

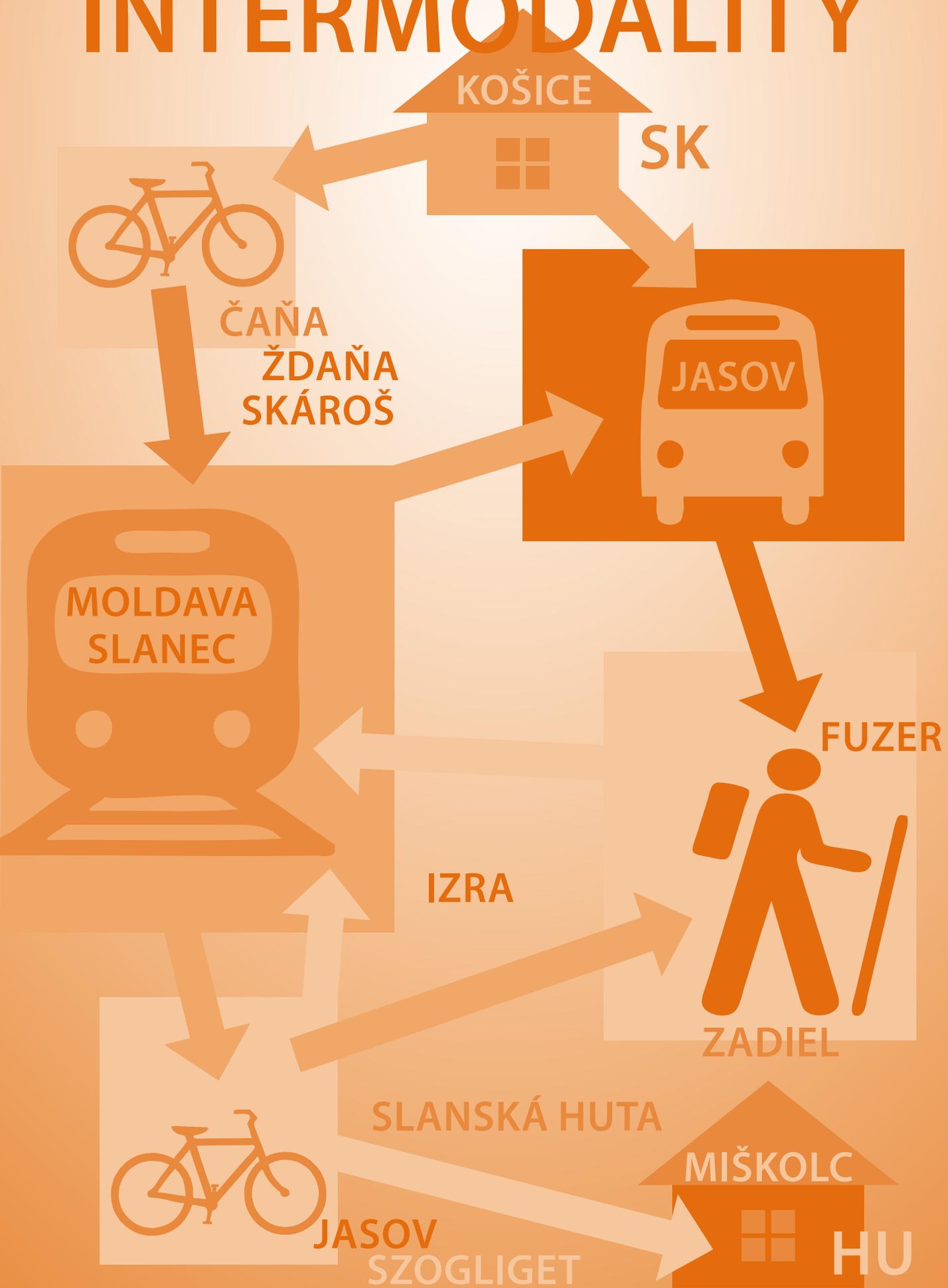
FEASIBILITY STUDY ON INTERMODAL CROSS – BORDER ROUTES AND PROPOSAL FOR THEIR IMPLEMENTATION

ACCESS2MOUNTAIN
SUSTAINABLE MOBILITY AND TOURISM IN SENSITIVE AREAS
OF THE ALPS AND THE CARPATHIANS



Jointly for our common future

INTERMODALITY





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Feasibility study on intermodal cross – border routes and proposal for their implementation

Brief summary

The objective of the feasibility study is to develop a proposal of three intermodal cross – border routes and a proposal for their implementation within the project ACCESS2MOUNTAIN. The objective of the project ACCESS-2MOUNTAIN is to create favourable conditions for improving accessibility to the mountainous regions of the Alps and Carpathians by sustainable transport and promotion of environmentally friendly tourism.

The feasibility study analyses the territory and proposes intermodal routes in three locations of the Slovak – Hungarian border area as follows:

- **the area of the Slovak Karst:** Hrušov – Jablonov nad Turňou – Silická Jablonica (SK) / Szögliget – Bódvaszilas (HU)
- **the area of the Slanské Hills:** Slanec – Slánska Huta – Izra – Byšta and Skároš – Vyšná Myšľa (SK) / Pusztafalu – Füzér (HU)
- **the area of Košice (SK) – Miskolc (HU)**

Apart from cross – border interconnection of intermodal routes there was a clearly defined objective to link the areas to the main regional centres in case of the Slovak side of the territory a link to the city of Košice and in case of the Hungarian area a link to the city of Miskolc.

LANDSCAPE

The feasibility study deals with the southern areas of the Košice region, an administrative unit of the Slovak Republic, that border Hungary. The territory that was identified for intermodal routes comprises the Slovak Karst and the Slanské Hills. In terms of geological composition the territory consists of two different locations belonging to the system of the Inner Western Carpathians. The volcanic Slanské Hills are separated from the limestone karst plains and formations of the Slovak Karst by the Košice Basin shaped by the Hornád River. The landscape and biosphere is protected by the state at various levels of conservation. The Slovak Karst National Park is the most important. Apart from the national park there are 43 smaller protected areas in the territory.

According to the instructions of the feasibility study the territory is defined as follows:

- **westward, Hrušov – Szögliget – border crossing point for pedestrians and cyclists**
- **eastward, Izra (Čotorne) – Pusztafalu – border crossing point for pedestrians and cyclists**
- **northward – the city of Košice**
- **southward – the national border with Hungary.**



Stanica v Moldave sa bude prestavovať na intermodálny terminál

TRANSPORT

The main rail corridor of the Slovak Republic runs in the direction Žilina – Košice – Čierna nad Tisou and partially crosses the territory in the section between Košice – Kalša. In terms of major roads the main pan – European corridor in the direction Žilina – Košice – Michalovce – Uzhhorod closely touches the territory, and its branch includes the section from the junction of Road I/50 and Road I/68 in Košice to the SK/H national border, the border crossing point of Milhost.

It follows that a part of the territory marginally touches Branch A of the multimodal Pan – European Corridor V that does not have a great influence on traffic congestion of the mountainous areas of the Slovak Karst and Slanské Hills and is not conducive to their transport links.

Transport links to the mountainous areas in the region are provided by public transport services. Bus transport services are primarily provided by Eurobus a.s. with their branches in Košice and Rožňava and rail transport by Železničná spoločnosť Slovakia, a.s., a passenger rail transport company.

TOURISM

Tourism (excluding the city of Košice as the regional centre) in mountainous areas has only local or regional importance, which is also demonstrated by the number of accommodation establishments and their capacity:

THE CAPACITY OF THE TERRITORY WITH RESPECT TO HOSPITALITY SERVICES				
Area	Number of caterers	Number of seats	Number of accommodation establishments	Number of bed places
Slovak Karst	8	596	23	397
Slanské Hills	1	30	3	45
Košice Basin	3	125	8	142
Total	12	751	34	584

In terms of tourism the most attractive locations with the highest number of tourists include Zádielská tiesňava (*Zádiel Ravine*) and Jasov Cave. Apart from these popular natural attractions there is a number of less known attractions in the region that are waiting to be discovered and may catch visitor interest. This especially includes the bicycle route network that is currently in the pipeline in the cross – border zone of Veľký Milič in the Slánske Hills that will interconnect the castles of Füzér (HU) and Slanec (SK) as well as rural tourism activities in the form of events held in the area of the Slovak Karst in the villages of Jablonov nad Turňou , Hrušov and Turňa nad Bodvou.

The most common recreational physical activities focus on hiking (45 routes), bicycle touring, rock climbing (19 routes) and fishing (4 ponds).

NUMBER OF HIKING TRAILS					
Area	Red	Blue	Green	Yellow	Total
Slovak Karst	4	6	3	7	20
Slánské Hills	4	3	4	6	17
Košice Basin	2	3	1	2	8
					45
CYCLE ROUTES WITHIN THE RELEVANT TERRITORY IN KM					
Slovak Karst				99,5	
Košice – Hornád – Miskolc				155,5	
Slánské Hills				65	
Total				320	



Currently, there are three cross – border cycle routes within the entire territory:

1. Hrušov – Szogliget – a yellow blazed cycle route on the Slovak side
2. Turňa nad Bodvou – Josvafó – a yellow blazed cycle route on the Slovak side
3. Skároš – Holloháza – a red blazed cycle route on the Slovak side

Planned routes:

1. *Trstené pri Hornáde – Kéked*
2. *Izra Lake – Pusztafallu*
3. *Slanec – Füzér*

On the Hungarian side there are green – blazed cycle routes and directions and information can be found on traffic and information signage boards.

The hiking routes in the cross – border zone are situated at the border crossing point Hrušov – Szogliget (green route) and in the mountain of Veľký Milič (red and yellow routes).

In terms of the development of cross – border tourism we recommend that the emphasis should be given on developing cycle routes because the territory is more accessible to cyclists than hikers.



ECONOMY

The economic impact of tourism on the local economy is little. It is a result of low visitor and occupancy rates of existing establishments and facilities, and relatively low local accommodation fees (from 0.20 to 0.90 EUR per night). The occupancy rate of accommodation capacities in the Slovak Karst National Park is, similarly to many regions in Slovakia, low. The average occupancy rate is at the level of 15% and the average number of nights spent is 2.3. This situation is partially influenced by the capacity (the supply of accommodation establishments is greater than visits to the region) but especially by the seasonal character of tourism. By interpolating the data obtained we estimate that 50,000 visitors will annually come to the entire territory, out of which 75% of them will move within the area of the Slovak Karst.

Paid services (apart from restaurant and accommodation services), admission or entrance fees are only charged in the following locations:

1. Car parking fees before entry to Zádielska tiesňava – a one – off fee of 1.5 EUR/car and 3.5 EUR/bus,
2. Entrance fees to Jasov Cave – 5 EUR/adult, 4 EUR/student, 2.5 EUR the retired and children under 15,
3. Monastery in Jasov – Church of St. John the Baptist – 2 EUR/adult, 1 EUR/student,
4. Jasov ponds – fishing permits from 10 EUR/2 fishing poles.

The expected revenues from tourism for the region we estimate at 317,000 EUR, collected from visitors. The municipalities collected a little less than 6,000 EUR into their budgets from accommodation fees and visitors, out of which the amount of 4,200 EUR forms the official revenue item in the budget of the town of Moldava nad Bodvou.

Public transport to mountainous areas is provided by Eurobus a.s. (busses and coaches) and Železničná spoločnosť Slovakia, a.s., (passenger rail transport). Most of the services provide the local population with transport to work and school. Bus and train services at weekends or when school is not operating are limited. The main transport nodes in connection with tourist offers are situated in the following municipalities:

- **The Slovak Karst area:** Jasov, Moldava nad Bodvou, Turňa nad Bodvou, Zádiel, Hrušov
- **The area of Hornád – Košice – Miskolc:** Košice, Nižná Myšľa
- **The area of the Slanské Hills:** Slanec, Slanská Huta, Kalša

The most serious problem of public transport links is in Zádiel where there are no train or bus links at weekends. The situation in the village of Slanská Huta is similar. Rail transport to the municipality of Jasov was totally excluded and was replaced by regular bus transport services.

The transport links between Košice and Miskolc are also very limited and there are only two fast train links that do not allow bicycle carriage.

CHARACTERISATION OF THE AREAS

The individual areas of the relevant territory are characterised by different features, therefore, we recommend a different method for each locations.



THE AREA OF THE SLOVAK KARST,

the area under investigation has, in comparison with other areas, the highest population of about 26,000. At the same time it has the highest number of visitors estimated at 37,000 visitors per year. Concerning its potential for tourism development it has the best conditions for growth and an opportunity to become an interesting regional destination with a cross – border impact. In addition to the existence of basic services (restaurants and accommodation) this situation is given by a number of natural attractions that are also promoted at national level, for example, Zádielská tiesňava and Jasov Cave. Ironically, this is a region with the lowest number of public transport links. There is an absence of passenger rail transport that was cancelled in 2011 on Route No. 168 and all the railway stations between Turňa nad Bodvou and Rožňava. Passenger rail transport was partially replaced by bus and coach transport but especially by private car transport. Therefore, this disproportion should be resolved as a matter of priority following the expansion of tourism offers focusing on activities and complementary services.



THE AREA OF HORNÁD– KOŠICE CORRIDOR – MISKOLC,

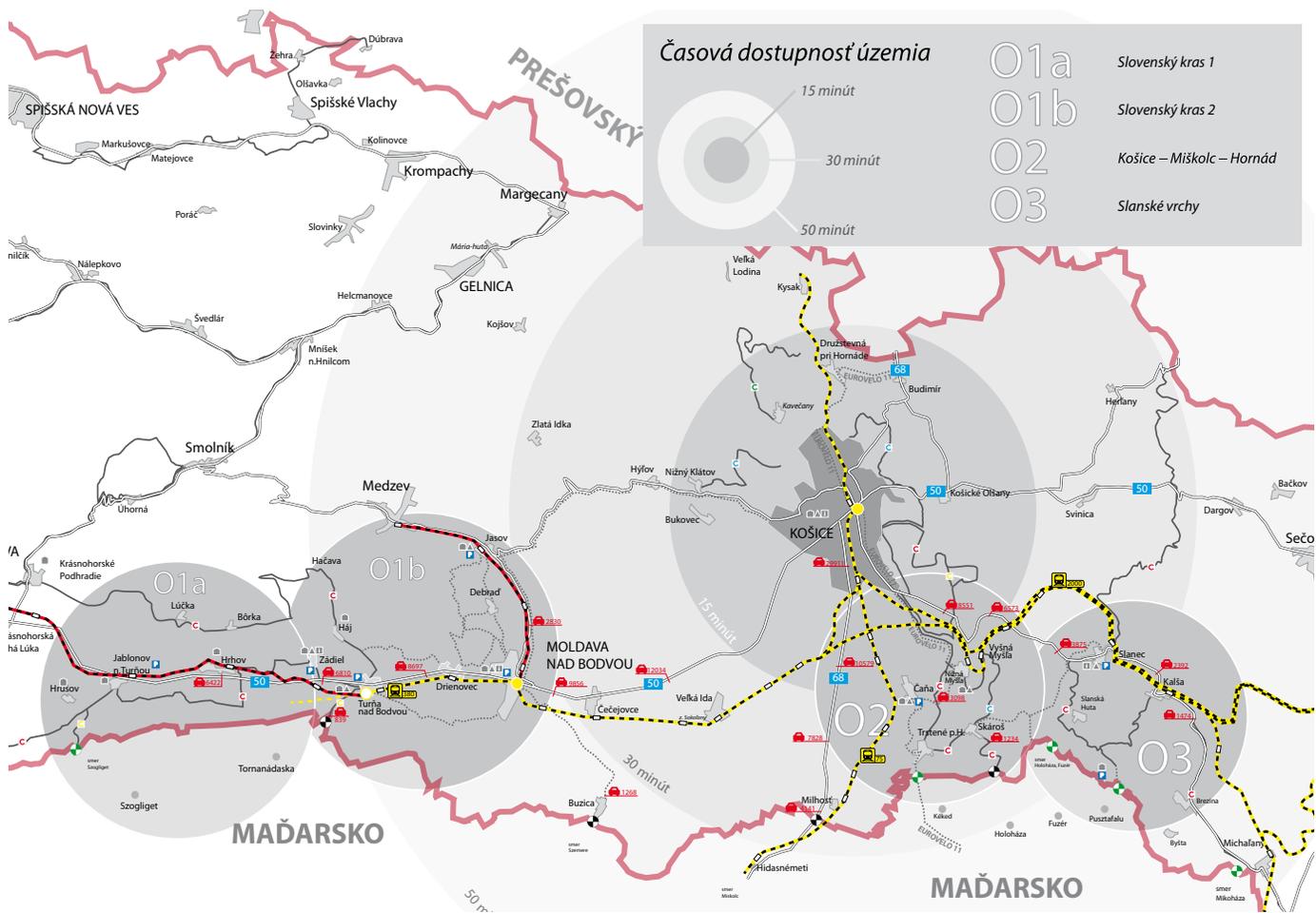
the area under investigation that is situated in immediate neighbourhood of the city of Košice and borders the Slánske Hills to the east, has a population of 22,000. Transport services in the territory are provided by bus transport and private car transport. Currently, no regular passenger trains run on the railway Košice – Miskolc in the Slovak territory. However, fast trains run twice day on the route Košice – Miskolc – Budapest.

With respect to the fact that the area lies in immediate neighbourhood of the city of Košice it also has an importance as a significant access area to the Slanské Hills from the city of Košice. The region is not important in terms of tourism, which is demonstrated by a low number of accommodation establishments (estimated annual number of visitors is 6,000), but it has a potential to become very attractive as a suburban recreational area for the city of Košice by developing relevant infrastructure along the Hornád River. The international route EuroVelo No. 11 is planned to cross the area, which may improve its tourism potential. The area is well organized under a coalition of municipalities called Mikroregión Hornád (*Hornád Microregion*) that associates local governments. As a matter of priority for this area we envisage that train links between Košice and Miskolc should be strengthened, the intended integrated regional transport system should be built in the village of Čaňa and the cycle route EuroVelo 11 in the direction Ždaňa – Nižná Myšľa – Košice should be finished.



THE AREA OF THE SLANSKÉ HILLS:

surprisingly, this area has the greatest use of rail transport services (up to 2,000 passengers per day) and relatively good bus transport services. There is almost a complete absence of tourist services such as restaurants and accommodation establishments, which is reflected in a very low number of nights spent that is estimated at about max. 650 nights spent per year. The tourism offer focuses on hiking and bicycle touring and most tourists come just for the day. A tourist information centre that also holds events and cooperates with a local ethnographic museum was established in the village of Slanec. Accommodation services can only be found on the Hungarian part of the territory under investigation, therefore, the local residents have zero economic benefits from tourism. The major problem seems to be an insufficient offer of services and weaknesses in informing potential visitors whether through tourist information signage or websites.



PROPOSAL FOR INTERMODAL ROUTES

In the feasibility study we propose intermodal cross – border routes that will primarily focus on interconnecting individual areas with the regional centre – the city of Košice. In addition to their function related to tourism development we also took into account transport links offered to the population when they commute to work and school. The main entrance gates to the mountainous areas constitute transport nodes that are part of the integrated transport system of the Košice – okolie district that is currently in the pipeline.



INTERMODAL ROUTE NUMBER I

Slovak Karst area

Košice – Moldava nad Bodvou – Jasov – Turňa nad Bodvou – Zádiel – Hrušov – Szogliget (HU) – Tornaádaska – Turňa nad Bodvou – Moldava nad Bodvou – Košice.

Brief description

The intermodal route is proposed as an interconnection of the territory of the Slovak Karst National Park and Aggtelek National Park (HU) with the city of Košice.

Total length of the intermodal route: 182 kilometres.

Expected time to be spent: 1 – 2 days

Proposed transport modes: train, bus, bicycle, walking

Destinations:

Jasov, Jasov Cave, Jasov ponds, Jasovské dubiny (Jasov Oak Forests, a national nature reserve), Jasov monastery

Debrad' – Church of St. Ladislaus

Turňa nad Bodvou – Turňa Castle Hill National, hiking routes

Zádielská tiesňava – Zádielská tiesňava (Zádiel Ravine, a national nature reserve), hiking

Hrhov – Hrhov waterfall, Hrhov ponds

Jablonov nad Turňou – a granary and wine cellar, rural tourist events

Hrušov – Hrušov ponds and fishing, hiking routes

Major problems:

Interconnection of the tourist destinations of Jasov and Zádiel with regular tourist transport and the cities of Košice and Moldava nad Bodvou.

Insufficient infrastructure for non – motorised transport.

Insufficient complementary services – information, hire of bicycles and sports equipment.

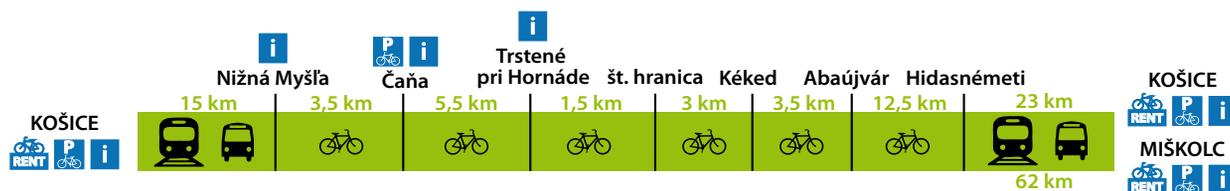
Insufficient complementary tourist amenities.

Proposal for improving accessibility lies in:

- implementing the approved plan of Košice integrated regional transport and a new terminal of passenger rail transport in Moldava nad Bodvou, responsibility: MdaRR (Ministry of Transport and Regional Development), ŽSR (Railways of the Slovak Republic),
- establishing tourist trains running in summer season on the route Moldava nad Bodvou – Jasov – Turňa nad Bodvou, Dvorníky – Včeláre – Moldava nad Bodvou, responsibility: Košice historic rail vehicles,



- implementing approved cycle routes – Moldava nad Bodvou – Jasov, responsibility: the town of Moldava nad Bodvou, a grant from the HUSK programme,
- implementing the cycling route from Moldava nad Bodvou to Turňa nad Bodvou, the route is part of the Košice Self – governing Region (KSK) project– the cycle route on the Wine Route, preliminary plan prepared, implementation: the association of involved municipalities, cooperation with representatives of the Slovak Cycling Club for Eastern Slovakia,
- preparing and implementing the cycle route from Moldava nad Bodvou to Zádiel through the village of Drienovec – the association of involved municipalities, cooperation with representatives of the Slovak Cycling Club for Eastern Slovakia,
- preparing and implementing the cycling route from Hrhov to Jablonov nad Turňou along the old route – the association of involved municipalities, cooperation with representatives of the Slovak Cycling Club for Eastern Slovakia,
- preparing and implementing the cycling route from Jablonov nad Turňou to Hrušov across ponds – the association of involved municipalities, cooperation with representatives of the Slovak Cycling Club for Eastern Slovakia – part of the KSK project – cycle routes on the Wine Route, preliminary plan prepared,
- establishing complementary services such as hire service of bicycles and sports equipment in the locations of Moldava nad Bodvou, Turňa nad Bodvou, Jasov,
- preparing and implementing complementary services such as servicing bicycles and sports equipment in one location – specified according to the interest of the local residents,
- implementing minor infrastructure such as bicycle parking racks – locations Zádiel (sheltered racks) – before entry to Zádiel Ravine, Moldava nad Bodvou – town centre location near the information centre, Jasov Cave (sheltered racks),
- implementing minor infrastructure such as sheltered rest facilities, benches – locations and near water areas – according to local needs and possibilities. Recommended locations: Hrhov ponds (benches), Hrušov ponds (benches and a gazebo), national border location Starý les – towards Hrušov,
- implementing and improving blazing and signage on walking routes and cycle routes – within the entire territory,
- adding directional signs for local attractions and the information centre to the local signage system in the town of Moldava nad Bodvou,
- adding stationary information boards with maps that will include locations of all activities in the region – in all municipalities,
- adjusting office hours of the information centre, at least during the summer season, after measures for intermodal routes have been implemented.



INTERMODAL ROUTE NUMBER II

Hornád Area – Košice/Miskolc

Košice – Nižná Myšľa – Ždaňa – Čaňa – Trstené nad Hornádom – national border – Kéked – Hidasnémeti

Brief description

The intermodal route lies in the multimodal transport corridor in the direction Košice – Miskolc that is currently used especially by motorised transport. On the Slovak side of the territory there is no regular passenger rail transport apart from four fast trains running in the direction Košice – Miskolc – Budapest and back. We suggest that train formations should include a unit for bicycle carriage and the offer of train tickets should be extended and the population should be better informed of it. Intermodality in the regional context is again connected to implementation of the Košice – okolie integrated transport system within which a terminal in Čaňa should be built. The intended cycle route EuroVelo 11 will be the main transport axis for non – motorised transport, especially, cyclists commuting to work and school.

The cycle route should also form the main access axis to the mountainous areas of the Slanské Hills for recreational purposes.

Total length of the route

is 35 km with possible variations, train links allow returning to Košice or continuing in the direction to Miskolc.

Expected time to be spent: 1 day

Proposed transport modes: train, bicycle

Tourist destinations:

Nižná Myšľa – a local museum of archaeological site from Bronze Age

Hornád meanders, Košice, Miskolc as regional and tourist centres

Major problems:

bicycle carriage by train – few trains offer bicycle carriage facilities

bicycle carriage by bus – no bus line has any bicycle carriers

relatively large investment needed – close cooperation with Košice Self – governing Region and Košice city council necessary.





Proposal for improving accessibility lies in:

- implementing the approved plan of Košice integrated regional transport line Košice – Čaňa, responsibility: MDaRR, ŽSR,
- securing the possibility of bicycle carriage in existing links,
- implementing the EuroVelo 11 project – building routes suitable for cyclists along the Hornád river from the municipality of Ždaňa to the city of Košice, responsibility: Košice Self – governing Region, project coordinator,
- repairing the blazing and signage of the educational path Hornád meanders, Hornád Microregion NGO, Sosna NGO as the founder of the path,
- adding cycle route signage with texts about existing cycle routes,
- establishing complementary services such as servicing bicycles and sports equipment in one location – specified according to the interest of the local residents, expansion of the offer of a local tire shop, e.g. in Čaňa,
- implementing minor infrastructure such as bicycle parking racks – locations: Čaňa , Ždaňa,
- implementing minor infrastructure such as sheltered rest facilities, benches – locations on cycle routes and walking routes and near water areas – according to local needs and possibilities . Recommended locations: near the bridge for cyclists in the territory of the municipalities of Trstené pri Hornáde, Nizná Myšľa – near the old bridge, Čaňa – near the new cycle path.



INTERMODAL ROUTE NUMBER III

The area of the Slanské Hills

Košice – Slanec – around the Slanec Castle Hill – Veľká Márovka – Veľký Milič – Füzér Castle – Puzstafalu – Izra Lake – Kalša – Košice

Brief description

The intermodal route is proposed as the interconnection of the territory of the Slanské Hills and the Veľký Milič nature reserve with the city of Košice. At present the area is especially accessible by bus transport. Passenger rail transport can be used to/from Slanec and Kalša stations.

The length of the route is 94.5 kilometres, out of which 56 km may be completed by train.

Proposed transport modes: train, bicycle, walking

Tourist destinations:

- Slanec – a local museum
- Slanec – a castle
- Füzér – a castle
- Izra Mountain Lake

Major problems:

- bicycle carriage by train – few trains offer bicycle carriage facilities,
- bicycle carriage by bus – no bus line has any bicycle carriers,
- the distance between the Slanec railway station and the starting point of hiking routes,

- highly frequent Road No. 552 with a high share of large goods vehicles passing directly through the village of Slanec,
- minimum public transport links to surrounding municipalities,
- insufficient information and signage system in the villages,
- insufficient complementary services – restaurants and accommodation establishments, hire service of bicycles and sports equipment,
- low complementary tourist amenities in the villages of Nový Salaš and Slanská Huta that have a potential for development of bicycle touring.

Proposal for improving accessibility lies in:

- implementing the approved plan of Košice integrated regional transport line Košice – Trebišov, responsibility: MDaRR, ŽSR,
- adding a possibility of bicycle carriage to trains in the beginning especially during weekends – inclusion of a „bicycle unit“,
- e – taxi on – call service – transport to the Slanec railway station within a radius of 10 km – municipalities: Slanec, Slančík, Nová Salaš, Slanská Huta, Slanské Nové mesto, for the local residents and tourists.
- implementing approved cycle routes – Vyšná Myšľa – Slanec, national border Veľký Milič in the direction to Füzér, responsibility: Košice Self – governing Region, a grant from the HUSK programme.
- blazing the local cycling route along the educational path – Slanec railway station – around the castle – Veľká Márovka, national border Veľký Milič, It is required to develop a simplified project for placing bicycle signage, implementation: the association of involved municipalities, cooperation with representatives of the Slovak Cycling Club for Eastern Slovakia
- blazing the local cycling route from the Slanec railway station to Nový Salaš – Slanská Huta – Izra Lake. It is required to develop a simplified project for placing bicycle signage, implementation: the association of involved municipalities, cooperation with representatives of the Slovak Cycling Club for Eastern Slovakia
- establishing complementary services such as servicing bicycles and sports equipment in one location – specified according to the interest of the local residents, expansion of the offer of the local tire shop,
- implementing minor infrastructure such as bicycle parking racks – locations Slanec railway station (sheltered racks), Slanec on the educational path under the castle as part of the area with a rest place – the design adopted to the forest environment, the location in Slanec near the information centre,
- implementing minor infrastructure such as sheltered rest facilities, benches – locations on cycle routes and walking routes and near water areas – according to local needs and possibilities. Recommended locations: on new local cycle routes – Nový Salaš and Slanská Huta,
- implementing and improving blazing and signage on walking routes and cycle routes – within the entire territory,
- improving the local signage system in the village of Slanec and Slanská Huta, directional signs for local attractions and the information centre,
- adding stationary information boards with maps that will include locations of all activities in the region – in all municipalities,
- adjusting office hours of the information centre, at least during the summer season, after measures for intermodal routes have been implemented.



KEY RECOMMENDATIONS FOR ACTION PLAN DEVELOPERS

After the implementation of the proposed measures we recommend focusing on the following areas:

Complete the information system in all areas – Many projects that focus on promoting tourism infrastructure have been and or are being implemented. The problem is that majority of potential visitors do not know about it. The information system has to be enhanced at all levels – directional signs, bicycle and hiking directional signs, information boards with comprehensive information, websites and information in formats for different online applications.

Complete building of missing parts of infrastructure so that they create logical and simple links – the idea is to develop a continuous route between the source and target points with a possibility to use different transport modes. The feasibility study defined segments for individual areas that deal with, for example, completion of building missing sections of cycle routes, provision of tourist passenger rail transport, implementation of sheltered bicycle parks, etc.

Promote development and expansion of complementary services – there are few available services related to accessibility to the territory in the region that are complementary to the tourism offer and generate revenues. As examples of complementary services we propose hire service of bicycles and sports equipment in selected locations.

Add complementary tourist amenities – they are used by route users, for example, tourist shelters, benches on the route, fountains with drinkable water, etc.

Out of the measures that are feasible in the short term and within the project ACCESS2MOUNTAINS we recommend the following plans:

Plan	Municipalities	Implementation (proposal)	Estimated budget
Blazing of cycle routes and complementary tourist amenities along the cycle route, about 10 km in length	Slanec – Nový Salaš – Slanská Huta – Izra	Municipality of Nový Salaš	9,000 EUR
Establishing a sheltered bicycle parking facility before entry to Zádiel Valley	Zádiel	Zádiel Association	5,000 EUR
Implementation of elements of tourist and cycle route signage, (on the cycle route in preparation in the length of about 12 km)	Moldava – Debrad' – Jasov	The town of Moldava nad Bodvou	3,000 EUR
Establishing a bicycle parking facility (racks) outside the Jasov Cave – 10 – 12 pieces	Jasov	Municipality of Jasov	1,500 EUR
Implementation of the cycling route Hrhov – Hrušov, as an alternative to the difficult MTB route CM029, about 22 km in length	Hrhov – Jablonov nad Turňou – Hrušov	Municipalities on the route	5,000 EUR
Implementation of elements of cycle route signage in the village of Slanec	Slanec	Municipality of Slanec	3,000 EUR

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