on the prevention and traffic education.

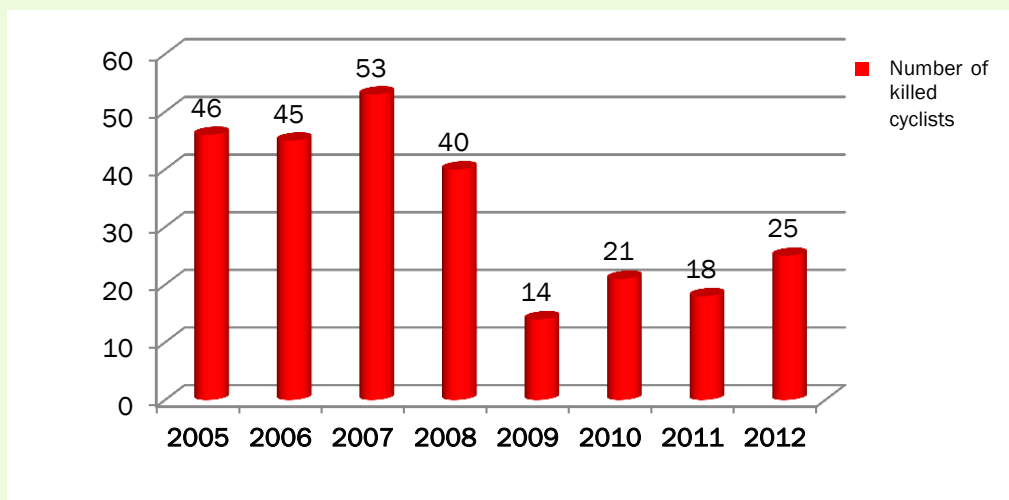
A major part of accidents involving cyclists could be prevented by segregation of cycling traffic, construction of new cycle paths and suitable traffic

education of children, young people and other road users. The purpose of the proposed measures of the Cycling Strategy is to decrease the rate of the number of accidents (fatalities) to the number of kilometres covered by cyclists by about 60% against the data reported in 2014, when these data will be already monitored.

If the cyclist is a person younger than 15 years this obligation also applies to a ride in the territory of a community. In low visibility conditions a cyclist riding at the roadside is obliged to bear reflective elements or reflective safety clothes. The result is the decrease in the number of killed, severely and lightly injured cyclists on Slovak roads. In spite of this fact, the fatality rate of cyclists involved in road accidents is still high (Graph 3).

Road accidents involving cyclists accounted on the average for 2.5% of the total number of

GRAPH 3: DEVELOPMENT OF THE NUMBER OF CYCLISTS KILLED IN ACCIDENTS INVOLVING CYCLISTS



Source: Ministry of Interior of SR, Presidium of the Police Corps of SR

3.5 Financing

The sources of financing of cycling infrastructure can be divided as follows:

- European sources – structural funds
- Domestic foundation sources
- Foreign foundation sources other than EU funds (e.g. Norwegian grant)
- State budget
- Budgets of self-governing regions
- Private sources (sponsoring)
- Non-financial sources of citizens' associations – especially volunteering

3.5.1 Possibilities of financing of cycling projects at national level

A systematic approach at national level to financing of the construction of cycling infrastructure or promotion of cycling transport still does not exist. No amount is earmarked in the state budget for the support of cycling transport. Neither is available a fund similar to the Czech SFDI (State Transport Infrastructure Fund – designed for financing of the construction of transport infrastructure, including cycling infrastructure) for financing of road and railway, but also cycling infrastructure.³ One of few possibilities of financing of cycling infrastructure is the use of the EU structural funds.

NSRF for the programme period 2007 – 2013 has not defined in the defined operational programmes the best position for the development of cycling transport and cycle touring. From eleven operational programmes only one (Regional Operational Programme) explicitly refers to the possibility of drawing of funds for the development of cycling infrastructure – EUR 3 million for the whole programme period. Moreover, the Bratislava region has the possibility to draw funds for cycle paths under the Operational Programme Bratislava Region.

³ For comparison: Over a period of eleven years (2001 – 2011) the Czech SFDI supported the development of infrastructure for cycling transport and cycle touring by subsidies totalling EUR 47.3 million, where subsidy could be granted up to 65% of costs. In Slovakia subsidies were only provided for marking of cycle touring routes and related costs via MoESRS SR – in total amount of EUR 155.5 thousand between the years 1999 and 2011.

ROP was mostly used for financing of projects of reconstruction of squares in the cities and communities, including the construction of short sections of pathways or cycle paths. As at 31 January 2013, the total volume of finance used for these projects within ROP amounted to 22.2 million € (investment in cycling infrastructure represent only a fraction of this amount). A total number of 33 projects referring to cycling infrastructure were financed and cycling paths in a length of 12.82 km were implemented.

OP Cross-border Cooperation was used for financing of several projects whose output was the construction and marking of new cycle tracks, reconstruction of existing cycle touring routes or preparation of strategic documents aimed to the development of cycle tracks in certain regions and their bearing with the aim of their digitalisation and use for web applications. The total number of approved projects referring to cycling transport and cycle touring was 26 (as at 31 January 2013) and total volume of eligible costs was EUR 26.5 million. These funds are reserved for larger projects and the construction of cycle paths or cycle touring routes is integrated in more comprehensive projects.

Under **OP Bratislava Region** the implementation of three projects aimed to cycling infrastructure with total value of EUR 1.5 million, was approved by 31 January 2013.

3.5.2 Financing at regional and local level

Financing of cycling transport in individual cities and regions should be provided predominantly from their own budgets. Some cities, communities and self-governing regions irregularly and sporadically earmark funds for cycling infrastructure or preparation of project documentation. Bratislava earmarked the amount of EUR 776,000 for the year 2013 (compared to EUR 491,000 in 2012 and EUR 32,000 in 2011). Banská Bystrica earmarked the amount of EUR 100 000 for the support of development of cycling infrastructure in 2012. In the years 2009 – 2011 the Žilina self-governing region systematically supported the reconstruction and construction of cycle tracks by annual contribution of EUR 143,000 from its

own resources (in 2012 its contribution was EUR 35,000 and in 2013 EUR 45,000). It currently implements further activities for the support of cycling transport (e.g. in cooperation with Kia Motors Slovakia it implements the cycle track Budatínsky Castle – Strečno Castle). Some cities have their own general grant schemes that can be used among others for financing of promotion activities related to support of sustainable transport modes (e.g. the Grant scheme of the city of Žilina, which supported cycling projects in 2011).

As for the process of approval of project documentation for different projects (business centres, administrative buildings etc.) the cities are not obliged to require the investors to create a certain number of parking places for bicycles, like for cars.

In case of marked cycle touring routes the indicative costs of installation are approximately EUR 300/km (besides the marking of the new cycle touring route they include its reconnaissance, simplified documentation and approval procedure). The maintenance of cycle

touring routes should be implemented with a three-year periodicity. Based on the qualified estimate of the Slovak Cycle Club (SCK), costs of maintenance account 25% of the realisation value (about 8% of the realisation value/year).

SCK has the opportunity to participate in financing of repairs and maintenance of cycle touring routes on the basis of calls issued by the Ministry of Education, Science, Research and Sport of SR. In the period of 1997 - 2011 cycling projects were supported by an amount of EUR 158,000, which proves that the amount of funds earmarked in the state budget for cycle tracks is absolutely insufficient (these funds were used for necessary maintenance and training activities throughout SR). The development and maintenance of cycle touring routes therefore rely on the support from the EU funds, sponsors, self-governing regions or individual enthusiasts who work without claim for remuneration. However, these sources are insufficient for adequate maintenance of all cycle touring routes in the territory of SR.

TABLE 2: SOURCES OF THE SLOVAK CYCLE CLUB FOR CYCLE TOURING 1997 - 2011

Source	Amount (€)	Percentage (%)
Pre-accession aid and structural funds	701 367	52,1
State support – Ministry of Education of SR	158 066	11,7
Private persons and sponsors	283 865	21,1
Cities, communities, self-governing regions	169 274	12,6
Domestic grants	33 163	2,5
Total	1 345 735	100,0

Source: Slovak Cycle Club (SCK)

3.6 Education, training and scientific research activities

The educational, training and scientific research activities may significantly influence the quality of cycling transport, which is reflected in the increase of safety and continuity of traffic in general. The education is also aimed to improvement of general awareness of cycling and advantages of its use as an integral part of transport systems.

The education issues are dealt with by government institutions and non-government organisations. Non-government organisations seem to be much more active in the area of promotion of positive impacts of cycling and cycle touring. From state institutions only the Road Safety Department of MoTCRD SR currently deals with education. Among others it

coordinates the educational activities and cooperates with the media and other entities with the aim to effectively influence the road users.

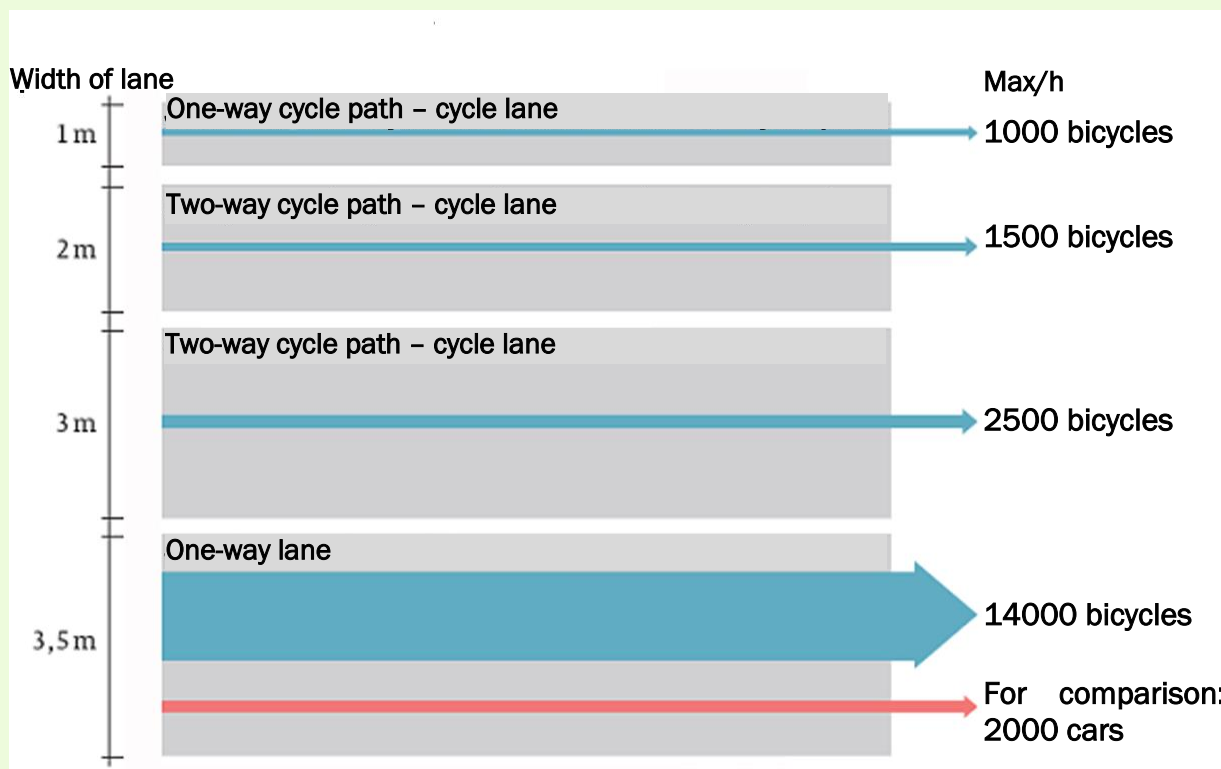
Educational campaigns implemented by non-government organisations are among others the European Week of Mobility, the Bike2work day, Cyclofest or the competition “Green Žilina”.

The Slovak Republic as a member of the European Union has the opportunity to participate in different international research projects and thus create conditions for exchange of know-how and experiences with other countries. There are many programmes, e.g. Central Europe Programme, Interreg, South-East Europe Programme, Framework Programmes, Intelligent Energy Europe, 7th Framework Programme and others. Possibilities for the implementation of research and educational projects exist also at national level,

through the structural funds or special grant schemes, e.g. the Research and Development Agency.

From international projects aimed to cycling or non-motorized transport, sustainable transport modes or mobility management, that were implemented or are under implementation in SR, we can mention e.g. projects BICY (CE), Central MeetBike (CE), MOVE (IEE), Trendy Travel (IEE), promotion (IEE), Snowball (IEE). Educational institutions (universities and colleges), but also cities and regions in cooperation with active citizens’ associations and private sector (private research organisations, small and medium enterprises) participate in these projects. Dissertations of graduates from universities are also an important source of information from the area of cycling transport and cycle touring.

CAPACITY OF CYCLE PATH



Source: the Central MeetBike project; specialised German publications for cycling transport



4 Expected benefits of the development of cycling transport and cycle tourism

4.1 Improvement of mobility

The increasingly fast and intensive way of life in the cities is accompanied by growing demands for mobility. The problem of most cities is that their demands are more and more satisfied by individual automobile transport. It necessarily results in traffic congestion and the call for construction of new roads. A more effective – and sustainable – method of development of urban mobility is the promotion of cycling transport, accompanied by the support of public

passenger transport. It is necessary to create conditions that will allow unlimited use of a bicycle as a full-value means of transportation to work and school, for shopping, services or leisure time activities. In cities that took this way it brought benefits to both cyclists (increased safety) and drivers (less cars = less congestion). Moreover, they need not to build up and maintain more roads for cars the number of which is growing.

4.2 Improvement of population health

Forty to fifty per cent of EU population live a sedentary working and private life, which represents an increased risk of overweight and is one of risk factors of cardio-vascular diseases. In accordance with guidance of the World Health Organisation the European Union and its member countries recommend at least

30 minutes of physical activity of moderate intensity per day in case of adults, including seniors. Commutation to work or school by foot or on bicycle is ideal for this purpose. In the long term, the benefit will be healthier population and lower expenditures on health care.

4.3 Protection of the environment

The widespread use of a bicycle as a means of transport helps to reduce the negative effect of automobile transport, in particular noise, emissions of gases and dust particles. An important improvement of infrastructure and other conditions for cycling transport may considerably increase the popularity of this transport mode and encourage a portion of

population to use motor transport less frequently for everyday transport, in particular to short distances in the cities. It creates conditions for a reduction of the share of the area reserved for automobile transport (dynamic and static) on the total public space in favour of environmentally friendly non-motorized transport and verdure.

4.4 Development of tourism

The development of cycle touring is one of important opportunities of sustainable development of tourism, especially in a country like Slovakia with varied landscape and a broad palette of sceneries concentrated in relatively small territory. The cycle touring has a large development potential in regions with attractive natural environment, many of which face the problem of high unemployment. Here it can help the growth of employment also without extensive investments in the development of road infrastructure.

A systematic promotion of the cycle touring can transform Slovakia to an attractive destination for a growing target group of the Europeans who prefer an active holiday and learning the country from the bicycle seat. The cycle touring does not load the environment or frequented tourist destinations by noise and emissions. Moreover, the interest of cycling tourists is not so much concentrated in the top tourist season and so offers the existing tourist destinations the chance to better plan the use of their capacity in spring and autumn months (of course, the winter centres also in summer).



5 Priorities and measures

As the Slovak transport policy in the area of cycling transport seriously lagged behind West Europe, but also some of the neighbouring countries, since 1989 it is necessary to adapt the rate of solution of problems in order to gradually eliminate the disparities between Slovakia and these countries. Therefore in this chapter we propose a set of measures whose implementation – in case of active cooperation of all relevant entities – gives a real chance for elimination of these disparities.

In the interest of the implementation of set objectives it is necessary for them to be managed, from the beginning, by the national cycling coordinator in close cooperation with self-governing regions or cycling coordinators at regional level, competent specialised units of the MoTCRD SR and in cooperation with individual affected ministries.

The National Cycling Coordinator will bear the responsibility for the implementation of

Priority 1 Management and legislative support

The legislative environment in SR should create optimal conditions for planning and implementation of cycling infrastructure, integration of cyclists into the multimodal transport systems and improvement of cyclist safety. The following measures should also contribute to the increase of the share of cycling transport in the division of transport labour in the cities and outside of them, for it to achieve 10% in 2020.

1.1 Management and coordination of cycling transport and cycle touring

The prerequisite of mastering of the agenda of cycling transport and cycle touring is its effective management and coordination. It is recommendable to solve the issues of cycling transport and cycle touring by the creation of the position of national cycling coordinator and regional cycling coordinators. The national cycling coordinator in close cooperation with regional cycling coordinators will ensure an effective Exchange of information and experiences, interim communication and cooperation among the interested entities with the aim to implement the measures resulting from the National Cycling Strategy. In the interest of achievement of the aims and measures of the Cycling Strategy, in the

individual proposed measures for MoTCRD SR. In this context the proposed management and coordination of cycling transport and cycling tourism will play an irreplaceable role (Annex 2, Measure 1.1.1).

For better transparency the individual priorities are divided into four basic areas:

- Management and legislative support
- Development of cycling infrastructure
- Provision of funds for the development of infrastructure for cycling transport and cycling tourism
- Research and education

Particular measures together with responsibility for their elaboration and identification of ministries and other entities, whose cooperation is required, are detailed in Annex 2. This chapter contains their basic overview and general description.

creation of the positions of cycling coordinators at national and regional level, it is necessary to **insist on the requirement of their professional competence and to select them in close cooperation with the expert cycling public.**

1.2 Strategic framework of implementation of cycling infrastructure

The adoption of measures in this partial area should ensure the amendment of acts and decrees and the creation of standards relevant for the development of cycling infrastructure. These regulations should provide the legal framework for planning, implementation and operation of cycling infrastructure in compliance with the latest trends. It is particularly necessary to draw up a comprehensive and integrated technical standard or technical regulation containing procedures for planning and implementation of cycling infrastructure. It will also be necessary to amend the existing STN 01 8028 Cyclo-touristic marking.

1.3 Legislative support of integration of cycling transport and its safety

The objective is to enforce legislative measures supporting the transport of cyclists and bicycles in everyday commutation to work and school or for leisure time activities by public passenger

transport. It will require changes in the transport codes of carriers and partial adaptation of the transport vehicles.

It can be reasonably assumed that according to the state and level of development of the cycling transport and cycle touring in SR it will be necessary to gradually amend individual legal acts concerning the cycling transport and cycle touring (see p. 7, Article 3.2). In connection with the possibility of drawing of European funds for the development of cycling infrastructure, it will be necessary to amend among others the acts related to the protection of nature and landscape, forests, land registry, settlement of land, construction of hydraulic works and administration of water courses, as well as to the road network and road traffic.

It is necessary to create a favourable legislative environment for planning and design of transport works so that the cycling transport is treated as equivalent to other transport modes, which will contribute to the increased safety of transport in general.

Priority 2 Development of cycling infrastructure

One of main conditions of the development of cycling transport is the construction of cycling infrastructure, either main infrastructure, i.e. cycle paths and cycle tracks, or supplementary infrastructure in the form of bicycle stands and shelters, rest areas, information boards and marking. Projects of construction and reconstruction of roads (especially local and regional), river dams, unused railway lines, state land in protective zones of railway lines and other suitable land owned by the state or self-governing regions, where cycle paths can be effectively and efficiently installed, should be used for the construction of new cycling infrastructure. It is also important to think of supplementary cycling infrastructure during construction of shopping centres, industrial zones, stations and stops of public passenger transport, and optimally residential complexes. The construction of suitable cycle touring and supplementary infrastructure will among others help the development of tourism. For example the construction of bike parks in ski resorts will enable their use all around the year.

It is also necessary to determine the obligation to design cycle tracks in case of new construction or reconstruction of roads and footways in the cities, communities and outside of settlements. Each new construction of shopping centre, offices or public works will include the implementation of an adequate number of parking areas for bicycles and barrier-free access. It is equally important to determine the obligation for administrative authorities not to approve any investment project that does not deal with the issue of cycling transport within the scope of regional possibilities and programmes.

The legislative arrangement of regulations in the interest of increasing the safety of cyclists as vulnerable road users is also necessary. In particular it will be necessary to introduce the statutory obligation to equip each bicycle by stable (non-blinking) front white light, sound alarm and red back light (Act No. 8/2009 Coll. on road traffic and on amendments of certain acts, as amended).

2.1 Main cycling infrastructure

First of all it is necessary to create conditions for the preparation and update of planning and strategic documents that integrate the cycling transport and provide sustainable urban mobility at regional and local level. By the construction of cycle paths it is possible to support the creation of new tracks, e.g. by better use of existing infrastructure (purpose roads, forest tracks, river dams, railway lines closed to traffic, see Measure 2.1.4), as well as by the change of use of a part of road infrastructure of cities and communities through the application of satisfaction elements or segregation of the cycling and automobile transport on sections with higher traffic intensity.

2.2 Supplementary cycling infrastructure

For the support of cycling, besides the construction of cycle tracks it is necessary to develop supplementary cycling infrastructure that allows more intensive use of bicycles by a greater segment of population. The

establishment of public bicycle systems or bicycle rentals, covered parking areas or bicycle shelters at workplaces, near apartment houses or railway and bus stations, the possibility to store bicycles in accommodation facilities, bicycle stands and parking areas in the city centre, near business centres, department stores, service operations and offices can help it. The increase of safety of parked bicycles is one of the most frequent requirements of

regular cyclists and condition of more frequent use of bicycles by the general public.

Supplementary cycle touring infrastructure also means the construction of shelters and rest areas along cycle touring routes and the installation of stationary information panels showing maps with marked cycle tracks. Such supplementary facilities on cycle tracks considerably enhance the attractiveness of the track and hence the number of its visitors and importance for tourism.

Priority 3 Provision of finance for the development of cycling and cycle touring infrastructure

The implementation of the National Cycling Strategy is conditional upon earmarking of required sources at all levels of public administration. The aim of the following measures is to pool and acquire funds for the implementation of projects in the form of EU programmes and EU structural funds, as well as in the form of financial state support through individual ministries, regional self-governing authorities, budgets of cities and communities, but also private sector, or other grant schemes. It must be noted that a majority of subsidies and contributions will require co-financing of the applicant, which is one of the European principles of granting of subsidies. Moreover, it ensures a higher level of engagement of the applicant.

3.1 Establishment of a permanent financial mechanism for the implementation of the Cycling Strategy

The establishment of a permanent financial mechanism requires the earmarking of permanent volume of funds for the construction and maintenance of cycling infrastructure from the state budget, budgets of self-governing regions, cities and communities. An example is the proposal for financing of cycling infrastructure in the new German national cycling strategy for the years 2013 – 2020. This document specifies the estimated requirement of funds for cities and communities (depending on their size) for new construction, maintenance and operation of cycling infrastructure in amount of EUR 6 to 15 per inhabitant and year.

Preparation of the programme period of SF EU 2014 – 2020 for drawing of funds for the

development of cycling and cycle touring infrastructure

It is appropriate to use also non-refundable financial contribution from the EU structural funds in the framework of the new programme period 2014 – 2020 for the development of cycling transport and cycle touring. One of objectives of the European Commission for this period is the support of sustainable development of mobility in urbanised areas, which creates conditions for satisfaction of a major part of financial needs related to the development of cycling transport infrastructure and possibilities of its used in combination with public passenger transport.

It is also possible to consider the support of the development of cycle touring infrastructure in the framework of other objectives of the European Commission, such as the increase of competitiveness of small and medium enterprises and support of employment. Investments in cycle tracks and supplementary infrastructure would enhance the attractiveness and competitiveness of a majority of tourism facilities in the respective region and thus contribute to the creation of jobs, especially in rural areas.

MoTCRD SR therefore included in the draft list of main activities proposed for financing from the EU structural funds and the Cohesion Fund among others the following activities:

- Support of construction of cycle paths and supplementary infrastructures motivating to a broader use of non-motorized transport in urbanized areas
- Support of construction of cycle touring infrastructure with potential of

development of employment in related tourism services

- Support of intermodality (interconnection of public passenger, individual automobile and cycling transport) in hubs (Park&Ride facilities, bicycle shelters)
- Support of education and enhancement of safety of vulnerable road users, construction and modernisation of traffic playgrounds
- Support of construction of traffic calming elements and zones and safe segregation of motorized and non-motorized transport, especially in the urban and rural zones, while putting stress on roads with high share of vulnerable road users
- Support of preparation of project documentations and master plans for cycling transport.

3.2 Cofinancing of public construction projects

As regards sources for the development of cycling infrastructure, private sources play a supplementary role, which is however important for the harmonic development of conditions for cycling mobility. For example they exert pressure on investors implementing public projects to build up cycling infrastructure with use of their own sources, i. e. to include costs of required cycling infrastructure in their project costs as induced investment. Although these efforts may first face opposition, with a growing number of customers preferring the cycling transport it will become evident that construction of cycling infrastructure will increase the attractiveness of premises or services offered by them.

Priority 4 Education, research and training

In view of the current negative perception of cyclists by other road users, but also employees of institutions that influence the development of cycling, the effort at the change of their attitudes will play a very important role in the following years. In this context education, training and research in the area of cycling transport and cycle touring will play an important role. The following measures should increase the safety and improve the way of life and health condition of population, which will create conditions for functioning of long-term economically active and healthy labour force.

4.1 Educational activity for improvement of general awareness and safety of cycling transport and cycle touring

The educational activity should be aimed to the elimination of prejudices, errors of judgment and myths of cycling and promotion of its positive effects. Also in Slovakia a bicycle should be gradually perceived as a practical, useful and effective means for movement in the cities and their surroundings, as well as for learning a country.

The purpose of proposed measures of the Cycling Strategy is to decrease, by the year 2020, the number of accidents (fatalities) involving cyclists by about 60% against data

reported in 2014, when these data will be already monitored.

4.2 Research in the area of cycling transport and cycle touring

The research should be aimed to the collection of data on the condition and development of cycling infrastructure and to the implementation of surveys and censuses objectivising data on cycling mobility in SR and on main obstacles to and opportunities for their development. The results should help to optimize the planning and implementation of transport infrastructure.

4.3 Education

The purpose is to improve and extend the education of pupils and students in the area of safety and development of cycling at all levels of schools and in relevant educational institutions, but also the life-long learning of practitioners or officers. It will also be necessary to create an educational programme for the expert public to allow the transfer of the latest knowledge from countries with richest experiences from cycling transport.



6 Financial instruments of the implementation of the Cycling Strategy

Although the implementation of the national Cycling Strategy is able to bring a set of benefits (summarised in Chapter 4) whose value will significantly exceed investment costs, their achievement would be impossible without provision of funds for the construction of cycling infrastructure in Slovakia and implementation of other required measures.

In view of the need to decrease the deficit of public finance it is unrealistic to assume that resources required for the implementation of the Cycling Strategy could be fully covered from the state budget and budgets of self-governing regions. It is therefore highly appropriate to use the fact that sustainable development of mobility in urban conglomerations is one of important objectives of the European Union and that measures implementing this objective can be financed from the EU funds for the programme period 2014 – 2020. Consequently, it is important to include financing of measures for support of a wider use of non-motorized, in particular cycling transport, in the operational programmes for the period 2014 – 2020 and to earmark in the relevant operational programmes resources allowing to cover most of the financial estimated in Annex 3 of the Cycling Strategy.

The European funds can provide a decisive amount of resources required for the construction of cycle paths, bicycle parking areas and cycle tracks and for the implementation of measures improving the possibilities of integration and combined use of the cycling and public passenger transport. The state budget and budgets of self-governing regions, cities and communities should envisage resources required for cofinancing of projects totalling 15% as well as resources for cycling coordinators and other measures that cannot be financed from the EU funds.

In case of the construction of cycling infrastructure it will be necessary to propose models and procedures for provision of financial compensation for limitation of third-party property rights in order to respect the rights of land owners affected by the cycle track project in accordance with the Constitution of SR.

It is at least equally important to engage resources of the private sector, e.g. by requiring the implementation of cycling infrastructure (connection to cycle tracks and bicycle parking areas) in case of construction projects envisaging the commutation of a larger number

of people, or also in the form of advertising, e.g. on bicycle stands.

From the viewpoint of initiators of particular projects it is important that they cannot envisage the use of a single source of financing of cycle touring routes and cycle paths. It is therefore necessary to gradually raise and pool funds for each individual project and activity and to actively use every opportunity for financing of cycling infrastructure.

It is particularly important to reserve in the Partnership Agreement of SR and EU and in operational programmes 2014 – 2020 and later effectively use resources of the European funds and to combine them as appropriate with contributions from the state, regional or municipal/communal budgets as well as from other existing grant schemes (the Norwegian Financial Mechanism, Ekopolis, UNDP and others).

In 2013 the budget of MoTCRD SR covers expenditures for the preparation of Technical Conditions for cycling infrastructure design, as well as expenditures on education and promotion of cycling transport and various activities in the area of cycling safety.

However, from 2014 it will be necessary to earmark in the state budget and budgets of individual self-governing regions and settlements more funds for financing of projects in the area of development of cycling transport and cycle touring. In this context it is necessary to draw up the **draft permanent financial mechanism for the implementation of the Cycling Strategy** (Annex 2, Measure 3.1.1). The additional burden for the state budget and the proposed financial coverage of selected measures of the Cycling Strategy in the period 2014 – 2016 are described in Annex 3 and the calculation procedures are set out in Annex 4.



7 Annexes

Annex 1 SWOT analysis of cycling transport and cycle touring

STRENGTHS

- Existence of over 10 000 km of marked cycle touring routes enabling the active learning of Slovakia
- A dense network of less frequented second and third-class roads, local roads and related dirt and forest tracks enabling the movement on a bicycle in an environment without congestion;
- Activity of citizens' associations aimed to cycling transport and cycle touring;
- Growing popularity of bicycle as a means of transport for commutation to work and school and of cycle touring as a leisure activity;
- Growing interest of regions, cities and communities in the development of cycling transport and cycle touring

WEAKNESSES

- Underdeveloped network of cycle paths and low level of their interconnection, their unsuitable condition;
- Non-addressing of needs of the development of mobility and ignoring of its potential in a majority of development plans and transport master plans;
- Insufficient addressing of cycle paths in development plans of communities;
- Lack of funds for the construction of new and adequate maintenance of existing cycling infrastructure;
- Underdeveloped supplementary cycling infrastructure (bicycle stands, protected parking areas, information boards, etc.);
- Weak promotion and education in the area of cycling transport and cycle touring in regions;
- Missing technical regulations for design and construction of cycle paths, marking of cycle tracks and construction of accompanying infrastructure;
- Dirt tracks serving predominantly for forest management.

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OPPORTUNITIES

- Promotion of sustainable mobility, and in particular cycling transport, in the EU documents and the Manifesto of the Government of SR;
- Linkage of main transport destinations in the cities by cycling infrastructure and partial replacement of short-distance IAT for cycling transport;
- Integration of cycling transport with PPT and possibility of achievement of synergies;
- Promotion of healthy lifestyle;
- Possibility of earmarking of required resources in EU funds for the period 2014 – 2020;
- Attractive territory and suitable conditions for the development of cycle touring in regions;
- Possibility to use land consolidation for integration of land ownership in the routes of proposed cycle paths;
- Use of dams, roads located in military zones and embankments of cancelled railway lines for construction of cycle paths;
- Extension of the supply by tourism products and services in the area of cycle touring.

THREATS

- Development of individual automobile transport to the detriment of cycling transport;
- Extremely high fragmentation of land ownership will considerably prolong the construction of cycle paths and make it too expensive, sometimes even impossible;
- Insufficient and ineffective drawing of funds from the EU funds or non-earmarking of sufficient resources for the development of cycling infrastructure;
- Low support in the area of legislation;
- Insufficient linkage of urban cycle paths to cycle tracks in the rural zones;
- Inadequate addressing of critical road sections that are a threat for vulnerable road users and discourage from use of a bicycle;
- Conflict of interest in the use of dirt track for economic and tourism purposes;
- Increase of the risk of alienation of parked bicycles;
- Insufficient education in the area of cycling transport and cycle touring.

Annex 2 Specific measures within priorities

Priority 1 Management and legislative support

1.1 Management and coordination of cycling transport and cycle touring

Measure 1.1.1 Creation of the position of national cycling coordinator and positions of cycling coordinators at the level of HTUs and cities responsible for coordination of cycling transport at the level of self-government

- Responsibility: MoTCRD SR
- Cooperation: self-governing regions, cities, citizens' associations
- Deadline: 30. 09. 2013

Measure 1.1.2 Establishment of interministerial working group for the development of cycling transport and cycle touring in SR

- Responsibility: MoTCRD SR
- Cooperation: vice premier minister for investment, Mol SR, MoLSAF SR, MoE SR, MoARD SR, MoESRS SR, MoEn SR, MoH SR, MoC SR, MoFEA SR (within the scope of their competences), self-governing regions, cities, citizens' associations
- Deadline: 31. 10. 2013

1.2 Strategic framework of construction of cycling infrastructure

Measure 1.2.1 Inclusion of cycling transport and cycle touring agenda in all important state strategies and policies (Transport policy of SR, Road safety strategy, Strategic Plan of Transport Infrastructure until 2020 (so-called Masterplan), future operational programmes 2014 – 2020, Environmental action plan, Strategy of development of tourism and others)

- Responsibility: MoTCRD SR
- Cooperation: vice premier minister for investment, Mol SR, MoLSAF SR, MoE SR, MoARD SR, MoESRS SR, MoEn SR, MoH SR, MoC SR, MoD SR (within the scope of its competences), scientific and research institutions, citizens' associations
- Deadline: on an interim basis

Measure 1.2.2 Preparation of methodology for non-motorized transport masterplans, including the linkage of urban cycle tracks to cycling tour paths

- Responsibility: MoTCRD SR
- Cooperation: Scientific and research institutions, SKSI, SSC, designers, citizens' associations
- Deadline: 31. 3. 2014

Measure 1.2.3 Preparation of Technical conditions for the design of cycling infrastructure

- Responsibility: MoTCRD SR
- Cooperation: SÚTN, scientific and research institutions, SKSI, SSC, designers, citizens' associations
- Deadline: 31. 12. 2013

Measure 1.2.4 Amendment of existing STN 01 8028 Cyclo-touristic marking

- Responsibility: MoTCRD SR
- Cooperation: SÚTN, citizens' associations (SCK)
- Deadline: 31. 12. 2014

1.3 Legislative support of integration of cycling transport and its safety

Measure 1.3.1 Creation of conditions for comfortable transport of bicycles by public passenger transport, including construction of bicycle shelters, barrier-free access to passenger platforms and connection to existing/planned network of cycle tracks (especially in case of the construction or reconstruction of interchange terminals, railway and bus stations, stops, public areas, shopping centres, residential complexes and others)

- Responsibility: MoTCRD SR
- Cooperation: ŽSR, self-governing regions, cities and communities, infrastructure administrators, operators of PPT, citizens' associations, research institutions
- Deadline: on an interim basis

Measure 1.3.2 Preparation of proposals for required changes in legislation for the development of cycling transport and cycle touring in SR (especially amendment of acts relating to the protection of nature and landscape, forests, land registry, settlement of land, construction of hydraulic works and river administration, as well as road network and road traffic)

- Responsibility: MoTCRD SR
- Cooperation: self-governing regions, cities and communities, infrastructure administrators, citizens' associations, research institutions
- Deadline: 31. 12. 2014

Priority 2 Development of cycling infrastructure

2.1 Main cycling infrastructure

Measure 2.1.1 Preparation and updating of strategic and planning documents integrating the cycling transport and ensuring sustainable urban mobility at regional and local level, including the support of project preparation and construction of cycle paths in cities and communities, their modernisation and maintenance

- Responsibility: MoTCRD SR
- Cooperation: self-governing regions, cities and communities, road administrators, research institutions, designers, citizens' associations
- Deadline: on an interim basis

Measure 2.1.2 Support of the development of freight cycling transport for supply in zones closed to motorized traffic or in calmed zones with exclusion of motorized traffic

- Responsibility: MoTCRD SR
- Cooperation: self-governing regions, cities and communities, road administrators, research institutions, designers, citizens' associations
- Deadline: on an interim basis

Measure 2.1.3 Support of the construction and modernisation of infrastructure for the development of cycle touring and mountain cycle touring (linkage of regional cycle tracks into a comprehensive updated network of national cycling arteries, creation of cycling regions)

- Responsibility: MoTCRD SR
- Cooperation: MoESRS SR, MoARD SR, MoEn SR (within the scope of their competences), Lesy SR, š.p., self-governing regions, cities and communities, road administrators, local and regional tourism organisations, citizens' associations
- Deadline: on an interim basis

Measure 2.1.4 Maintenance and reconstruction of cyclo-touristic marking on existing cycle touring routes

- Responsibility: MoTCRD SR
- Cooperation: MoESRS SR (within the scope of their competences), self-governing regions, cities and communities, tourism organisations, citizens' associations
- Deadline: on an interim basis

Measure 2.1.5 Support of the use of land and forest tracks owned by the state and self-governing regions for the construction of cycle paths and cycle touring routes (use of cancelled railway lines, river dams, space along rivers and temporary access roads used for the construction and modernisation of railway corridors, as well as unused former "signal" roads along the state border of SR for the construction of cycle paths and marking of cycle touring routes)

- Responsibility: MoTCRD SR
- Cooperation: MoARD SR, MoEn SR, MoD SR (within the scope of their competences), Lesy SR, š.p., ŽSR, SVP, š.p., Vodohospodárska výstavba, self-governing regions, cities and communities, citizens' associations
- Deadline: on an interim basis

Measure 2.1.6 Application of elements and zones with calmed traffic, segregation of motorized and non-motorized transport on roads with a high share of vulnerable road users

- Responsibility: MoTCRD SR
- Cooperation: MoI SR (within the scope of their competences), cities and communities, road administrators, citizens' associations, project offices
- Deadline: on an interim basis

2.2 Supplementary cycling infrastructure

Measure 2.2.1 Construction of supplementary infrastructure of cycle touring routes (bike-points, rest areas, maps, panels of monuments and sights, remarkable sites, cycling direction signs)

- Responsibility: MoTCRD SR
- Cooperation: MoARD (within the scope of its competences), self-governing regions, cities and communities, SCK, KST, citizens' associations, private investors and sponsors
- Deadline: on an interim basis

Measure 2.2.2 Construction and modernisation of traffic playground in cities

- Responsibility: MoTCRD SR
- Cooperation: MoESRS SR, MoI SR (within the scope of its competences), self-governing regions, cities and communities, citizens' associations, private investors and sponsors
- Deadline: on an interim basis

Priority 3 Provision of finance for the development of cycling infrastructure and cycle touring infrastructure

3.1 Establishment of permanent financial mechanism for the implementation of the Cycling Strategy

Measure 3.1.1 Preparation of the draft permanent financial mechanism for the implementation of the Cycling Strategy and its submission to a meeting of the Government of SR

- Responsibility: MoTCRD SR
- Cooperation: vice premier minister for investment, MoI SR, MoE SR, MoARD SR, MoESRS SR, MoEn SR, MoLSAF SR, MoC SR (within the scope of their competences), self-governing regions, cities and communities, research institutions, citizens´ associations
- Deadline: 31. 10. 2013

3.2 Preparation of the Programme Period of EU SF 2014 – 2020 for drawing of finance for the development of cycling and cycle touring infrastructure

Measure 3.2.1 Preparation of conditions and documents for inclusion of activities of the Cycling Strategy in the future operational programmes 2014 - 2020

- Responsibility: MoTCRD SR
- Cooperation: MoF SR, vice premier minister for investment, MoI SR, MoE SR, MoARD SR, MoESRS SR, MoEn SR, MoH SR, MoLSAF SR, MoC SR (within the scope of their competences), self-governing regions, cities and communities, research institutions, citizens´ associations
- Deadline: 30. 9. 2013

Measure 3.2.2 Support of effective drawing of resources from the EU funds for cycling and cycle touring infrastructure

- Responsibility: MoTCRD SR
- Cooperation: MoF SR, vice premier minister for investment, MoI SR, MoE SR, MoARD SR, MoESRS SR, MoEn SR, MoH SR, MoLSAF SR, MoC SR (within the scope of their competences), self-governing regions, cities and communities, research institutions, citizens´ associations
- Deadline: on an interim basis

3.3 Cofinancing of projects of public works

Measure 3.3.1 Determination of the condition of financing of basic infrastructure for cycling mobility from private sources in the approval process of projects designed for a large number of visitors or commuting employees (barrier-free access roads, bicycle stands and shelters)

- Responsibility: MoTCRD SR
- Cooperation: self-governing regions, cities and communities, SKSI, citizens´ associations
- Deadline: on an interim basis

Priority 4 Education, research and training

4.1 Educational activity for improvement of general awareness and safety of cycling transport and cycle touring

Measure 4.1.1 Creation of national web portal with information about cycling transport and cycle touring, including the map with marked cycle tracks (urban and cycle touring tracks) with possibility of retrieval of tracks and basic information about individual regions and their cycling infrastructure (basic structure and its gradual completion with data in accordance with the development of cycling transport and cycle touring)

- Responsibility: MoTCRD SR
- Cooperation: SACR, self-governing regions, cities and communities, research and scientific institutions, citizens' associations
- Deadline of creation of portal: 30. 6. 2014
- Deadline of completion and maintenance of portal contents: on an interim basis

Measure 4.1.2 Comprehensive marketing and promotion of cycle touring as a suitable opportunity for active leisure and learning of Slovakia

- Responsibility: MoTCRD SR
- Cooperation: SACR, RTVS, self-governing regions, cities and communities, regional and local tourism organisations, citizens' associations, enterprises
- Deadline: on an interim basis

Measure 4.1.3 Increasing of the awareness of population and road users of advantages and benefits of use of a bicycle in everyday life and on risks linked to vulnerable road users (educational activity, education of the public, different campaigns, e.g. "European Week of Mobility", "To the Work on Bike", "National Cyclist Gatherings", campaigns to enhance the cyclist safety on roads...)

- Responsibility: MoTCRD SR
- Cooperation: MoESRS SR, MoEn SR, MoI SR (within the scope of their competences), Public Health Authority of SR, Slovak Red Cross, self-governing regions, cities and communities, RTVS, research institutions, citizens' associations, road administrators, bicycle shops and repair shops, health insurance companies
- Deadline: on an interim basis

Measure 4.1.4 Introduction of the possibility for the employers to use resources of the social fund for the support of cycling transport of their employees (benefits for employees, contribution for purchase and maintenance of bicycle, e-bicycle, social facilities...)

- Responsibility: MoTCRD SR
- Cooperation: MoLSAF SR (within the scope of its competences), employers' associations and trade union organisations
- Deadline: on an interim basis

Measure 4.1.5 Keeping of records of accidents involving cyclists, analysis of their causes and proposal of measures for their elimination. Evaluation of bicycle riding safety expressed as the rate of the number of accidents (fatalities) to the number of kilometres covered by cyclists per year.

- Responsibility: MoTCRD SR
- Cooperation: MoI SR (within the scope of its competences), cities and communities, research institutions

- Deadline: on an interim basis

4.2 Research in the area of cycling transport and cycle touring

Measure 4.2.1 Support of research projects with subject of cycling transport and cycle touring with stress on the transfer of foreign know-how

- Responsibility: MoTCRD SR
- Cooperation: research institutions, universities, citizens' associations
- Deadline: on an interim basis

Measure 4.2.2 Introduction of regular collection of data on the condition and development of cycling infrastructure and implementation of surveys and censuses for mapping of cycling mobility in SR (statistics, censuses, surveys, analyses for the preparation of transport masterplans, development plans, etc.)

- Responsibility: MoTCRD SR
- Cooperation: self-governing regions, cities and communities, SO SR, road administrators, SSC, research institutions, designers, citizens' associations
- Deadline: on an interim basis

4.3 Education and training

Measure 4.3.1 Extension of traffic education of children in nursery schools and pupils in primary schools to bike riding in accordance with the road traffic regulations (theoretical and practical training)

- Responsibility: MoTCRD SR
- Cooperation: MoESRS SR, MoI SR (within the scope of their powers), research institutions, citizens' associations
- Deadline: on an interim basis

Measure 4.3.2 Education of applicants for driving licenses to show consideration for vulnerable road users

- Responsibility: MoTCRD SR
- Cooperation: MoI SR (within the scope of its powers), the Slovak Chamber of Driving School Training Establishments (SKVZA), driving schools
- Deadline: on an interim basis

Measure 4.3.3 Introduction of certified training programme/course for "cycling tourist guides" and continuation of education for accreditation in the profession "Fitter of cycling direction signs" for the purpose of development of human resources and services in the area of cycle touring

- Responsibility: MoTCRD SR
- Cooperation: MoESRS SR (within the scope of its competences), citizens' associations (SCK), universities
- Deadline: on an interim basis

Annex 3 Proposed financial coverage of selected measures of the Cycling Strategy 2014 – 2016

Measure	Costs/Number	2014		2015		2016	
		Annual total		Annual total		Annual total	
1 Segregated cycling paths in cities	Unit price (€/km)	250 000		250 000		250 000	
	Length in km	40	10 000 000	50	12 500 000	60	15 000 000
2 Cycle lanes and cycle corridors on existing roads	Unit price (€/km)	24 000		24 000		24 000	
	Length in km	85	2 040 000	75	1 800 000	65	1 560 000
3 Marking of new cycle touring routes	Unit price (€/km)	200		200		200	
	Length in km	800	160 000	700	140 000	500	100 000
4 Supplementary cycling infrastructure	Estimated price (€/km)	1 250		1 250		1 250	
	Length in km	40	50 000	50	62 500	60	75 000
5 Repairs, reconstruction and maintenance of cycle touring route marking	Unit price (€/km/3 years)	75		75		75	
	Length in km	12 000	300 000	12 000	300 000	12 000	300 000
6 Standards, technical conditions	Unit price (€/piece)	10 000		10 000		10 000	
	Number	1	10 000	1	10 000	1	10 000
7 Education, research, training, promotion	Organisation of EWM in regions	5 000		5 000		5 000	
	Unit price (€/piece)	5 000		5 000		5 000	
	Number	8	40 000	8	40 000	8	40 000
	National cycling conference (€/piece)	5 000		5 000		5 000	
	Number	1	5 000	1	5 000	1	5 000
	Specialised seminars (€/piece)	2 000		2 000		2 000	
Number	8	16 000	8	16 000	8	16 000	
	Total (€)		61 000		61 000		61 000
8 Cycling coordinators	Annual costs per worker at national level (wage + overheads) (€)	30 000		30 000		30 000	
	Number of employees	1	30 000	1	30 000	1	30 000
	Annual costs per fellow worker of cycling coordinator (€)	20 000		20 000		20 000	
	Number of employees	2	40 000	2	40 000	2	40 000
	Annual costs per worker at regional level (HTU; wage + overheads) (€)	24 000		24 000		24 000	
	Number of employees	8	192 000	8	192 000	8	192 000
	Total (€)		262 000		262 000		262 000
	Total costs (€)		12 883 000		15 135 500		17 368 000

Annex 4 Calculations of effects on public finance

The calculation of the estimated length of cycle paths that must be implemented in Slovak cities is based on so-called “cycling index” which shows the length of cycle paths per inhabitant in cities (m/inhabitant). Data from the Czech Republic, Germany and Slovakia were compared. The basis was data from “Non-motorized transport master plan of Banská Bystrica” (first in the conditions of SR) where the proposed length of cycle paths seems to be optimal in comparison with data from CR and Germany. In case of similar sizing of cycle paths in other cities of SR roads for cycling transport in a total length of 1 600 km should be constructed in Slovak cities until 2025.

The construction of new cycle paths in estimated length of 1000 km is envisaged until the year 2020. For a period of 8 years it represents 125 km/year in all Slovak cities together. For the number of 138 cities in SR it means the construction of about 1.1 km of cycle path per year.

1. Segregated cycle paths in cities

In the first years of the implementation of the Cycling Strategy segregated cycle paths are expected to represent a smaller part of the new-built cycle paths, in view of the need of project preparation and obtaining of permissions. In the years to come the construction of cycle paths that use exclusively or prevailingly land owned by self-governing regions or other entities in the public sector and do not require the lengthy process of acquisition of highly fragmented land from different owners is feasible.

For the construction of segregated cycle paths it is necessary to count with average construction costs of 250 000 €/km (without supplementary infrastructure – rest areas, information boards, direction signs etc.). The average costs per km are determined on the basis of already implemented projects and projects prepared for implementation in SR, as well as data on costs of construction of cycle paths in the Czech Republic, Austria, Poland, Germany, Belgium, Denmark and the Netherlands.

The following table shows average construction costs per km of cycle path with comparable technical parameters in these countries (EUR/km including VAT):

Czech Republic	272 000
Austria	263 000
Poland	200 000
Germany	255 000 - 285 000
Belgium	250 000
Denmark	345 000 - 415 000
Netherlands	160 000

2. Cycle lanes and cycling corridors on existing roads

The second part of new-built cycle paths are cycle lanes and cycling corridors on roads, calmed zones etc. with lower investment costs that are estimated in the average amount of 24 000 €/km. The amount of costs depends on the type of used technology, scope of required construction works and implementation of traffic restrictions.

Due to much lower intensity of preparation and implementation of these cycle paths and considerable unused potential of these measures (the width layout of many existing roads in Slovak cities allows to reserve a part of the transport area for cyclists) a large length of new cycle lanes and cycling corridors is envisaged in the first years of the implementation of the Cycling Strategy. With exhaustion of suitable options for such less expensive measures that use existing roads their share on the development of the cycle path network will decrease, while the importance and share of segregated cycle paths will grow.

3. Marking of new cycle touring routes

It is impossible to determine uniform rates per km of cycle touring routes. It always depends on a particular project, site and plan. The estimated calculation only concerns cycle touring routes without construction works. It includes marking of existing roads, installation of cycling direction signs, production and assembly of cyclist orientation elements. The general estimate of average costs of marking of a new cycle touring route is EUR 200/km.

4. Supplementary cycling infrastructure

Supplementary cycling infrastructure consists of rest areas (tables, benches, waste bins), bicycle

stands or shelters, information boards and other facilities.

Estimated costs account for 0.5% of total average costs per km of new-built segregated cycle paths, which represents EUR 1 250/km. For the period of years 2014 – 2016 the construction of supplementary cycling infrastructure on new-built segregated cycle paths in a length of 150 km is envisaged.

5. Repairs, reconstruction and maintenance of marking of cycle touring routes

The length of existing cycle touring routes in Slovakia is 10 099 km.

The indicative cost of implementation of 1 km of marked cycle touring route is approximately EUR 300/km (apart from marking of a new cycle touring route, the cost comprises reconnaissance work, simplified documentation and approval procedure). Based on a qualified estimate of the Slovak Cycle Club, costs of reconstruction and maintenance represent 25% of the realisation value. The reconstruction and maintenance are usually implemented with a three-year periodicity (approximately 1/3 of total length of the cycle touring route network needs reconstruction every year).

Costs of maintenance = 25% x EUR 300/km/3 years, i.e. EUR 75/year/km of maintained network. Since 2014 the extension of the cycle

touring route network to 12 000 km is expected.

6. Standards and technical conditions

The calculation of costs for individual years is based on the amount of costs already allocated for the year 2013 to SSC for the preparation of Technical conditions for cycling infrastructure design (i.e. EUR 10 000). It can be reasonably assumed that further directives and standards for cycling transport and cycle touring (e.g. standards of implementation of supplementary cycling infrastructure) will be prepared. In the years 2014 – 2016 an amount of EUR 10 000 per year is envisaged for this purpose.

7. Education, research, training, promotion

It is proposed that the national cycling conference and awareness campaign organised during the European Week of Mobility in regional cities (every year on 16 – 22 September) should be financed from the state budget since 2014.

8. Cycling coordinators (wage and overhead costs):

a) National Cycling Coordinator	30 000 €
b) Two fellow workers of the National Cycling Coordinator	40 000 €
c) Eight regional cycling coordinators (at level of HTU)	192 000 €
Total	262 000 €

Annex 5 Eurovelo tracks



Source: Analysis of foreign experiences and draft national strategy of development of cycling transport and cycle touring in the Slovak Republic

Annex 6 Network of long-distance cycling arteries in Slovakia



Source: Analysis of foreign experiences and draft national strategy of development of cycling transport and cycle touring in the Slovak Republic

Annex 7 List of used abbreviations

BECEP	road traffic safety
BMI	body mass index
CO2	carbon dioxide
EC	European Commission
EWM	European Week of Mobility
EU	European Union
GIS	Geographic information system
GPS	Global Positioning System
IAT	Individual automobile transport
IEE	Intelligent Energy for Europe – financial mechanism, programme for projects
KST	Slovak Tourist Club
UMT	urban mass transport
MTB	mountain bike
NGO	non-governmental organizations
NSRF	National Strategic Reference Framework
OP	operational programme
UNO	United Nations Organisation
PPZ SR	Presidium of the Police Corps of the Slovak Republic
ROP	regional operational programme
RTVS	Radio and Television Slovakia
SACR	Slovak Tourist Board
SCK	Slovak Cycle Club, citizens' association
SKSI	Slovak Chamber of Civil Engineers
SKVZA	Slovak Chamber of Driving School Training Establishments
SSC	Slovak Road Administration
STN	Slovak technical standard
SÚTN	Slovak Standards Institute
SVP	Slovenský vodohospodársky podnik, š.p.
SF	Structural Funds of the European Union
TEN-T	Trans-European Transport Network
PPT	public passenger transport
HTU	higher territorial units
VÚD	Výskumný ústav dopravný, a.s. Žilina
ŽSR	Railways of the Slovak Republic

Annex 8 Terminology of cycling transport and cycle touring

Road (according to STN 73 6100 – Terminology of roads) means a road used particularly for movement of transport vehicles, cyclists and pedestrians. According to transport importance and technical value roads are divided into:

- Roads – motorways, express ways and first, second and third-class roads
- Local roads
- Special-purpose roads⁴

Local road (LR) means a road that is a part of the transport equipment of a settlement or that creates a transport link within its territory. According to traffic planning function local roads are divided into:

- Express roads
- Bypass roads
- Service roads
- Non-motor roads

Non-motor road means basically a local road with excluded or limited access of motor transport, used for non-motor transport. According to the purpose non-motor roads are divided into:

- Calmed roads (STN 73 6110)
- Cycle paths
- Foot-paths

Calmed road (STN 73 6110 – Local road design) means a local road with full or partial exclusion of motor transport; under certain circumstances it can be used for destination or service transport.

Cycle path (cycle road, cycle track) – (STN 73 6100) means a non-motor road used for cycling traffic with exclusion or segregation of any motor transport.

Cycling infrastructure means a group of facilities and measures that are required for proper operation of cycling transport. Infrastructure for cycling transport includes, first

⁴ **Special-purpose road** – is a road enabling the transport connection of a production plant, closed premises, isolated objects etc. to the road network, e.g. including country and forest roads, or establishing a transport link inside closed premises and objects. Special-purpose roads are divided into public, non-public and roads partially inaccessible for public traffic.

of all, linear constructions such as cycle paths and cycle lanes. Further elements are solutions of intersections with regard to cyclists, design of cyclist-friendly public areas and, last but not least, parking facilities for bicycles.

Multi-purpose lane (STN 73 6110) means a part of traffic lane reserved for cyclists using horizontal road marking, which can be also used by other road users. It usually has a width of 1.2 m and is proposed in a traffic lane with minimum width of 3.5 m. In case of its absence, especially for spatial reasons, a cycle lane can be used in case of fulfilment of certain conditions of traffic intensity and speed of vehicles on the respective road.

Cycle lane (STN 73 6100) means an associated lane reserved for cyclists. According to STN 73 6110 Local road design in a built-up area or area reserved for development a road is partially situated in an associated area and separated from the transport area by a raised kerb with safety clearance of at least 0.5 m and a dividing strip with a width of 1.5 m or a side dividing strip. A cycle lane has a width of 1.0 m to 1.5 m.

Cycle belt (STN 73 6100) means an associated belt reserved for cyclists; it must not be confused with a cycle path. It contains at least two cycle lanes with a width of 1.25 m.

(Cycle) road marking is governed by Decree of Mol SR 9/2009 Coll. implementing the Road Traffic Act and amending certain acts, as amended. Cycle path marking concerns particularly linear marking of cycle paths and zones as well as marking of direction in the urban zones of cities and communities, sometimes also in their rural zones. However, it does not replace the cyclo-touristic marking.

Traffic calming elements (STN 73 6110) are measures aimed at prevention of undesirable speeding of vehicles on local roads, e.g. visible change of road surface, narrowing of road, optical and acoustic brake, sudden change of track alignment, decelerating thresholds.

Cycling transport is an independent transport mode that very effectively contributes to satisfaction of requirements for transport, especially to a short, but also to a long distance.

It is mostly used for transport to work, school, shopping centres or to other public facilities. Thanks to its simplicity and affordability it is suitable for all inhabitants. It thus contributes to social equality and higher quality of life. Its low requirements for space and operation, energy independence, flexibility and affordability as well as environmental suitability make it to an important alternative to individual automobile transport, which has negative impact on the environment. The use of a bicycle also significantly contributes to the good health condition of population.

Cycle touring is a form of recreational cycling which uses a bicycle for the implementation of tourist activity.

Road cycle touring is a form of cycle touring for which a cycling tourist uses especially hard asphalt roads and it is suitable for all types of bicycles.

Mountain cycle touring (MTB cycle touring) is a more demanding form of cycle touring practised in the mountain environment or landscape on soft purpose roads (grit, earth, etc.), often with higher elevation. It is suitable for mountain bikes (exceptionally for trekking bikes).

Cycle touring route (cycle track) is a route for cycling tourists situated in a landscape on existing roads marked according to STN 018028. A cycle touring route can run through a rural or urban zone, forest, mountain or field.

Singletrack is a natural trail, so narrow that only two-track vehicles can use it. It is sought by cyclists riding on mountain bikes.

Cycling artery is a long-distance cycle track running through a less difficult terrain. It allows fast and easy passage through a territory and creates the basic network of cycle touring routes.

Eurovelo is a network of long-distance European cycle arteries which connects countries of Europe (Annex 4). Individual Eurovelo tracks are proposed and implemented according to the principles of the European Cyclist Federation. The network consists of about 66 000 km of cycle tracks, 65% of which are marked in the terrain.

Cyclo-touristic marking in Slovakia is governed by STN 01 8028 – Cyclo-touristic marking. It deals with classification of cycle touring routes, determines the shape, dimensions, colours and method of use of cycle-tourist marking

elements. It does not apply to linear marking of cycle paths and zones in the urban zones of cities and communities within the meaning of road marking. It also means systematic activity aimed to marking and equipment of cycle touring routes by signs and cycle-tourist information objects.

Small infrastructure of cycle touring routes is infrastructure that supplements the equipment of cycle touring routes. It includes small lookout towers, large and small cycling tourist rest areas, stands with large-size maps, stands with information panels, cycle touring meridians and destinations, cycling direction signs.

Cycle-tourist information element is a symbol, data or group of data providing cyclo-tourist information in one unit (cycling tourist sign, cycle arrow sign, cycling direction sign, emblematic cycling plate, supplementary cycling plate or cycling tourist map).

Cycling tourist sign (cycle sign) – basic cycling tourist information element showing the set direction of a cycle track.

GPS (Global Positioning System) is a modern satellite-based navigation system.

GPS bearing is a cycle touring route bearing in the terrain using a GPS device. The larger number of satellites is scanned by the device the more accurate is the measurement.

Welcome Cyclists is a project consisting in the establishment of a network of tourist facilities and services adapted to needs of cyclists and cycling tourists.

