

HUNGARY-CROATIA IPA CROSS-BORDER
CO-OPERATION PROGRAM 2007-2013

PROJECT PARTNER:
PÉCS URBAN
DEVELOPMENT
COMPANY

Cross-border Bike Project



BICYCLE TOURISM

HUHR/1101/1.2.2/1004

Development of Pécs-
Osijek-Antunovac-
Ivanovac biking route



The Programme is co-financed by the
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Contents

1. Introduction.....	3
2. The description of the project.....	4
2.1. Aims	5
2.2. Expected results, the position of the project in the International Bicycle Network.....	8
3. Bicycle tourism	11
3.1. Bicycle and tourism worldwide	11
3.2. Bicycle tourism along the borders.....	15
3.3. Cycling and tourism within the framework of the IPA projects	17
3.4. Bicycle and tourism in Baranya and Pécs	19
3.5. Bicycle and tourism in the Baranya-triangle	35
4. SWOT	40
4.1. Bicycle tourism in Baranya	40
4.2. Bicycle tourism in Pécs	43
4.3. Bicycle tourism in the Baranya-triangle	46
4.4. Bicycle tourism at project level	47
5. Strategies.....	50
6. Summary.....	68
7. Sources:	72

1. Introduction

Hungary possesses favourable circumstances for the development of bicycle tourism, but despite the great number of positive values, the opportunities for bicycle tourism have not been taken or to a very limited extent. As a result, at present we cannot talk about complex product range in bicycle tourism in Hungary, even in locations with more advanced infrastructure.

In accordance with international experience, countries with progressive and sustainable development policy have taken and are continuously taking steps in order to improve their tourist destinations in a cyclist-friendly way. The common characteristics of these regions are:

- High level of civilization, innovation;
- The scale of social differences and the exclusion of society from decision-making processes are low
- Within active tourism, cycling is popular and mass pastime, which characteristically develops further, and its market is continuously expanding.

Long distance (wandering) bicycle tourism is a form of cycling which in fact means the largest direct revenue, however it constitutes a relatively narrow target market. The establishment of the culture of daily cycling for commuting can mean the wide base for bicycle tourism, which represents the cycling habits of the masses of local population. Without this wide base, bicycle tourism cannot be improved in a sustainable way. When popularizing the environmentally-friendly way of transportation, the greatest challenge is to convince the daily users of motor vehicles not to regard car transport as an indispensable part of their life. The task is given: they have to be made to realize that other ways of travelling exist in daily transportation, or in travelling on holiday and getting around within their destination. It is essential to establish facilities for recreational cycling, and to local improve the standard of facilities locally, as they are the fundamental conditions for the creation and improvement of urban cycling with the aim of commuting, and also – indirectly – for bicycle tourism. The connection also works the other way round: in accordance with international experiences only the truly cyclist-friendly cities and regions are able to attract a large number of foreign bicycle tourists.

The European Union provides special support for the spreading of bicycle transport and culture, which has several reasons. Cycling in an ideal case protects our physical and mental health, does not pollute the environment, decreases our dependence on motorized transportation, fills cities with life and connects rural settlements. The bicycle today is no longer a mere means of transportation or sport equipment, but the symbol of a new way of life, an alternative pastime, which provides healthy, high quality recreation that is available for anyone. Every developed European country treats the question of cycling as an issue of special importance, and Hungary does not lag behind in the movement for the popularization of bicycle transportation.

Cycling is an effective and low-cost means of transport. At present the success of car transportation has turned against itself, and through the endless congestions we can see how much faster and more dynamic is the bicycle than the car as means of transportation. For shorter distances, within cities, considering the time spent on looking for parking spaces, the bicycle is faster and also requires much less space.

Moreover, the construction of bicycle infrastructure is cheaper than that of highways, the construction of 1 km of independent bicycle road costs 20-40 million forints.

Cycling meand physical and mental health and a positive way of life. An increasing number of studies prove the health-enhancing effects of cycling. In cities travelling by bicycle is becoming increasingly popular, and it decreases air pollution, we can reach our destination, exercise our bodies and represent new, dynamic, although environmentally conscious way of life. In the Danish city of Odensee, the proportion of cyclists increased by 20 per cent through a project. The city initiated an informative and advertising campaign to popularize cycling, and after the closure of the four-year project, it was found that the costs were remunerated through the decrease of the number of necessary hospital beds alone. Those who commute by bicycle are more open, positive and energetic at work than their motorist colleagues, as reflected in reports by several cyclist-friendly workplaces. In the countryside people have always used the bicycle as a means to run daily errands, but unfortunately this is reduced by people reverting to driving. "Rural development", however, places special emphasis on the construction of bicycle roads, as sustainable development cannot lack cycling as an effective, environmentally friendly and humane branch of transportation.

This study focuses primarily on the area (Pécs, Beremend, Osijek, Antunovac, Ivanovac) covered by the project named Cross-border Bike Project, and entitled for funding in the IPA Hungary-Croatia Cross-Border Cooperation Program. The project is described briefly, and it is placed in the national, county, regional and other bicycle networks implemented in the IPA Programme. The study provides Readers with an overview on the opportunities for connecting to other bicycle roads along the route of the project.

2. The description of the project

As a result of this project, the infrastructural bases of bicycle tourism linking the two neighbouring countries, Hungary and Croatia, will be created. The proposed bicycle road network will be implemented between Pécs – Osijek – Antunovac- Ivanovac and many smaller settlements, and will provide several positive economic, social, cultural effects and benefits.

The planned starting date of the project: 1st of March, 2013.

The planned closing date of the project: 30th of October, 2014.

The implementation period of the project: 20 months

The organizations participating in the project

Antunovac district: As Main Beneficiary, the task of Antunovac district is the coordination, monitoring, management of the project, communication with the partners, suppliers, technical and water experts, PraG expert, controllers on the Hungarian side, and the Joint Technical Secretariat. The legal entity of the applicant is the district. The largest construction investment of the project, the building of a bicycle road from Osijek to Ivanovac through Antunovac is implemented in the project section belonging to this partner.

Green Osijek Touristic Association: is responsible for the professional content of the project, for the planning of green way bicycle roads and for placing road signs, for the successful realization of the training package, and for marketing activity.

It is a touristic organization, which has great experience in implementing bicycle projects (e.g. the designation of the Pannonian Peace bicycle route and providing it with road signs).

Pécs Development Non-profit Private Limited Company: will have the licensed plan prepared for the bicycle road leading out from Pécs, and also acquires bicycle stands, in addition to strengthening the value of the project through preparing professional studies and organising workshops, and will also coordinate the tasks on the Hungarian side, consult the Hungarian partner and experts. In addition to these tasks, a significant proportion of the project marketing also belongs to this partner.

GeoScience Nonprofit Ltd: This partner is in charge of the professional content of the project, for the planning of green way bicycle roads and for providing these with road signs, for successfully carrying out the training package, and for a certain proportion of marketing activity. In addition, a professional training package will be developed, through which, apart from the training of tour guides, service providers operating along the bicycle road will also receive useful information. In the course of the project implementation, this partner will be responsible for the Hungarian sections of the virtual map and website. They undertake to place information boards and road signs to mark the bicycle road, in addition to the maintenance of green way bicycle roads.

2.1. Aims

General aims

The general aim of the project is to increase the number of tourists visiting the region, the time spent here, the number of services used, and finally, the income from touristic revenue, in addition to enhancing the touristic attractiveness of the region and the development of a nationally competitive, complex touristic product package. A further goal is to create a uniform bicycle road network in order to develop bicycle tourism.

A fundamental long-term aim is to enhance the touristic attraction of the settlement and its vicinity, and to support the development of reception capacity, as well as the connection of the settlement into the touristic circulation in a way as to make it an integral part thereof. **Through the implementation the area will become part of the international bicycle tour routes: from Mohács as a route connecting to the EuroVelo® route, from Murakeresztúr as the continuation of the western border section, and also as a part of the Three Rivers bicycle tour route starting from Austria.**

The project also contains wider aims in addition to its implementation, such as involving the local population in touristic services through the improvement of the touristic attractiveness of the area (with products of folk art, regional food. etc.) thus decreasing or reducing existential problems resulting from unemployment. Furthermore, the implementation of the project will directly affect the decrease of unemployment, as it leads to the creation of new workplaces.

The general aims of the project:

- The development of tourist attractions
- Increasing the national tourist attractions, and the revenue resulting from tourism
- Strengthening touristic potential in the region
- The improvement of the high quality appearance of man-made environment, enhancing the condition of the environment
- Enhancing the ability of the area to retain its population

Local aims

The aims of Osijek-Baranja county (CRO):

New infrastructure suitable for cyclists would be constructed between Ivanovac – Antunovac-Osijek, which would improve the accessibility of the region and provide a safer way of transport. On the bicycle road passing through the county seat a connection could be built with other bicycle roads of the county and a closer cooperation based on economy and tourism could be created. Cyclist organisations could forge closer connections with each other, become familiar with each other's activity and could encourage the population for a more environmentally-friendly way of transportation.

The aims of Baranya county (HU):

In Pécs cycling has a long history, so it is important for Baranya to have a bicycle road leading out of the city, which would link it with other settlements of the region and provide a connection with the Croatian people living on the other side of the border. The cultural heritage of Pécs can become accessible through a safe bicycle road as well. Through this project, tourists arriving on the bicycle road could explore the natural, historic heritage of the neighbouring counties and the development of local tourism can expand with new demands.

Specific aims:

A significant aim of the project is to **improve the competitiveness of organisations and businesses dealing with tourism**. Besides, it aims at providing tourists with a complex product package presenting the area. Thus local economic stakeholders could establish active connections with organisations across the border. Services created along the bicycle road and the placement of bilingual road signs can contribute to the increase of the number of tourists, primarily cyclists, crossing the border. By increasing the activity related to tourism, the rate of unemployment can decrease in the area of the regions.

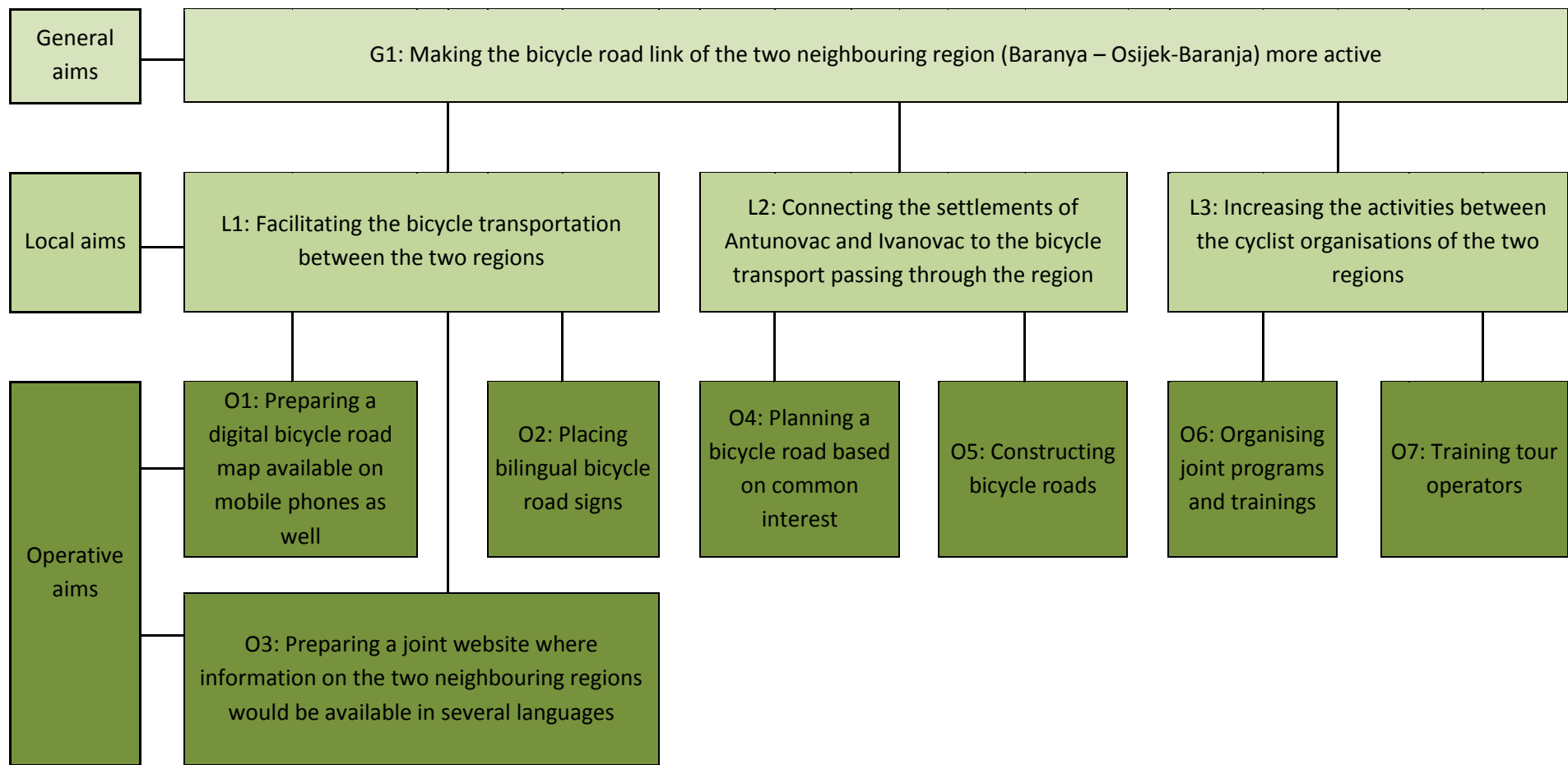


Figure 1. THE NETWORK OF AIMS CONCERNING THE CROSS-BORDER BIKE PROJECT /AIM TREE/¹

¹IPA Cross-Border Bike Project – Situation analysis

2.2. Expected results, the position of the project in the International Bicycle Network

As a result of the project a new touristic product will be developed, and the opportunity for cycling in a north-south direction will be created on the Pécs-Osijek-Antunovac-Ivanovac route. As the constructed bicycle road will be connected to other bicycle networks – Three Rivers Bicycle Route (which is partly the route of the EUROVELO 11 Iron Curtain Trail), EuroVelo, Drava Bike Tour, Pannonian Peace Bicycle Route – thus Antunovac and Ivanovac will become linked to the circulation of international bicycle networks.

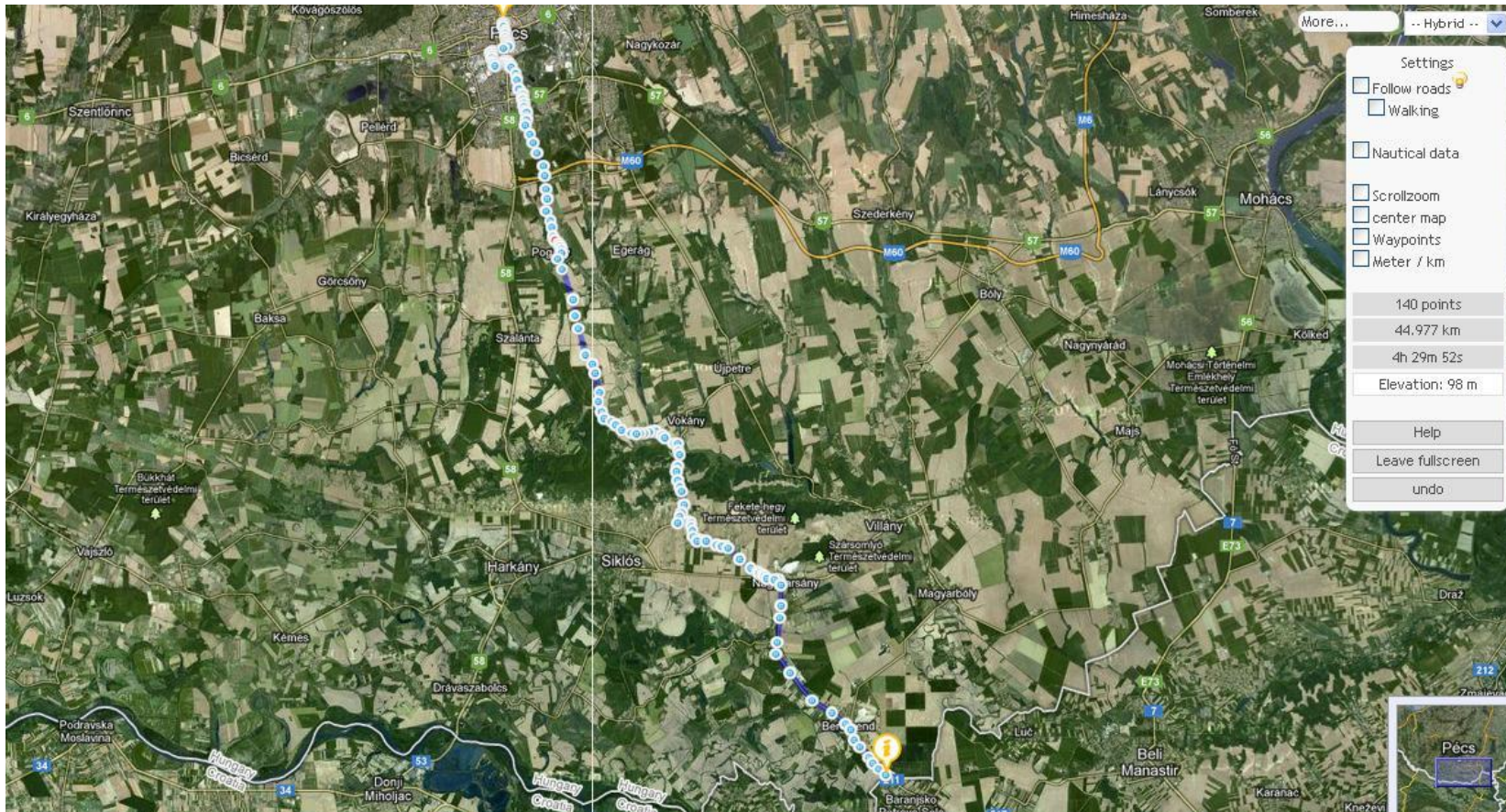


Figure 2: The route of the planned bicycle road between Pécs and the Croatian border

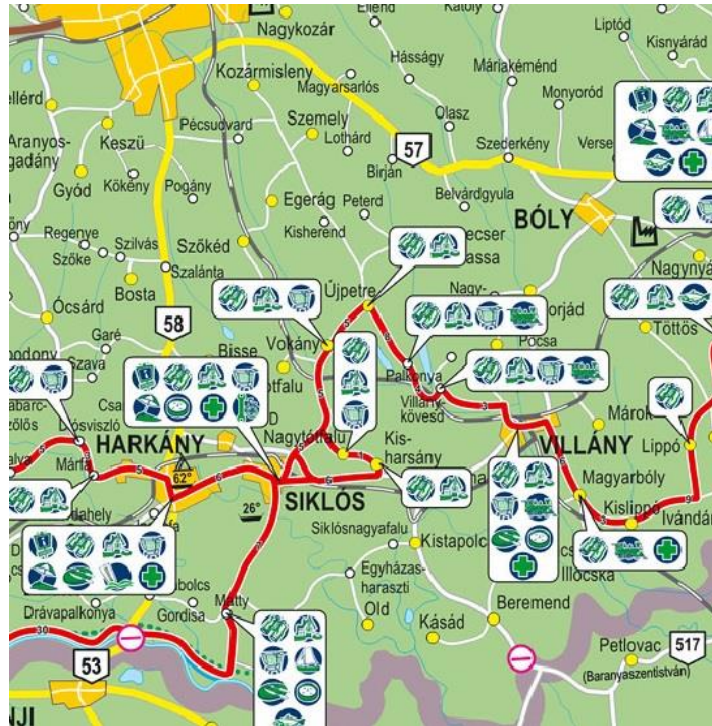


Figure3: The section of the Three Rivers Bicycle Route involved in the project (source: www.kerekparut.com)

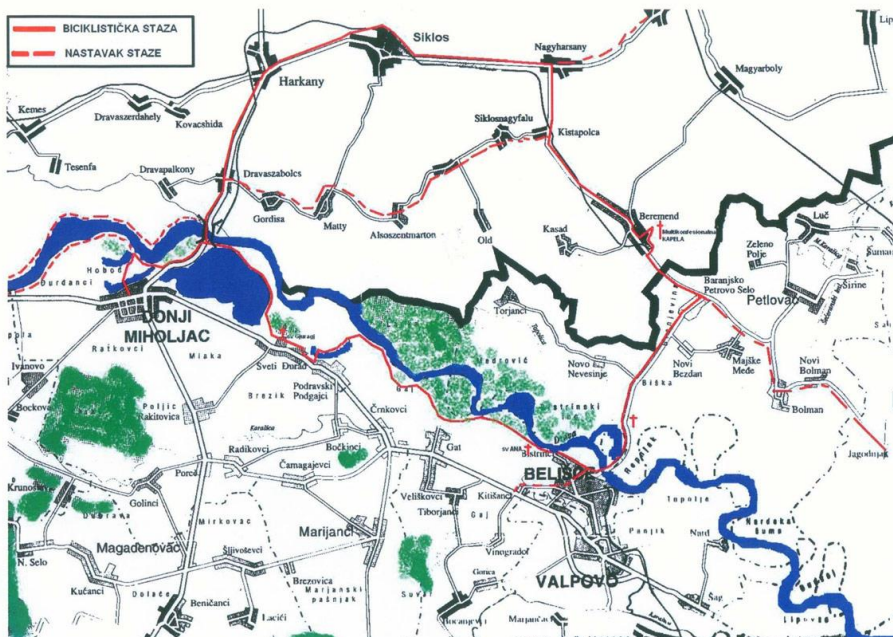


Figure 4.: Drava-Bike Tour (source: <http://m.visitosijekbaranja.com>)



Figure 5: Pannonian Peace bicycle tour route (www.zlatna-greda.org)

Cycling does not pollute the environment, decreases dependency on motorized transportation, thus it is highly environmentally friendly and popular recreational and touristic activity, which is treated as an issue of special importance throughout Europe. Due to the spreading of cycling, emissions can be reduced and it also has an extremely positive effect on the maintenance of health.

The economic importance of bicycle tourism is not insignificant. Research shows that the participants of bicycle tourism do not spend less than “conventional” tourists, moreover, it can be said that they even spend more at times as they have to purchase items locally due to limited possibilities for carrying luggage.

The project provides opportunity for the creation of a cross-border touristic service, which can result in the economic and cultural development of both regions. The increased number of visitors carries the chance of a certain improvement of local production and service industry.

3. Bicycle tourism

3.1. Bicycle and tourism worldwide

In accordance with data from the World Tourism Organisation, in 2012 1035 million international tourist arrivals were registered, and **the international touristic revenue of the world – on the basis of preliminary estimates – was 1075 million dollars**. The 4 per cent increase rate of tourist arrivals corresponds to the long-term annual forecast of the UNWTO for the decade between 2010 and 2020 (+3.8 per cent). Among the regions Asia and the area of the Pacific Ocean (+7 per cent) and Africa (+6.4 per cent) showed the largest increased compared to year 2011. In America a 4.1 percent increase, in Europe a 3.4 per cent increase and in the Middle East a 5.4 per cent decrease was recorded.

The most mature destination of the world is Europe. In 2012 approximately half (51.6 per cent), that is, 534.4 million of international arrivals were recorded here. However, significant differences can be seen between the performances of European sub-regions. The 7.4 per cent increase of Central and Eastern Europe, providing 20.9 per cent of European arrivals (111.6 million arrivals) is mainly due to the outstanding performance of emerging countries.

From the second half of the 20th century, with the spreading of active tourism the areas waiting to be explored has widened, and by now the zone of active touristic experiences practically encompasses the whole of the Earth. Thus, due to extreme sports and adventure trips, the destinations of international tourism do not only include interesting and beautiful elements of natural environment, but also its more extreme areas: desert trips, extreme mountaineering, extreme mountain sports, and polar areas or beyond, and even deep sea destinations. If we wish to examine the territorial concentration of active tourism through an international overview, it is difficult to highlight certain countries or destinations, as practically any point on Earth can be suitable for pursuing active tourism. However, some countries can be mentioned where exercise and the related touristic activity has on the one hand been part of everyday life for a longer period, and the natural environment is excellent for serving touristic products. Thus in Europe the countries related to the Alps – not only because of the Alps themselves – are Austria, Switzerland, Slovenia, Italy, France, Germany, and Scandinavian countries, the British Isles, and in America mainly the United States can be highlighted where the proportion of active tourism can be considered quite high in quantity and its traditions.

In accordance with the latest study of the European Cyclists' Federation (ECF) the nearly 3 billion bicycle tourists every year contribute to the European economy with nearly 60 billion Euros. The ECF estimates that the number of bicycle tourists spending at least one night can reach 26 million, which is approximately 3 per cent of the travels generated by the residents of EU member states.

There is a great tradition of cycling worldwide and in several Western European countries. The bicycle is sports equipment, a means of recreation and as an alternative of commuting. This means a significant advantage in the age of traffic congestions, and sudden changes of our environment. We do not only have to focus on the elimination of the problems, but at the same time alternative solutions must be found. This is the reason why world leading powers invest increasing amount of energy in the creation of bicycle infrastructure.

Several European cities (the most recent of them was Prague) introduced charges for driving into the city centre. In addition to public transportation, excellent bicycle rental services are offered as solution.

The largest market is naturally Germany, but Holland must also be mentioned, where 70% of the population cycles and the proportion of bicycle holidays is at least the same. On the basis of data from 2005 it can be said that the total number of bicycle tours has reached 427 million, which generated revenues of approximately 350 million Euros. In Germany the accommodations and restaurants specialised on bicycle tourists have gathered in the Bett & Bike franchise system since 1995. At the beginning, the system had 216 members, which has expanded to 4561 in accordance with the latest survey (March 2008). This huge popularity is proved or rather generated by the fact that 56.2% of the bicycle tourists asked by the ADFC “often” or “always” choose services that are members of the Bett&Bike system. The daily spending of German tourists is between 62 and 70 € which corresponds to 16-19 thousand Forints depending on exchange rate. This means significant, solvent demand. The survey showed that 95.5% of the questioned cyclists planned some kind of a bicycle tour for 2008. The majority, 78% of the tours are directed to destinations inside the country, and 22% towards the neighbouring countries (Austria, France, Italy, and Switzerland), and 2% is directed outside Europe.

Apart from the Germans, the other significant cyclist nation is the Austrians. One of the most popular cyclist destinations is the Austrian section of the EuroVelo network running along the Danube. In 2006 approximately 350 000 cyclists visited this area, and spent nearly 3.5 million Euros in Austria.

The EuroVelo, or in its full name, the European Bicycle Route Network is the plan of the European Bicycle Association for creating 12 long-distance, cross-Europe bicycle routes. The total length of these routes is over 60 000km, more than 40 000 km of which has already been constructed. The EuroVelo routes represent similar concept to that of the Greenway projects of the United States, such as the East Coast Greenway. The EuroVelo routes are planned to be used for cross-continent bicycle tours, though connecting the existing cycle routes.

Naturally these EuroVelo routes can also be used for local bicycle transport. Two EuroVelo routes lead through Hungary, the EV6 running from the Atlantic Ocean to the Black Sea, and the EV11.

At present the European Union does not provide financial support for the EuroVelo program, but the situation may change in the future. **In Hungary the surveying and connection of bicycle roads to the EuroVelo network is carried out by the agent of relevant ministry.**

The aim of the EuroVelo is to encourage travellers to choose the bicycle over cars in a large proportion of their journeys. Although they provide some travellers with wonderful experiences in the course of cross-continent bicycle tours, the majority of the EuroVelo routes will be local – they will be used for commuting to school, work, to do the shopping, or for recreational purposes. However, the EuroVelo tours will be much more exciting and fascinating, as the cyclists will be aware that they can get to Moscow, Athens or even to Santiago de Compostela.

The developers of EuroVelo routes are the national and regional governmental authorities of each country, local governments, non-profit organisations in all European countries. Internationally, EuroVelo provides help with the preparation of establishing routes, obtaining political support for the construction, and also assists in selecting the appropriate routes. The routes will have to be

coordinated with and approved by the EuroVelo, as this will ensure good quality for the users and creators of the routes.



Figure 6: The map of EuroVelo cycle routes
(source: <http://hu.wikipedia.org/wiki/EuroVelo>)

The MOL Bubi projects that shall be introduced in spring 2014. can be mentioned as a good example. The “uniform bikes”, hereafter public bikes, known from other European cities will soon appear in Budapest. **These can be taken from uniform, easily recognisable bike racks, and after use they can be left at any other rack. MOL Bubi is not a bicycle rental service, but a new form of community transportation, which combines the freedom of individual commuting and the reliability of track-based means of transport.**

The features of MOL Bubi:

- In the first phase 1100 bicycles can be used in 75 locations. On the Pest side on the Nagykörút (Grand Boulevard) and within the Városliget (City Park), in Buda in the Víziváros and also in the university district of South Buda, and on Margaret Island.
- The bikes can be used in two ways. Either by personal registration, paying a one-off fee. This way the cyclist can be identified, and it works like a season ticket on other means of community transport. The other way is registration with a bank card and payment at the terminal – in this case a deposit must be paid.

- In both cases the bikes can be used free of charge for 30 minutes, then the fee rises sharply. It will not be worth using the bikes for periods longer than a few hours, which facilitates the utilization of the system, so everybody will find bikes waiting for them in the racks if needed.
- The bikes, combined with public transportation can be especially effective for distances over four-five kilometres.
- A non-stop helpline service is available for the users of the system.
- The bikes will have a uniform design and will be enduring ("city-proof"). The vehicles will be built from elements that are not compatible with parts of other bikes, so there will be no point in stealing them.
- The terminals do not only consist of docking stations: they will be equipped with information terminal and security cameras.
- The users will be able to obtain online, real-time information on the bikes at each terminal, that is, on the current number of available bikes on the future website and mobile application of the MOL Bubi.
- Joining the development, cyclist-friendly traffic regulations will be created throughout the whole area of the MOL Bubi, so every destination can be reached by bike from everywhere, fast and safely, in pleasant circumstances.
- Important hubs, like Széll Kálmán Square and Móricz Zsigmond Circus are also parts of the system. Later on Zugló and Óbuda will be connected to it.
- Not all the distance needs to be covered by bicycle, there is opportunity to use it only when and where it is more advantageous to use than other means of transportation.
- It can also be used for one-way transportation, the users do not have to travel by bicycle on the way back if it suddenly starts raining, or they receive a heavy package or meet a friend who is driving and can give them a lift.
- There is no need to worry about having the bicycles repaired, as the service provider will do this.
- There is no need to bear the risk of theft if the bikes are always dropped off at the terminals after use, as the user is no longer responsible for the bicycle thereafter.
- The users do not need to own a bicycle, they only have to go to a terminal, and take one.
- Each section of a journey can be covered with the most suitable means of transport, when arriving from a long distance the traveller can change to a bicycle from the underground, train or coach, and can cross the busy city centre by bike.

What makes the MOL Bubi different from other means of public transportation?

- The route can be selected at will, as there is no need to follow any timetables.
- It can be used free of charge for 30 minutes, and no ticket inspector will appear.
- There is no need to travel on crowded vehicles, there is always an available seat, and the users do not have to give it up to other passengers.
- The cyclists can enjoy fresh air all along the way.
- Distances can be covered faster than by most surface services and no strenuous effort is needed.
- Instead of wasting time and money on parking, cars can be left in a rented garage and free street car park, and the distances in the city centre can be covered by bicycle.

- Users of the MOL Bubi service do not pollute their environment.
- It can create more personal and community relationships.
- Users can experience what it is like to be a cyclist.

What means help bicycle transportation?

A series of measures are being implemented, entitled “The complex cyclist-friendly implementation of the Inner city”, as a result of which the residents of Budapest will not only receive bikes that can be used by anyone, but also a road network that can easily be used by bicycle. There is no need or space for bike lanes marked in narrow side-streets, and with the appropriate means of traffic technology, bicycle traffic can be made fast, safe and comfortable on roads shared with motorists.



Figure 7: France, Velib (source: <http://www.bkk.hu/bubi/abubi/>)

3.2. Bicycle tourism along the borders

Osijek-Baranja county is located in North-East Croatia, between the Drava and Danube rivers. It shares borders with Hungary and Serbia (Vojvodina), but Bosnia and Herzegovina are also near. The natural treasures of the region include plains, forests, hills, lakes, waterfalls, and wetlands rich in vegetation and wildlife. Thanks to the natural and cultural diversity of Osijek-Baranja county, to the protection of its natural resources, to its geographical features and to the changing worldwide trends of tourism, it belongs to the category of continental tourism. Tourism in Osijek-Baranja plays an increasingly important role in the economic structure of the county.

The range of touristic offers and accommodation is connected to the following cities: Osijek, Alsómiholjác, Dikovár, Nekcse, Belistye, Pélmonostor and Valpó, and also the villages of Bellye, Bizovac, Hercegszöllős, Darázs and Erdőd.

At present there are approximately one hundred companies and private persons dealing with rural tourism (civilian enterprises and joint ventures – family farms, handcrafts, limited companies, households associations, public institutions) **in the region of Osijek-Baranja county**; in addition, eleven wine routes exist, almost all of which are located in the region of Baranja. These routes are:

Hercegszöllős-Karancs – Sepse – Kö, Vörösmart, Csúza, North Baranja, Mártonhegy, Vinski put-Batina, Drázs, Zlatno brdo, and in villages in Baranja, and also in Mártonhegy Pélmonostor villages.

The tendencies of tourism show an increase worldwide, as tourist would like to get the most possible experiences during their holiday. As the county has outstanding opportunities in rural tourism, the following projects are prepared: construction of river ports, brown tourist signs, wine routes, bicycle routes, drive-in campsites and education in the rural region.

Natural resources and the attraction of travelling

One of the largest and most important natural flood areas is the south-eastern part of Baranja, the Kopácsi Wetland. The total area of the flooded land is 33,010 hectares, out of which 11,700 hectares is a nature reserve. 7000 hectares qualified as a zoological area of special importance. The zones connected to the periphery of the Kopácsi Wetland are the future areas of tourism and restaurant offers, providing opportunities for excursions and recreation as well as sports facilities. The activities planned to develop rural tourism: creating accommodation in traditionally built houses, improving agro-tourism, and eco-agriculture, including the cultural, historic and architectural heritage to be integrated in tourism, which will make the touristic offers of Osijek-Baranja county even richer and more complete.

Bicycle routes

Cycling in nature is a wonderful and unique experience, as it is an active pastime and a form of exercise without releasing materials that damage nature. Thus **the improvement of bicycle routes is one of the key conditions of the successful development of eco-tourism.** EU funds facilitate and finance (partially) the construction of bicycle roads. The following local routes belong to the international bicycle routes:

- Drava bike route – this project is based on the Danube bicycle route. The following cities are part of the route in Osijek-Baranja county: Belišće, Alsómiholjác and Valpó and their tourist offices.
- Pannonian Peace Route from Osijek to Zombor – the project manager is the “Green Osijek Ecological Association” which has designated the road and has placed informational and educational road signs for cyclists along the route.
- “Drava Bike Tour” bicycle route through Osijek – Erdőd – Osijek.
- Osijek - Nekkse- Diakovár - Osijek.

EuroVelo routes

EuroVelo 14 is a long-distance bicycle route crossing and connecting the whole of Europe. The routes can be used by bicycle tourists and also by locals for daily commuting. In countries where a developed bicycle route network is available, EuroVelo routes mainly consist of bicycle roads separated from the main roads. These bicycle roads dramatically increase the safety and comfort of cyclists. In countries where a less developed bicycle road network is available, EuroVelo routes mainly consist of low-traffic roads and alternative routes running though natural environment. **There**

are four EuroVelo routes passing through Croatia, but only two of them run through the continental regions of Croatia: EuroVelo 6 and EuroVelo 13.

EuroVelo 6 – Atlantic Ocean – Black Sea-The route passes through the picturesque landscapes of Eastern Croatia, along the Danube and Drava rivers. The route enters Croatia at Dályok, and runs across the beautiful Kopácsi Wetland nature reserve area. The Kopácsi Wetland is one of the largest and most attractive nature reserve marshes of Europe.

The route is completely free of altitude differences and leads along several cultural and historic treasures of Eastern Croatia. The Croatian section of the EuroVelo finishes at Újtlak, and continues in Serbia. The route is passable at present.

EuroVelo 8 – Mediterranean Route- This route crosses the most beautiful areas on the Croatian coast of the Mediterranean Sea, and runs through large and small towns and villages. The route connects the region included in the World Heritage by the UNESCO. This route has not been implemented yet.

EuroVelo 9 – Baltic Sea – Adriatic Sea - EuroVelo 9 terminates in the nicest way: the cyclist passes through the hills and valleys of the Istrian Peninsula! The end of the route is the town of Pula whose history reaches back to prehistoric times. The route has not been implemented yet.

EuroVelo 13 – Iron Curtain Route- The route runs along River Drava, on the borderline of Croatia, through an UNESCO Biosphere reserve. It connects the Mura-Drava-Danube and Baranja region with the Serbian border. The route mainly leads on low-traffic roads and does not have any altitude differences.

3.3. Cycling and tourism within the framework of IPA projects

Project name	Improving the international Danube bicycle road - Cycling Danube	BICYCLE FOR TOURISM WITHOUT BORDERS)	Greenway - A Way to Connect
Programme framework	IPA CBC HR – SR	IPA CBC HR – BIH	
Partners	Osijek-Baranja County and the tourism committee of Vukovar –Sirmium County of Croatia, Backa Palanka tourism organisation, local government of Bac and Backi Petrovac, Serbia.	Prijedor Local Government - Pre-PD - Economic Development Office (Bosnia-Herzegovina); Nature Park (Croatia) Kozara National Park (Bosnia-Herzegovina); Sziszek County Tourism Office (Croatia) Prijedor Local Government Tourism Organisation (Bosnia-	(elaborated jointly by the Association for Sustainability and the Together for the Children of Kémes District Foundation of Ormánság, and the “Saw” Foundation for the Local Communities of Osijek and the Eco Centre of Latinovac)

		<p>Herzegovina); Local Government Tourism Organisation (Bosnia-Herzegovina), the town of Kostajnica Croatia (Croatia) Jasenovac District (Croatia) Croatian Chamber of Economy – County Chamber, Sziszek, Croatian Crafts, Sziszek</p>	
<p>Aims</p>	<p>Creating the necessary conditions for the development of bicycle tourism in regions along the border, and increasing the attractiveness of the regions.</p>	<p>Improving the competitiveness of tourism along the border by enhancing the touristic attractiveness of the region. Improving and bettering the abilities of the participants of tourism, and promotion of areas along the border.</p>	<p>The facilitation of the economic improvement in disadvantaged rural regions of Slavonia and Southern Hungary by improving the 120-kilometre thematic bicycle road network. The bicycle roads between Kémes in Hungary and the village of Latinovac in Croatia will connect two dozens of villages and towns.</p>

Activities	<ul style="list-style-type: none"> - encouraging bicycle-related improvements in regions along the border - improving road safety - training the participants of tourism - Promotion of Danube bike tours and informing the public on tourism 	<ul style="list-style-type: none"> - Planning and marking bicycle roads in areas along the border, - Training tourism experts in regions along the border, - Placing four internet kiosks (2 in Croatia and 2 in Bosnia-Herzegovina) - Recording the common touristic opportunities along the border, - Organising demonstration bike tours for the Croatian and Bosnia-Herzegovinan media and specialised journalists, - spreading information regarding the project and supporting the EU joint financing. 	
Period	18 month		
Total value of project	€ 364,763.60 (Croatia and Serbia cumulative)	151,126.34 Euros	

3.4. Bicycle and tourism in Baranya and Pécs

The analysis of the bicycle road network of Baranya

The bicycle roads of the county and of the whole region are typically short, fragmented, and they do not constitute a continuous network. The further construction of bicycle roads is hindered by several factors, as the funds that can be spent on them is only sufficient for the construction of approximately 150-200kms of bicycle roads per year in the whole country, and it is frequently combined with building pavements. The limited financial means of many local governments does not allow them to take this opportunity, especially because they do not consider the construction of bicycle roads primarily important. In addition, they do not consider the income resulting from bicycle tourism to be in proportion with the scale of the investment, and the maintenance costs are also significant, and would be borne by the local governments as well. The unfavourable approach,

together with the lack of resources currently does not allow the medium-term programming of uniform, connected bicycle roads.

At present Baranya already has a large number of bicycle routes, but no long bike routes suitable for tours have been constructed yet, as in several places only short, individual sections exist. From cyclist point of view, a favourable feature of this area is that it is characterised by several small villages, which in turn features a dense, but mainly low-traffic side road network. There is only one single-digit main road passing through the county; road number 6, which connects Budapest-Pécs-Barcs. Cycling is prohibited on the majority of this road, and it is not worth breaking this regulation due to the heavy traffic. Between Bonyhád and the edge of Pécs, the older trace of the road running parallel to the new section is easily passable, but traffic is scarce on it, so it can as good as be regarded a bike route.

However, on the slope at Mecseknádasd (between sections 169.030 and 171.970) and just before Pécs, from the Vasas junction to the city (189.150 - 196.600) cyclists have to use the main road, and cycle among the cars, as these sections of the old road do not exist. Cycling is not prohibited on these sections, and the road has three or, at some points, even four lanes, thus motorists can safely bypass cyclists.

Roads with two-digit codes are not recommended for cycling, although through short sections, where they cannot be bypassed, hiking trails also pass through these roads.

Cycling is not usually prohibited on two-digit roads, although there might be a temporal limit (e.g. cycling is prohibited between 6 and 9 am and 6 and 8 pm). Side roads and lanes can be used easily, and the majority of tours run on these roads. In Mecsek and Zselic private forestry lanes also exist (closed by bars), and these are the most ideal tour routes, especially for families arriving with children. Cycling is allowed on forest lanes almost without exception, but the possible individual regulations of owners must be respected. If the tourists are accompanied by a car, its passage requires permission and/or the payment of road charges. The Tourist Map of Mecsek indicates forest (hiking) lanes that can be used for cycling. Cycling might be limited by the directorate of the relevant National Park, if the protection of the area makes it necessary. This issue has not been regulated in other areas of the region. The Water Management Directorates managing flood dams have allowed cycling on these embankments (with the exception of the period if intensive flood protection). Cycling on dirt roads passing through agricultural areas is not limited either by any regulations.

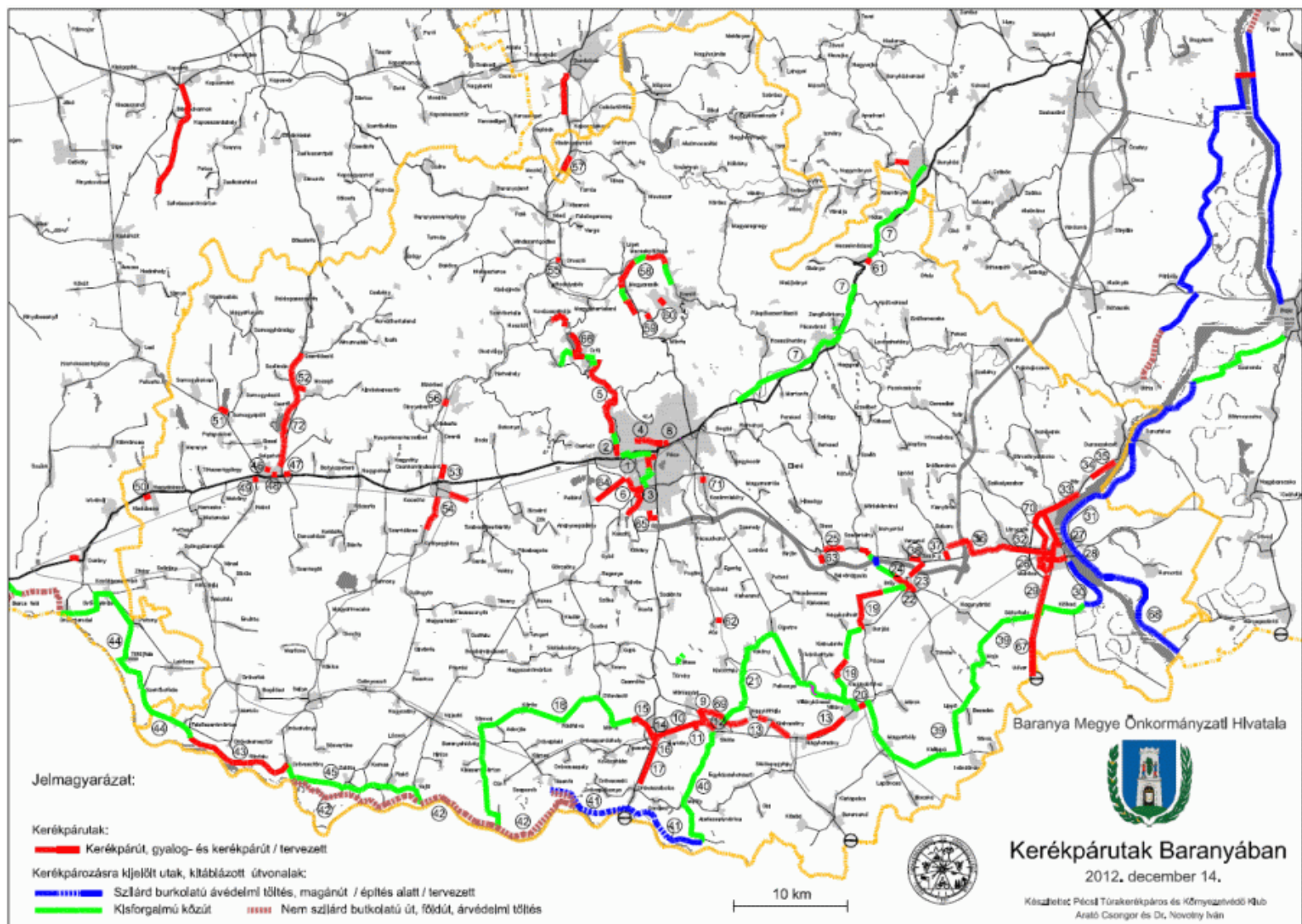


Figure 8: the map of the bike route network in Baranya county
 (source: www.kerekvaros.hu)

Existing bicycle routes

- Orfú – Tekerés - Kovácsszénája

The first plan of the bicycle route was made in 1993, but its implementation fell through due to land privatization, as the planned route became private property. The concerned local governments however did not give up the implementation of the connection, and in 2004, a bicycle road was built starting from the main street of Orfú-Tekerés towards Kovácsszénája, although it terminates at the Herman Ottó Lake. In 2012 the governments applied for funds for the construction of the remaining 1.5km section, which runs along the Herman Ottó Lake and Kovácsszénája Lake, in a beautiful environment, and thus a bicycle road network connects the settlements of Pécs-Orfú-Tekerés and Kovácsszénája. A long-term possibility can be the extension of the route towards Magyarhertelend.

The Pécs Development Non-Profit cPlc responsible for the implementation of the project sent the plans of the bike route to local and national cyclist organisations (Magyar Kerékpárosklub, Pécsi Túrakerékpáros Klub), and through conciliation negotiations, provided opportunity for the evaluation of the plan from cyclist point of view.

Based on the example of the Pécs-Orfú bicycle road the representatives of the cyclist organisations disapproved of the protective railings along the bike road, as they pose a risk of accidents. In their opinion, the railings placed level with the height of the bicycle handlebars can be more dangerous than drifting off the road. As standards require the installation of iron railings, in accordance with proposals, the railings were placed further away from the road and were provided with a reflective band.

Another problem is – as unfortunately shown by national practise – that the posts aimed at keeping the car traffic off the bike road are usually knocked down, thus the solution was the creation of a safety island-like structure. This is also justified by the fact that the main road access from one settlement to the other is 20km longer, so the temptation will be significant for motorists to drive on the bicycle road. This can result in damages on the surface, as it was not designed for load from motor vehicles.

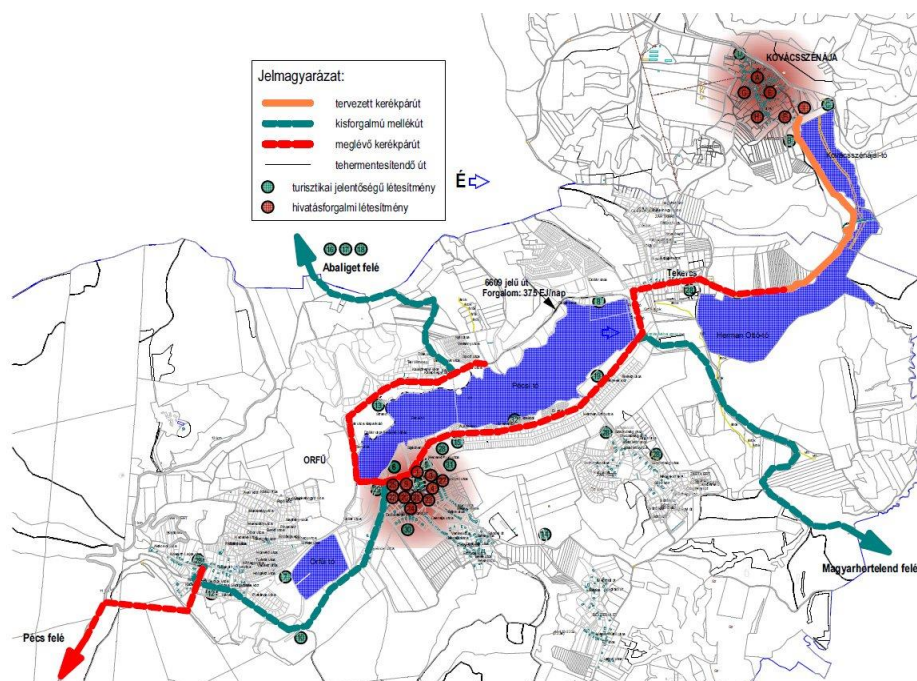


Figure 9: Orfú-Tekerés-Kovácsszénája bicycle route

- Pécs - Orfú

The idea of constructing a Pécs-Orfú bicycle road was raised by the Pécsi Túrakerékpáros és Környezetvédő Klub in 1994. The public opinion poll carried out among the cyclists unambiguously indicated that the cyclists of Pécs consider the Pécs-Orfú route the most important touristic route to be improved. In 1997 a draft study containing several versions for the bicycle road was prepared on the request of the Környezetünkért Alapítvány foundation, and consequently the Pécs-Orfú bicycle route concept was included in official development plans.

The marking out of the trace started in late 2009 but several people protested against damaging nature. During the construction other problems arose apart from environmental ones, for instance in connection with the trace (e.g. sinkholes), but the greatest indignation was caused by the fact that just before Orfú, at the Szuadó Valley the bike route would have crossed the main road in a blind corner. During the construction, the trace was modified through significant earthwork, and the junction was moved to a more transparent section. Objections concerning quality also arose (lack of road-bed, broken, sunken road surface), but the cyclists were ensured that the quality of the road will be appropriate. The drainage of water posed a problem at several points, as rainwater flowing from the hillside deposits mud on the road, but a drainage system was built along the road to carry it. Foliage falling on the asphalt surface means a further problem, as the wet, slimy leaf litter can cause accidents. The clearing of foliage has not been solved so far.

At several points, the asphalt surface was not designed for the realistic (50-70 km/h) but for a planned speed (15-20km/h), which is dangerous at some places as the speed limit signs are not always appropriate either. The iron railing is painted brown and in the inner arch of the bend it cannot be seen appropriately in the dark, so it is also dangerous. The large number of runners and hikers using the road also mean a difficulty.

- Pécs – Pellérd

The bicycle route connecting Pellérd and Pécs leads from Pellérd towards the western bypass road of Pécs. The road runs on the Pécs-Harkány railway line embankment, is 3.6km long and has a 2-metre wide surface. The construction of the bicycle route provided an opportunity to avoid busy roads, thus even daily commuting to work can be feasible by bicycle.

- Harkány – Siklós

With the busy main road connecting the two towns, the construction of a bicycle route was necessary, and the approximately 5km long section is highly popular, especially with holidaymakers in Harkány. The sole weakness is that the road does not lead directly into the centre of Siklós, only to the edge of the town.

Aside from minor faults, the road surface is in good condition on this section, is covered with solid surface everywhere, and its maintenance is arranged. The bicycle road has relatively busy pedestrian traffic, but it is separated from motorists, so it is also safe for families arriving with children.

- Harkány – Drávaszabolcs

The over 4km long bicycle road between Harkány and Drávaszabolcs was built in 2009, with a width corresponding to European standards. The route is not only popular with the residents of Harkány who enjoy cycling, but also with Hungarian and foreign guests visiting the spa, as they can just jump on a bike and explore the area.

A large number of visitors have already been cycling to the Drava, to the Mattyi Lake or to the Three Rivers bike route running on the Drava flood dam, using the busy main road 58, thus putting themselves in significant danger. Moreover, cycling is prohibited on this main road from 6 to 9 am and from 4 to 8 pm, so the construction of the bicycle road meant a huge advantage for the area.

The bicycle route starts in front of the roundabout located at the southern end of the Harkány bypass road, runs along the former Harkány –Drávaszabolcs (Donji Miholjac) railway route, and terminates in front of the Drávaszabolcs town sign. Its trace runs parallel to road 58, to the east of it. The only big deficiency is that a half-kilometre section is missing between this section and the Siklós-Harkány bicycle road network.

- Villány – Nagyharsány

The bicycle road connecting Villány and Nagyharsány was handed over on the 20th of April, 2013. This section of the bicycle route differs from the European standard, as it is only two metres wide, and 3.6 km long. The bicycle route between the two towns runs along the north side of road number 5701, among and past vineyards, through one of the most beautiful areas of true Mediterranean character. Among others, one of the biggest advantages of the bicycle road is that it has made commuting between the two towns much safer, which is not only important for tourists, but also makes life easier for the residents commuting to work daily from Nagyharsány to Villány.

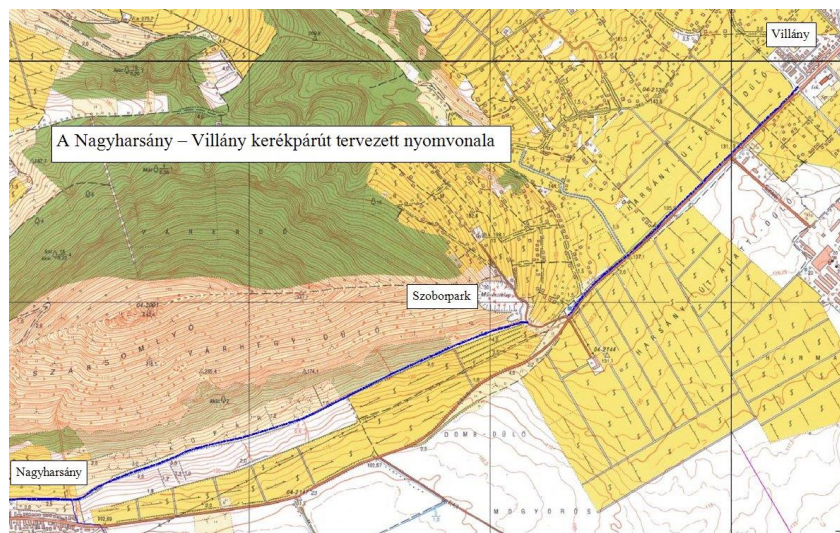


Figure 10: The trace of the bicycle route between Villány and Nagyharsány

- Villány – Bóly

The bicycle road connecting the settlements of Bóly and Villány was handed over in December 2007. The total length of the section is 15km long, and consists of a 2-kilometre and a 5-kilometre long section of standard length, and 3 sections marked on low-traffic roads.

The bicycle route starts in Villány, at the Fülemlé Inn, and runs through an oak forest to Kisjakabfalva, including a 2.5km long low-traffic lane. Here there are no road signs to mark the bicycle route, although the main road between Újpetre and Villány is the designated section of the Three Rivers Bike Tour Route, and cyclists can turn on to the bicycle road from it. In Kisjakabfalva, near the bus station a road sign shows the way, and turning left, the cyclists can continue their way towards Bóly. Here a designated low-traffic agricultural road leads to the beginning of the bicycle

road. Thereafter the next section of the bicycle route is 2km long, and, similarly to the 5km section, it was constructed in a width of 2m 20cm, corresponding to the prevailing European standard, and at its starting point a concrete post installed in the middle of the road stops cars from entering the road. This section includes rises and descents, providing a beautiful view of the surrounding landscape. After reaching Kisbudmér, the built bicycle road ends, and thereafter, after crossing the village and turning left at the junction at Nagybudmér, the cyclists soon reach the Karasica water course, this marked section is a low-traffic lane, with a length of approximately 2 km. After cycling over the bridge of the Karasica, the road turns left, on the left embankment along the stream. The 5km long, standard bicycle road begins here and continues to Békápuszta. Over half of this 5km section runs on the embankment. Here signposts prevent motor vehicles from entering. Inch-wide cracks can be seen at several points on the surface of the section on the embankment. The section of the road built on the embankment terminates at the stone bridge, and turning left here, the cyclist can proceed on the shorter part of the 5km section, all the way to Békápuszta. This section of the road is much more colourful, and includes several rises and descents. After reaching the end of the built bicycle road, the cyclists can turn left towards Békápuszta, straight on, along a low-traffic service road which is marked as bike route for 2 km, Bóly can be reached.

- **Mohács - Lánycsók**

The bicycle road between Mohács and Lánycsók is 1 km long and has a 2-metre wide surface. The bicycle route passing through the region is incomplete. With the construction of the bicycle route, safe bicycle transportation can be realised in the area where the busy roads 56 and 57 did not allow it. The continuous bicycle road network is connected to the EuroVelo bicycle route, so tourists can cycle as far as Croatia.

- **Three Rivers biking route (Danube – Drava – Mura)**

The “Three Rivers biking route” runs along the Mura and Drava rivers to the Danube. The section of the route that passes through Somogy and Baranya county runs on the flood dam of the Drava, including approximately 10km of asphalt-surfaced bicycle road, and the rest is well-maintained, grass-covered dam crest. Between Óstilos and Barcs, and between Keselyősfapuszta to Kölked the bicycle route runs on low-traffic roads, and later it passes through the Siklós-Villány wine region. In the area of Mohács the route joins the EuroVelo route running along the Danube. As the flood dams are free of traffic, they provide excellent opportunity for cycling for families with young children and for school groups as well.

The route can be divided into several sections:

Mohács – Majs – Villány, the length of the section is 40km, on solid surface

Siklós – Matty – Keselyősfapta, the length of the section is 12.4km, on solid surface

Drávaszabolcs – Tésenfa, the length of the section is 20km, on solid surface, on the flood dam at some points.

Tésenfa – Drávasztára, the length of the section is 30km, on solid surface, on the flood dam at some points.

Drávasztára – Felsőszentmárton, the length of the section is 10km, on solid surface, on the flood dam at some points.

Felsőszentmárton – Szentborbás – Drávatamási, the length of the section is 22km, on solid surface.

Vejti – Zaláta – Drávasztára, the length of the section is 19.8km, on solid surface.

- South Balaton

Although this bicycle route is not located in the area affected by the project, it would be very important to connect Baranya county with Lake Balaton, as it is one of Hungary's greatest tourist attraction, and the most attractive region for foreign tourists. The bicycle route circling the total coast of the "Hungarian sea" aids this.

On the south coast the settlements located past Balatonberény (Balatonkeresztúr, Balatonmáriafürdő, Balatonfenyves) do not have constructed bicycle roads, so the cyclists have to ride carefully in side streets. Cycling through this section, the tourists can marvel at the view to the monadnocks of the north coast, the castle of Szigliget and the wonderful Balaton sunset. The section terminates at the western border of Fonyód, at a quite problematic railway crossing, and here the cyclist arrives at road 7, where the built bicycle road runs along the left side of the road. Tourists can visit lookout towers and castle ruins on the two hills of Fonyód. Fonyód offers the best panorama to the north coast. After passing through Balatonlelle, Balatonszemes, Balatonszárszó, the cyclists arrive to Balatonföldvár, where cyclist-friendly solutions exist almost everywhere throughout the town: first marked cycle lane, then a beautiful new bicycle road can be used. Then the route continues from Szántód, where a low-traffic road takes the cyclist to Fonyód. The south coast of Balaton is recommended for beginners as well, as nearly the complete section is flat.

It can be noted that the **best quality cyclist services can be found on this section**, due to the large number of tourists visiting it. This is why it would be essential to connect it, to construct a continuous biking route between the Balaton and Baranya county.

In 2012, 3 Hungarian and 2 Croatian partners applied jointly for the construction of a so-called "green way" from Osijek to the Western Mecsek (Bakonya) across the Kopácsi Wetland. The trace of the green way was set out and informative and location signs were placed within the framework of the project. The Green Way program to be implemented facilitates the development of bicycle tourism through the increasing number of accommodation, creation of bicycle rental facilities and complex infrastructure.

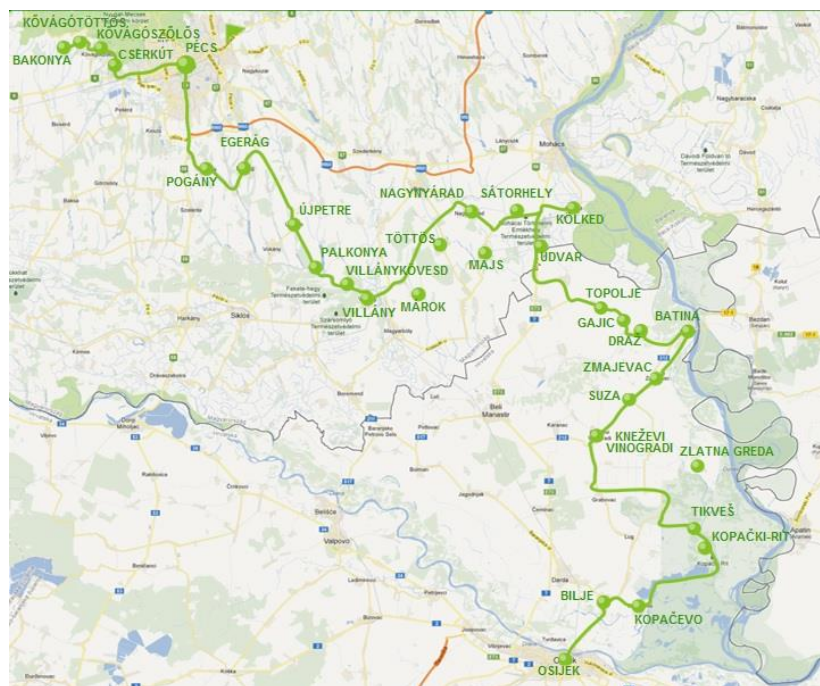


Figure 11: The route of the Green Way of Baranya

Geographically Baranya is a remarkably varied area, its northern area is a mountainous, hilly landscape with vast, continuous forests, while in the south and east there are plains. It is flat near the rivers, making it easy to cycle, but the Mecsek has seriously steep mountain roads, while elsewhere hilly terrain awaits cyclists. Cyclists advised to embark on the tours with geared bicycles, while MTB or trekking-style bikes are the best on flood dams.

In 2000, the tourism development concept and strategy program of South-Transdanubia was elaborated with the involvement of the Department of Geography of the University of Pécs. The primary aim of the program is the creation of the framework conditions for cycling tourism. The goal of the program is to increase the amount of touristic offers in the region significantly, mainly through the appearance of new market segments. The construction and high-quality maintenance of the basic infrastructure and service facilities (accommodation, catering units) is of key importance among the stated aims. As a result of basic surveys concerning cycling tourism, and the creation of a statistical database and development strategy, the realization of the aims, that is, enhancing the standard of existing offers and services in bicycle tourism, and increasing the number of guests visiting the region, reducing seasonality, increasing revenues, creating workplaces and sustainable tourism development, will become achievable.

Unfortunately, the organisational background is diverse but individualised, the willingness to cooperate is not yet present, and no common aims have been stated. It is essential to choose one among the existing organisations that is capable of performing regional management tasks and of delegating these tasks to the other organisations. Sadly, there is no organisation in the existing structure that could represent the interests of bicycle tourism by extending its scope to regional level, but they undoubtedly mean an important source of information due to their practical activity.

The tasks needed for the systematic development of bicycle tourism:

- The establishment of a professional representative grassroots organisation, which carries out its activities at a regional level bearing in mind the specific interest of this branch of tourism. As bicycle tourism cannot be connected to any clearly defined service providers, facilities, the future members of the association must be chosen according to the area, thus it should mainly depend on local governments, and local governmental organisations.
- As one of the primary aims of bicycle roads is to separate motor vehicle and bicycle traffic, the bicycle road constructions along busy main roads have priority, especially those that match the national and highlighted regional connective elements of the nationally compiled bicycle road development plan. In the future the mosaic-like further expansion of the bicycle road network can be predicted. There is a possibility for systematically controlling this procedure, if the bicycle road network is created in combination with routes passing on low-traffic roads and flood dams along the main prioritized routes. The defining of priorities is the task of the organisation responsible for the implementation of the program – taking into consideration of the concept of the relevant ministry – involving a large-scale coordination and with the approval of the involved parties.

- The majority of services related to bicycle tourism depend on the market, and are enterprises, but their activity and the standard of their services can be monitored. Thus the aim of the program, among others, is to expand services, enhance their standards and also, to grant subsidies to the entrepreneurs on the basis of individual judgement.

The main cyclist organisations in Baranya:

- Dél-Dunántúli Kerékpár-turisztikai Közhasznú Egyesület
- Pécsi Túrakerékpáros és Környezetvédő Klub

Bicycle tours available in Baranya:

- Castle tour
Route: Fonyód - Kaposvár – Zselic forest - Inner-Somogy - Szigetvár - the Ormánság - Pécs - Pécsvárad – mountain roads in the Mecsek - hills of Tolna, Szekszárd
The total length of the tour: 405 km, which takes approximately 9 days.
- Wine Route bike tour
Route: Villány - Villánykövesd - Palkonya - Újpetre - Vókány - Siklós (opportunity for detours to Harkány and/or Máriagyűd) - Nagytótfalu - Kisharsány - Nagyharsány - Villány
The total length and terrain of the tour: 42 km, hilly area
- Wanderings in the Mecsek I.
Route: Pécs - Bogád - Hird – Dombay lake, Pécsvárad – continues on at first steep but beautiful, forestry lanes that are mostly free of traffic - Zobákpuszta (belongs to Komló) - Koszonyatető - Árpádtető - Lapis - Remete-rét - Abaliget – Hetvehely Kővágószőlős - Cserkút - Pécs
The total length and terrain of the tour: 90 km, mountainous
- Wanderings in the Mecsek II.
Route: Pécs - Bogád - Pereked - Szilágy - Pécsvárad - continues on low-traffic forestry lane - Magyarereggy – on main road: Szászvár - Egyházaskozár - Mágocs - Alsómocsolád - again on forestry lanes: Kisvaszar - Mecsekpölöske – on main road: Magyarszék - Magyarhertelend - Orfű - Abaliget - Hetvehely – Kővágószőlős - Cserkút - Pécs
The total length and terrain of the tour: 150 km, mountainous.

The tourist attractions/ list of sights of the county

This region is famous for its historic monuments, spas and hospitality. The centre of the region is Pécs. The main attractions in the city are the Cathedral, the early Christian tombs that have been included among the UNESCO world heritage sites, and the djamis of Gáz Kászim and Jakovali Hasszán, and mementoes of the Turkish Age. The city's landmark facades decorated with ceramic ornaments and other decorative objects were created in the Zsolnay Ceramics Manufacture, which has been operating in the city for 150 years. The city was awarded the role of the Cultural Capital of Europe in 2010. Near Pécs, in Orfű, the tourist can marvel at the unforgettable famous lake system, while proceeding to Abaliget an extraordinary dripstone cave can be visited. Pécsvárad is famous for its Árpád-era crypt and castle, just like Szigetvár, where several Turkish monuments can be seen. Near the border the renovated cellars and bicycle roads of the famous wine-making centre, Villány await tourists and wine-lovers alike.

The attraction of Siklós is the Garai castle where famous Hungarian movie, “Tenkes kapitánya” was filmed. The djami and a Serbian church are located beside the castle. The nearby Harkány is one of the touristic centres of the region due to its medicinal spring, where an extremely high quality spa and lido, and hotels and pensions await those seeking recreation.

Cycling in Pécs

According to data from the Central Statistical Office, slightly over 7 per cent of the bicycle roads of Baranya county are located in Pécs, and no local government-funded road network expansions were carried out in the past years.

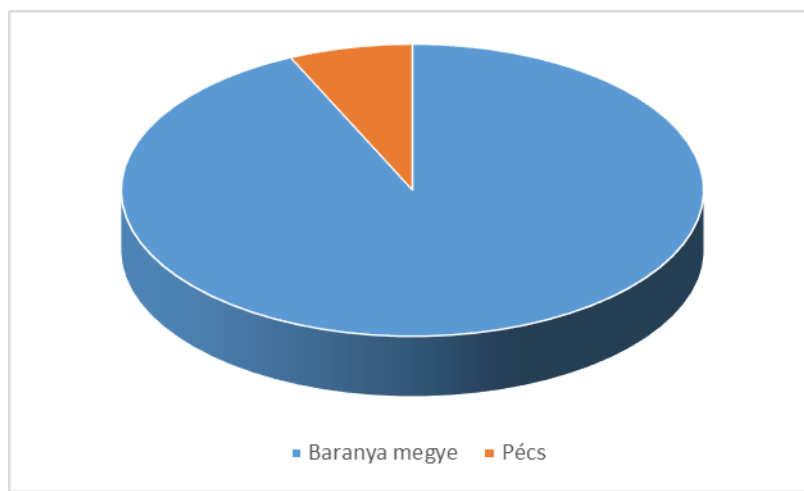


Figure 12: The proportion of bicycle roads in Pécs compared to the total of bicycle roads in Baranya county (2012) (source: ksh)

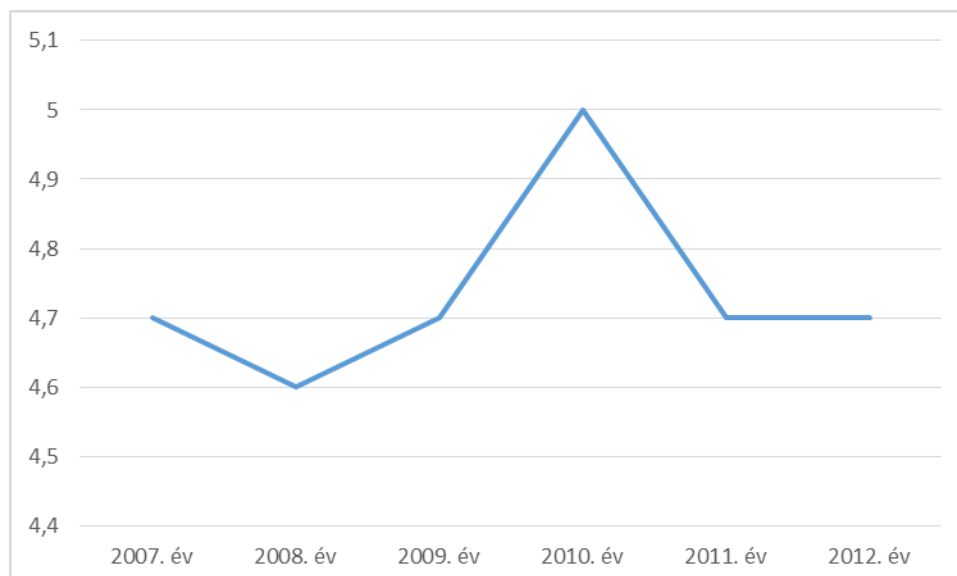


Figure 13: Changes in the length of bicycle roads in Pécs (km) (source:ksh)

The improvement of the bicycle network in Pécs:

The first bicycle road of Pécs was built in the 1980s, connecting Kertváros and the lakes of Malomvölgy. As cycling at that time was mainly considered as recreational activity, the city government did not plan any significant investments to increase the number of bicycle roads in later years. The number of cyclists increased in the city from the 90s so it became necessary to begin improvements to support bicycle transportation throughout Pécs. On the basis of the public opinion poll carried out by the Pécsi Túrakerékpáros Klub in 1994, the greatest demand concerned the implementation of bicycle transport between the city centre and Kertváros, which was followed by the construction of the bicycle road between Verseny Street and Kertváros in 1996. The bicycle road of Uránváros was built 20 later, however the lack of connection between the two sections was a significant problem.

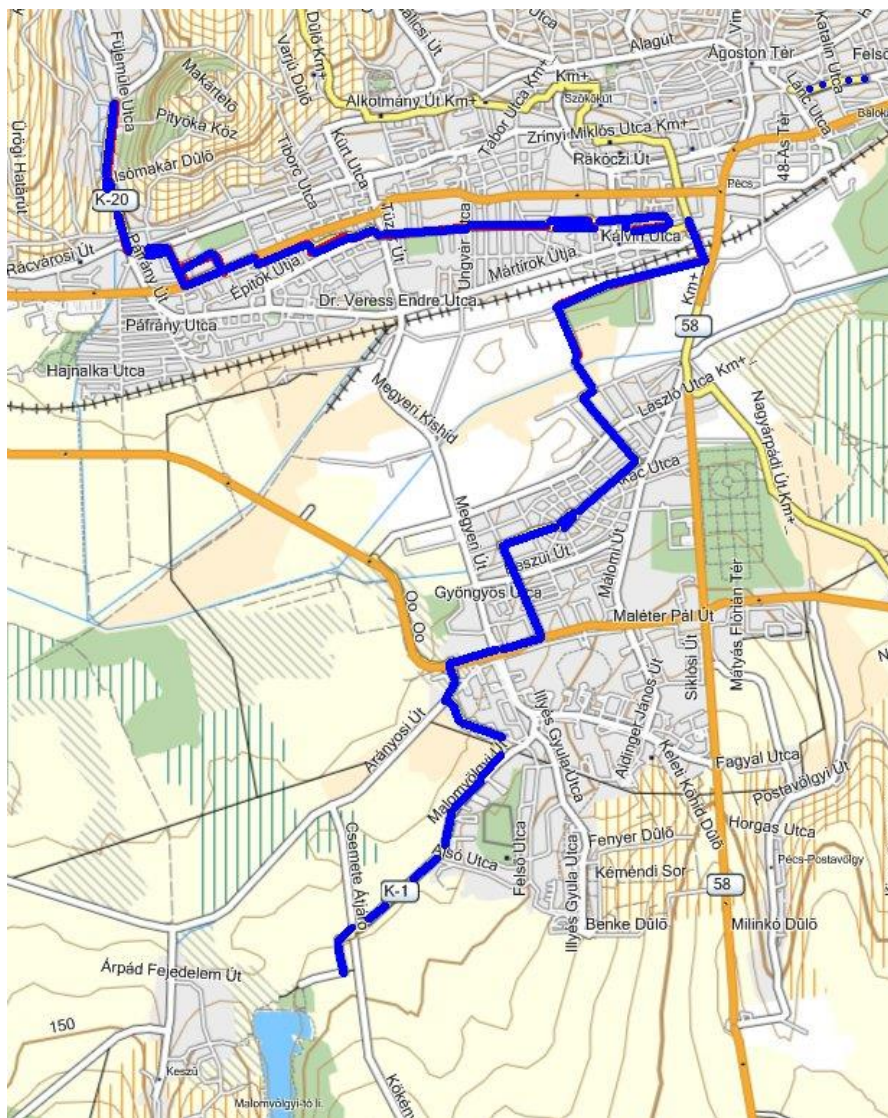


Figure 14: nyomvonala the trace of the bicycle road between the city centre and Kertváros and the road constructed in Uránváros(Source: Kerékváros)

The Pécs as the Cultural Capital of Europe project began in 2008, and within the framework of this project, during the creation of several squares the previously constructed bicycle road sections disappeared.

Cycling recovered its importance due to the large masses of mainly foreign university students who appear in the streets of Pécs each morning and who represent the key sector of the economy of the city. The criteria of a liveable and attractive city include the facilities of bicycle transportation, so it is worth investing into this area of city development. The process started in 2011 when the cyclist community of Pécs could submit their suggestions to the local government concerning the route of a west-east running bicycle road – linking the university facilities, thus the name “Campus bike road”. The South-Transdanubia Operational Programme 5.1. was prepared in 2012, in accordance with the suggestions. The largest investment of recent years has been the cross-city bicycle route linking the University of Pécs Ifjúság street block, and the Zsolnay District. Out of the 3.2 km section 1.04 kilometres was newly built, and on the existing section, mainly in the city centre of Pécs the bicycle road pictograms, yellow signs appeared, thus it is now possible to reach the city centre from Búza Square, following the “biking trail”. The complete section is expected to be ready by spring 2014, and thus Pécs will have a cross-city bicycle route in east-western direction. Another step forward is the speed limit introduced in the city centre of Pécs from autumn 2013 to guarantee the safety of cyclists crossing the city.

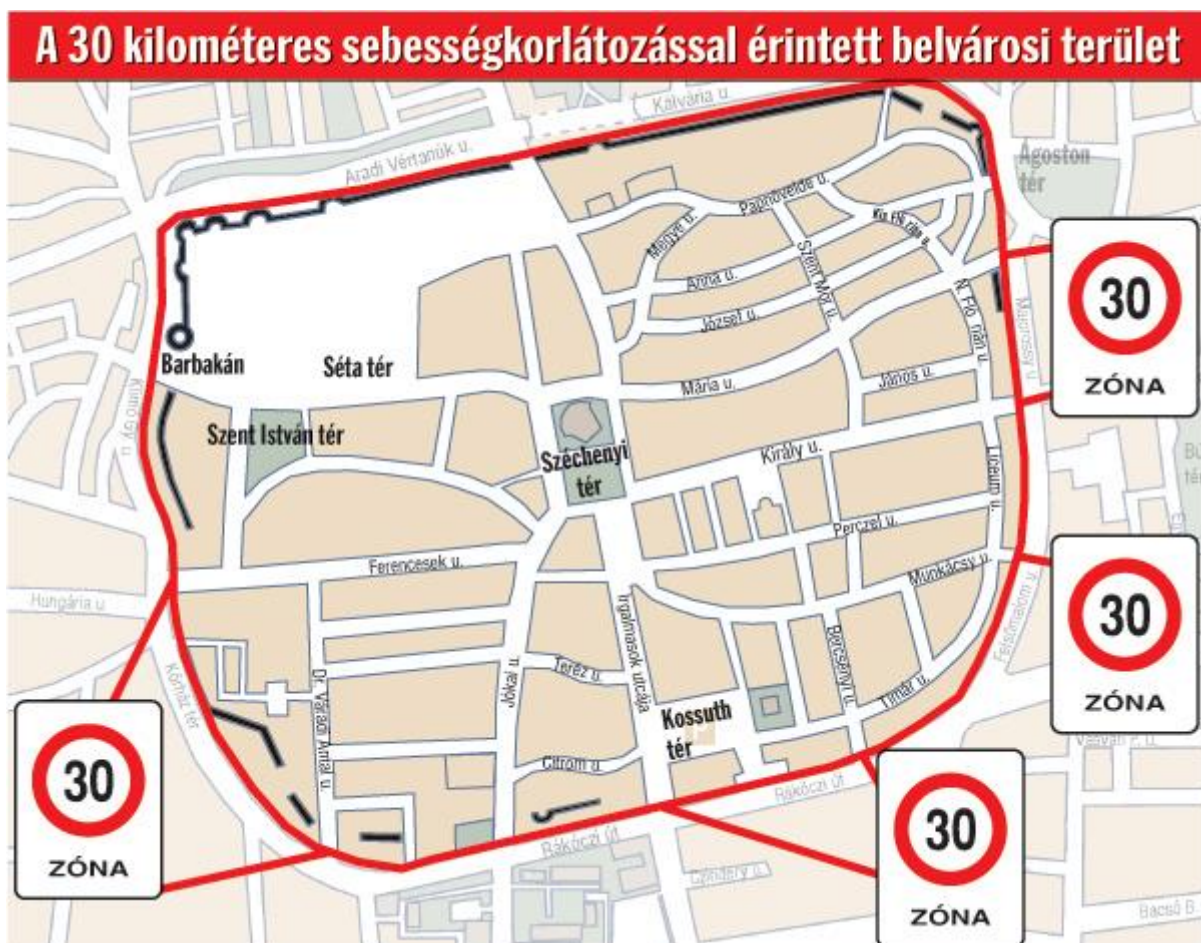


Figure 15: Speed limit in the city centre



Figure 16: The trace of the E-W bicycle road in Pécs (spring 2014)²



Figure 17: Bicycle lane in Pécs, in Mária Street

² <http://www.bama.hu/baranya/kozelet/pecsi-kerekparut-mi-sem-tortent-514067>



Figure 18: Bicycle road signs in Pécs along the E-W bicycle route



Figure 19: Bicycle road in Pécs, in Mária Street



Figure 20: Sidewalk and bicycle road side by side in Ifjúság Street



Figure 21: Bicycle road in the centre of Pécs, in Alsóhavi Road



Figure 22: Pécs, Király Street – Felsőmalom Str junction

The effect of the expanding bicycle road network:

A positive effect of the development is that a cyclist-friendly city has a good reputation. It is worth visiting such a city. It is a pleasant place to live, or to study. Besides, there it is easy to commute to work, not only as far as the Zsolnay District but further on, to Meszes, Rácváros, and to the Mohácsi road – by bicycle.

3.5. Cycling and Tourism in the Baranya-triangle

The Baranya-triangle in geographical and historical context

The **Drávaköz** is the name of the area between the Drava and the Danube used mainly in scientific texts. Its other names are Drávaszög, Drávazug, Baranyai Hegyalja. In the former Kingdom of Hungary it was also referred to as South-Baranya or Lower-Baranya, as the area constitute the southern part of the historic Baranya County. Today it mainly occupies the north-eastern region of Croatia, while a smaller area belongs to Hungary (Béda-Karapanca).

Today the name Drávaszög is mainly used to refer to the Croatian area, which is bordered by the Danube-Drava and the Hungarian-Croatian border.

Thus the Drávaszög and Drávaköz do not refer to the same area today! This area is also known by the name **Baranya-triangle**, and in Croatia it is simply called Baranya (Baranja)³.



Figure 23. The division of Baranya County

(Source: <http://hu.wikipedia.org/wiki/F%C3%A1jl:BARANYA.png>)

Baranya County, similarly to its eastern neighbour, Bács-Bodrog County, was one of the oldest of the Hungarian royal counties. In the 16th century the Ottoman Empire conquered the county and established the sanjak of Mohács, which was a Turkish administrative unit. In the 17th century the area of Baranya County was incorporated in the Habsburg Empire, later it was returned to the Kingdom of Hungary. In 1918, the county was occupied by Serbian forces, and for a while it was under the control of the Serbian-Croatian-Slovenian Kingdom (see also: Baranya-Baja Serb-Hungarian Republic).

The Treaty of Trianon in 1920 left the larger part of Baranya County in Hungary, and the smaller, south-eastern area was annexed to Yugoslavia. Between 1941 and 1945, the area of the County was completed with the detached areas ("Baranya-triangle"), but after the world war, the area was returned to Yugoslavia. In 1991, Croatia became independent, and since then the south-eastern, detached area has belonged to Croatia.

At the census of 1991, the 25.5% of the 54.1 thousand residents were Serbians⁴. The most important Hungarian-inhabited settlements are Baranyavár, Csúza, Hercegszöllős, Karancs, Kopács, Kő, Laskó, Pélmonostor, Sepse, Várdaróc and Vörösmart⁵.

³ Source: <http://hu.wikipedia.org/wiki/Dr%C3%A1vak%C3%B6z>

⁴ Source: <http://terkepek.adatbank.transindex.ro/belso.php?nev=181>

⁵ Source: <http://hatartalan.net/index.php/horvatorszag>

The Baranya-triangle as bicycle tourism destination⁶

“Bordered by the Drava and the Danube rivers and divided by the Croatian and Hungarian state border, enchanted by the swamps in the east, protected by backwaters in the south and south-west and opened to connect with the wine roads and paths in the north and north-west – Baranja is still isolated and more mystical than ever before.” Dario Topić

The reason why Baranja remained special until today may lie in the fact that people here jealously guard and remember the stories older than their families, stories of life and survival, love and death, wine, hot peppers, fishing, weddings.

Thanks to this still existing ethno-magic, Baranja stays attractive but never reveals itself completely. The important road connecting the major urban centres of Mursa (Osijek) and Sopianane (Pécs) led through Baranja.

Hereafter we present the most remarkable settlements, natural and cultural values of the area, which are of key importance from the point of view of bicycle tourism.

KOPÁCSI WETLAND

The international significance of the Kopački rit Nature Park was confirmed in 1993 when it was included in the List of Wetlands of International Importance, in accordance with the Convention on Wetlands of International Importance, especially as a residence of wading birds.

The Kopácsi wetland is the flood area of the right bank of the Danube formed in the north-eastern part of Croatia, in the corner bordered by the Drava and the Danube. It is one of the largest fluvial-marshy flatlands of Europe. The appearance of the entire area depends on the intensity of floods, thus the dry and flooded areas change their form and function according to the amount of water arriving to the area. Its largest lake is the Kopácsi Lake, and the deepest is the Sakadaško Lake. The lakes are connected to the Danube and Drava by natural canals.

The Kopački rit Nature Park is a complex ecological system consisting of valuable, rare and endangered plant and animal species, as well as some unique ecological phenomena. The white-tailed eagle and the rare black stork are the most mentioned among these species but there are many other rarities. It is even less known to the general public, that outside Kopački rit, Baranja abounds with a variety of rare species, ecological phenomena and even fossil sites, which together provide a great wealth of natural heritage to the area.

Kopački rit, at the contact point of the Danube and Drava rivers, is one of the best preserved flooded areas in Europe and is protected as a nature park. It is characterised by different types of vegetation: forests, grassland and wetland and aquatic plants. The largest area is covered by forests of white willow which, together with black poplar, dominate higher areas, and the highest areas are dominated by oak forests. Water surfaces within the park are covered in communities of water lilies, pondweed and water lilies. The most common in the occasionally flooded areas are reed-patches and tall sedge

⁶ Source: <http://business.croatia.hr/Documents/901/A-fantasztikus-Baranya-HU.pdf>

communities, providing a characteristic marshland atmosphere. Kopački rit is an important tourist destination and especially interesting as a place for relaxation, sport and recreational activities, attractive cruises on the Kopačko lake and very popular for bird watching and recording. Big cormorants represent a remarkable curiosity because their survival as birds is based solely on the abundance and quality of fish found, with an adult eating a few kilograms of fish a day.

PÉLMONOSTOR

The only city and administrative centre of Baranja, it grew on the western slopes of the Baranja mountain, almost halfway between Osijek in the south and the Hungarian city of Mohač in the north. The name of the city has its roots in the Middle Ages; in 1227, Hungarian Palatine Moys de Daro built a monastery on his farm in Pel, the reason for which this place was later called Pel Monostor (Pel Monastery), interpreted by the Slavic population as “Beli Manastir”.

BILJE

The hunting Castle in Bilje has not yet been historically and architecturally explored. The name of an Austrian architect, Johann Lucas Hildebrandt, known as the architect of the Vienna Belvedere Castle, is often mentioned as the most probable architect.

The largest estate in Baranja belonged to Prince Eugene of Savoy, general and statesman, the supreme commander of the Austrian army since 1697, and later president of the Court War Council in Vienna. Among twenty villages that belonged to Eugene’s Baranja estate, the village of Bilje, or Belje (Hungarian Bellye), was elected the seat of administration. At the beginning of the 18th century, a four-winged castle with moats and a square inner yard was built in an early Baroque style. Most of Croatian Baranja was assembled within the Belje manor, with other settlements in the Danube region from Batina to Kopačevo and those to the west and north of BANSKO BRDO (Petlovac, Beli Manastir, Branjin Vrh, Popovac, Branjina, Duboševica, Topolje etc.).

TOPOLJE (IZSÉP)

The monumental Baroque Church of Saint Peter and Paul near Topolje village, near the old Danube riverbed, was erected by Prince Eugene of Savoy after the last in a series of his great victories over the Turks (Senta 1697, Petrovaradin 1716, Belgrade 1718). Unusual in having no tower, the church of Saint Peter and Paul has encouraged the belief of different legends in people for centuries.

Topoljski dunavac or Puškaš, as it is mistakenly referred to, because Puškaš is the name of the estate alongside a part of Topoljski dunavac, is about 10 km long. It was founded 150 years ago, when the Austro-Hungarian government decided to regulate the flow of the Danube. The shores are covered with cane, sedge and aquatic plants, making it an ideal nesting place for wading birds, and a hatchery for many types of fish, which find ideal conditions for growth and reproduction here.

The old Carnival traditions of masked groups called “buše” passing through villages and visiting houses is preserved up to this day in the villages of the Danube valley and the Drava valley of Šokadija. Typically the most beautiful “buše” masks come from Baranjsko Petrovo Selo, the so-called “petaračke buše”. The “buše” are still chased in Duboševica, Topolje and Gajić, and the final party takes place in Draž.

DARDA

Another great Baranja manor from the Habsburg era was gathered around Darda, and its first owner was yet another general, General Friedrich von Veterani. Apart from Darda, more than twenty villages belonged to that estate, and some of them are still part of Croatian Baranja: Baranjsko Petrovo Selo, Jagodnjak, Bolman, Karanac and some others. The famous noble Esterhazy –Zvolen family bought the manor in 1749 and were the owners until 1842. In 1800, a three-winged classicist castle was built in Darda.

BATINA (KISKŐSZEG)

The Victory, the work of sculptor Antun Augustinčić, dating from 1947, is a reminder of the Battle of Batina in 1944. In this battle, Soviet Red Army troops and Tito’s army liberated Baranja from German occupation.

The Monument and the memorial complex mark the place of the great battle that took place from 11th - 30th November 1944, when the Soviet Red Army and the Yugoslav National Liberation Army troops crossed the Danube, established bridgeheads and pushed the German occupation forces together with the remaining parts of the Hungarian army out of Baranja. At the site of the fiercest battle, the so-called “Hill No.169”, a monument to the fallen soldiers of the Red Army was erected, a monumental obelisk 27 metres high, with an eight metre high bronze sculpture of Victory on the top. A mass burial grave of 1,297 members of the Red Army is a distinctive feature of the monument.

KNEŽEVO (FŐHERCEGLAK)

Kneževo is a village within the municipality of Popovac, 9 km north-east of Beli Manastir. There are prehistoric and medieval sites in the surroundings, as well as a 19th century park located near the classicist castle dating from 1827. The remains of the valuable archives of the agricultural and industrial combine of Belje, which were unfortunately largely destroyed, are located in the castle. The former administrative building, the Belje manor, which today is abandoned, is also situated in Kneževo.

KARANAC (KARANCS)

The village, once belonging to the Darda estate, is widely known as an ethnic village. Today, a little more than a thousand inhabitants live in it. In recent years it has become a magnet for many foreign and domestic tourists, who enjoy its rich gastronomic and tourist offer. A third of the village area is covered with vineyards and forests, and excellent wines are produced by the local villagers, who even today successfully preserve this tradition.

4. SWOT

4.1. Bicycle Tourism in Baranya county

Strengths	Weaknesses
<ul style="list-style-type: none"> • Ideal natural conditions, biking-friendly low elevation differences • Diverse, country scenery • Many untouched landscapes • Rich, colorful, and diverse flora and fauna • Thermal waters, rivers, and lakes • Traditional small villages • Proximity of historical towns (Pécs, Mohács) • Rich cultural heritage (Early Christian Necropolis) • Rich folklore, ethnic diversity • Dynamically developing economy • Demand for bicycles and related products and services • Openness of local population towards biking • Cross-border cooperation • Existing economic and touristic relationships • Resources and developments in the County • Openness and initiative of institutions responsible for developments • Openness to regional and nationwide solutions (the three counties in the Southwest Region make up a regional union) • Interventions carried out in line with international tourism and lifestyle trends • Numerous biking organizations and clubs • Biking routes in the region • Significant side-road system, low-traffic routes suitable for cycling • EuroVelo, the international biking route crosses multiple counties • Trail/Mountain cycling routes marked on the Mecsek Tourist Map • Private trail/mountain routes available for biking in the Mecsek and Zselic • Biking is not restricted on river flood dams • Numerous biking organizations and clubs 	<ul style="list-style-type: none"> • Undiscovered and under-promoted natural resources • Large abandoned and damaged areas • Overwhelming size of crop fields in many areas • Neglected towns and settlements • Less dynamic cultural life in villages • Limited acceptance of cyclists in villages and rural areas • Limited or low-level driving and biking culture among citizens • Lack of knowledge and education of traffic rules for young children • Lack of knowledge of business opportunities/services (hospitality, service providers) that would be suitable for cyclists • Entrepreneurs lack of language knowledge and other communication barriers • Isolated county-level initiatives, lack of cooperation among interested parties • Lack of local and regional self-funding • Weak unity of existing developments • Lack of regional aspect of projects, only local-oriented developments • Weak cooperation among parties interested in biking development • Limited realization of interests or definition of projects • Lack of abilities to cooperate (development, planning, operation, distribution, innovation spreading) • Lack of business-minded strategic/marketing thinking among biking organizations, related institutions and intermediary tourism bodies • Weak cooperation among existing biking, sport or civilian organizations

Strengths	Weaknesses
<ul style="list-style-type: none"> • Biking routes in the region • Significant side-road system, low-traffic routes suitable for biking • EuroVelo, the international biking route crosses multiple counties • Trail/Mountain biking routes marked on the Mecsek Tourist Map • Private trail/mountain routes available for biking in the Mecsek and Zselic • Biking is not restricted on river flood barriers • Rich and diverse bike tour offerings (Castle tour, Three rivers tour, Wine route tour) • Cycling is an important element of environmental protection and development of an environmentally conscious lifestyle • Rich and diverse bike tour offerings (Castle tour, Three-rivers tour, Wine route tour) • Cycling is an important element of environmental protection and development of an environmentally conscious lifestyle 	<ul style="list-style-type: none"> • Weak, unorganized civilians • Lack of synchronized promotional activities (brochures, maps, tour offers) • Lack of skilled tour guides, lack of education opportunities for tour guides • Existing bike routes are subpar in terms of both quantity and quality (short, not well-connected routes) • Complete lack of assistance & information • Lack of biking-related services (quantity & quality) • Bad quality of side-roads that are suitable for cycling • Limited options of combined transportation • Lack of safe commuting and storing options • Maintenance of biking routes is not resolved • Limited border crossing options • Many areas are hard to reach • Local governments' limited abilities to self-fund projects, where building biking routes is not primarily important • Investments into and revenues from bicycle tourism are not in proportion

Opportunities	Threats
<ul style="list-style-type: none"> • Creating a Biking Euro Region • Strengthening cooperation with nearby regions home and abroad • Developing international thematic routes • Possibility of successfully connecting to Lake Balaton • Increasing international attention towards and interest in Hungary • Increasing demand for rural tourism on the western tourism market • Creating demand for the different “products” of a biking region (routes, programs) • Supplying of integrated, cross-border tourism • Increasing demand for purchase of good quality bikes and biking accessories • Continuous increase of fossil fuel prices that brings renewables to the forefront • Economic development that allows more funding for biking and related activities • Promoting popularity of biking • Promoting a healthy lifestyle thus raising awareness to environmental and nature protection and consciousness • Changing the car-centered mindset, especially among youth • Improving the quality of bicycle tourism, increasing guest numbers and revenues, easing seasonality, creating jobs • Involving local entrepreneurs and local governments • Sustainable tourism development • Bicycle tourism as state-level revenue source • Creation of regional and cross-border management of bicycle tourism, developing necessary human resources • Increasing safety of bicycle commuting • Creating a dynamic service sector and 	<ul style="list-style-type: none"> • Steep elevation mountain routes of Mecsek are less attractive to cyclists • Competition, instead of cooperation, with neighbouring counties would increase • Divided region • Deepening economic and social degradation of country regions • Losing the advantages of European price competition at a county and national level • The development of the county’s economy at such level and in such direction that would deter cyclists • Increasing motorization • Local entrepreneurs would not recognize opportunities with regard to cycling and therefore leave them untapped • “Aggressive” promotion of biking would cause resentment among locals • Reversing trend of healthy lifestyle • Vehicles, as status symbol in Hungary • Poor driving culture of motorists would remain unchanged • Drivers’ negative attitude towards cyclists would remain unchanged • Investment and revenue from cycling tourism disparities would not increase entrepreneurial spirit of locals • The system is individualized, no traditions of cooperation or common goals • Separation of motorized and cycling traffic is difficult to realize

Opportunities	Threats
<p>information system</p> <ul style="list-style-type: none"> • Developing products and services in cooperation with Croatia and therefore developing good relationships with bordering nations • Bicycle tourism promotes the reach of less know destinations 	

4.2. Bicycle Tourism in Pécs

Strengths	Weaknesses
<ul style="list-style-type: none"> • Outstandingly favourable climate of town • Clean air thanks to the forested areas bordering the town even today • Natural heritage in and around town (Jakab-hill, Tubes, Misina, Malomvölgy Lake) • Cyclist-friendly landscape (plains, slopes, as well as steep elevation can be found) • Cultural heritage (Early Christian Necropolis, Barbican, Saint Peter and Paul Cathedral, Turkish Mosque of Gázi Kászim) • The University of Pécs is one of Hungary's largest universities by number of students (26,000 students, with more than 1,700 foreign students) • Lively university life thanks to the University of Pécs • Long-time presence of cyclist clubs and organizations • Popularity of cyclist events (e.g.: no-car day, Earth Day) • From spring to autumn, there are free biking events, advertised publicly every weekend • Popularity of the free magazine, Kerékváros (Cycling City), edited and distributed by the Pécsi Túrakerékpáros és Környezetvédő Klub (Pécs Tour Bike and Environmental Protection Club) 	<ul style="list-style-type: none"> • Natural heritage is often neglected, not cared for, and reaching them on bike is not an option (TV-tower) • Low level of public safety and settlement structure • Driving culture is not appropriately cyclist-friendly • Lack of knowledge and education of traffic rules for young children • Lack of good quality accommodation in town • lack of language knowledge in case of restaurant operators and hospitality workers • Lack of knowledge on behalf of hospitality workers (restaurants and service providers) of the possibilities offered in biking • Lack of foreign language signs and information spots in town • Lack of strong investors and self-funding in the region • Existing biking services in Pécs are limited and low in quality • Limited storage options in the city centre • Lack of safety in case of storage, in some public areas lockers are not sufficient • In some parts of town, bike roads are completely missing, or their quality is questionable

Strengths	Weaknesses
<ul style="list-style-type: none"> • The webpage, edited by the Pecs Tour Bike and Environmental Protection Club available on the internet • Abundance of resources and development in town • Dynamic economic development • Demand for bicycles and related services, mostly among youth • The city's residents are open to a cyclist mentality • Institutions responsible for developments take initiative and open towards other institutions • The town is easy to reach via main roads (M6 motorway and M60 main road) and by train • Existence of cycling routes in Pecs • Pécs has a history of cycling, it's a popular way of transport • Cycling is closely linked to an environmentally conscious lifestyle • Pécs has an excellent relationship with its Croatian sister city, Osijek • Pécs is respected abroad (thanks to the Medical Faculty and the ECC title in 2010) • The bicycle is a means of transportation as well as sports • Bicycle commuting is clean and quiet, therefore less disturbing for residents 	<ul style="list-style-type: none"> • Alongside main roads, biking is neither safe nor healthy • Low level of cooperation among biking organizations and unions in the city • Limited realization of opportunities, lack of a cooperative mindset • Lack of a unified image necessary for promotion of in-city cycling • Local biking organizations lack a market-oriented strategy • Local cycling organizations lack the amount and quality of marketing, synchronized promotional activity is limited in town • Lack of trained tour guides, their training is not appropriate • Weak civil society that can be linked to cycling in Pécs • Maintenance of existing biking routes is not resolved

Opportunities	Threats
<ul style="list-style-type: none"> • Formation and maintenance of cyclist interest groups in Pécs to represent cyclists, who at present are in minority • Reaching and stabilizing the goal of making cyclists equal participants of traffic • Developing a unified cycling system in order to improve bicycle tourism • Making the city more known abroad • Strengthening Croatian-Hungarian relations 	<ul style="list-style-type: none"> • Driving culture and drivers' negative attitude toward cyclists would not change or even strengthen • Locals' resistance toward the project, negative publicity • Too aggressive promotion of biking culture creates adverse emotions among locals • Lack of a good biking culture would result in the increase of accidents

Opportunities	Threats
<ul style="list-style-type: none"> • Decreasing the number of biking accidents • Increasing public awareness of cycling as an environmentally-minded way of transportation • Increasing competitiveness of local tourism organizations and businesses • Economic stakeholders in Pécs would form active relations with their foreign counterparts across the border as a result of the project • Decreasing the number of unemployed • Creation of a digital biking map that is accessible via mobile phones • Training of personnel (tour guides), thus enhancing education • Installing hundreds of new bike stands around Pécs • Promotion of activities of different biking-related organizations, clubs through various workshops, trainings, marketing activities • Daily communiting of locals would become easier • Increasing revenues from bicycle tourism • New biking-related establishments would open that would create jobs for locals • The spendings of tourists coming to Pécs would contribute to the increase of the city's revenues from tourism • Promotion of bicycle transport would support efforts to prevent environmental pollution • Promotion of cycling would also promote regular physical exercise playing a great role in preventing diseases • Within town, for shorter journeys biking is often a faster way of transportation than cars or public transport • Crowdedness of the city centre could be eased as bikes take up less space • The lower cost of transport is attractive as cycling offers greater mobility than walking and is cheaper than public transportation or 	<ul style="list-style-type: none"> • Project costs would be higher than planned, creating additional costs for local governments responsible for maintenance • Combining biking routes with pedestrian sidewalks would create conflicts between the two parties • Combining biking routes with main roads would increase conflict between the two parties • No distinctive separation of main roads and biking routes would result in a loss of interest in biking • Building and maintaining biking routes would disturb the fauna and flora • The quality the city air worsens as a result of industrialization and pollution by the public • Human resource development, training of too many people would cause problems in finding employment • Revenues from bicycle tourism are not in line with investments, therefore entrepreneurial spirit of locals is not strengthened • No cooperation or shared, unified goals among biking-related organizations • Increased interest in biking would result in a more expensive public transportation which could be disadvantageous for some (workers, the elderly, expecting mothers), and those who cannot ride a bicycle • Tourists' interest in Pécs will be lower than expected • The planned long term effects of the ECC do not last as long as expected

Opportunities	Threats
driving	

4.3. Bicycle Tourism in the Baranya-triangle

Strengths	Weaknesses
<ul style="list-style-type: none"> • Since Baranya County is located along the borders of Hungary, Croatia and Serbia, it facilitates the development of all economic activities • Geostrategic location of Baranya County offers an opportunity to improve biking routes and bicycle tourism as part of eco-tourism and rural tourism • Accommodation in East-Baranya is sufficient to accept the high number of tourists who cycle along the local bicycle routes • Majority of cycle routes are marked with traffic signs and provide guidance and lead through the Kopacs Wetland National Park • Biking routes are partially paved and unpaved routes lead through areas that are undisturbed by the harms of human activity 	<ul style="list-style-type: none"> • Biking routes in Baranya County are partially paved, but most of them are not. It could cause difficulties for those with weaker biking equipment (thin wheels, bike etc.) • Bicycle routes are marked only along main roads, on unpaved roads cyclists with ordinary abilities can find it hard to navigate • Horizontal signs only exist in Bilje, but they are not properly maintained • There are not enough participants to create a return on the investment in biking infrastructure

Opportunities	Threats
<ul style="list-style-type: none"> • The potential to develop Baranya County's western part that economically and in all other aspects lags behind and is underdeveloped • Increase in guest nights, restaurant and coffee shop revenues • Job opportunities in newly created biking-related services along frequented roads • Financing opportunities for the development of horizontal and vertical traffic signs that 	<ul style="list-style-type: none"> • According to the relevant laws of the Croatian Republic, the surfaces separated from car traffic for bicycle traffic always shares the given roads with motorized vehicles – these roads are only called 'bike routes', in reality they are shared roads. Where there are no resources from foundations to support the building of new "biking roads", significant financial resources are needed.

Opportunities	Threats
guide cyclists and drivers	<ul style="list-style-type: none"> • The lack of maintenance of bicycle routes risks the safety of cyclists • The increase of biking traffic would pose a danger to locals who are not yet used to the new participants of traffic

4.4. Bicycle Tourism at a Project Level

Strengths	Weaknesses
<ul style="list-style-type: none"> • Climate of the areas covered by the project is excellent for bicycling • The excellent geographical conditions of the areas covered by the project are able to meet a variety of biking needs and preferences – there are low elevation routes • The Danube-Drava National Park and the Kopacsi Wetland are close to the area covered by the project • The area has diverse and rich folklore culture which was formed by many different, co-existing ethnic groups • Larger cities in the area have dynamic cultural lives (Pécs National Theatre Festival, Mohács Buso Festival) • Besides the few larger cities, the region has a typically small village settlement structure which is favourable for bicycle tourism • The presence of health tourism in the region (Harkány, Siklós) and its good quality • Numerous historical sites (Pécs, Mohács, Osijek) • Well-developed wine tourism in the region (Villány, Siklós) • The region is easy to reach by car (M6 motorway, M60 highway) or by train • One of the largest universities of Hungary is located in the region, which enrolls numerous foreign students too • The University of Pécs is the largest employer 	<ul style="list-style-type: none"> • Roads in smaller towns and villages are in poor condition, image of settlement are often bad and unattractive for tourists • Some areas are characterized by monocultures which makes the scenery unattractive • Rehabilitation of damaged natural environment is not resolved • Historical sites are often left neglected and in poor condition • Natural and historical values in the area are less known to the public and efforts to promote them are weak • Uneven distribution of accommodation in the region, they are concentrated around larger tourist attractions (Harkány, Siklós, Villány) • Limited number of quality services • No unified touristic offers, existing services are not aligned • Cultural life is poor in small villages and peripheral areas • Language knowledge of service providers and hospitality workers is not acceptable, few of them speak English or German • Lack of self funding of local and regional projects • Development of biking routes is not a priority above other projects

Strengths	Weaknesses
<p>in the region</p> <ul style="list-style-type: none"> • The area involved in the project is located along the border of two countries (Croatia and Hungary) which offers further economic possibilities • The two countries and the two sister cities, Pécs and Osijek have excellent relationships • Numerous cyclist organizations, unions and clubs exist in both countries • Residents' openness and interest toward cycling and related products and services • Cross-border cooperation, joint efforts to reach targets • Many bicycle routes and smaller sideroads are covered by the project • International tour routes covered by the project (Three Rivers, Drava Bike, Eurovelo) • No border control between the two countries after Croatia joined the EU on July 1, 2013 	<ul style="list-style-type: none"> • Majority of existing routes is in poor condition • Condition of low-traffic sideroads suitable for biking is also poor • Unpaved bicycle routes are frequent • Combined travel options are limited • Villages are often difficult to reach • Maintenance of biking routes is not resolved • Local efforts are often isolated and do not form a regional goal • Lack of trained tour guides, their training is not solved • Bike route signs are often not appropriate, neither by quantity nor by quality • Drivers' prejudice towards cyclists • Bad relationship between motorists and cyclists • Poor cooperation among organizations responsible for bicycle route developments • Lack of a common image and marketing structure • No Regional Bicycle Concept which could serve as guidance for future biking developments
Opportunities	Threats
<ul style="list-style-type: none"> • Cooperation between neighbouring countries would strengthen • Increasing international interest toward areas outside Budapest and the Croatian coastline • Building new biking routes could act as catalyst of further developments • Importance of settlements, small villages along bike routes increases, hitherto unknown areas can become known nationwide • Number of local residents can increase as well as their revenues • Building bike routes can also increase touristic value of the region 	<ul style="list-style-type: none"> • Instead of cooperation, competition would increase among neighbouring countries, regions, and cross-border areas • Foreign tourists' interest will not turn towards the region, there are very few attractions that would attract masses of visitors • After building the bicycle route, the expected developments will not take place • Deepening economical and social problems in villages and underdeveloped areas • Actual guest numbers and the resulting revenues fall short from planned

Strengths	Weaknesses
<ul style="list-style-type: none"> • Decrease in unemployment rates in the area • Accessibility of the region improves which can facilitate further infrastructural developments • Biking routes would link together three countries and would contribute to the creation of a “cycling Euroregion” • Further increasing the popularity of cycling and therefore promoting a healthier lifestyle and environmental protection and awareness among residents • Changing residents’ car-centered thinking • Improving the standard of bicycle tourism, increasing guest nights and revenues, decreasing seasonality, creating jobs, involving businesses and local governments • Sustainable tourism development • Bicycle tourism as country-level source of revenue • Increasing demand for quality cycling products and services which would support existing businesses and help create new ones • Training of necessary personnel to manage bicycle tourism • Making bicycle transportation safer • Creation of a functioning service sector and information system • Creating organizations that represent the interests of cyclists currently in minority in Hungary as well as in Croatia • Cyclists become equal participants of traffic • Supporting the cause of environmental protection via promotion of cycling • Promoting regular exercise as a means of preventing diseases through facilitating bicycle transportation • Creation of Cyclist Community Centers • Involvement of schools • Involvement of celebrities – athletes, artists 	<p>figures</p> <ul style="list-style-type: none"> • Long lasting effects of the economic crisis • Unemployment levels would not decrease • Residents do not realize the opportunities in developing bike routes and therefore do not take advantage of them • The maintainers of bicycle routes lack funds for maintenance and development • Locals’ resistance toward the project, bad public opinion • Too aggressive promotion of biking culture creates adverse emotions among locals • Increasing motorization in Europe • Car as a status symbol in Europe • Drivers’ negative attitude toward cyclists would not change • Revenues from bicycle tourism are not in line with investments, therefore entrepreneurial spirit of locals is not strengthened • No cooperation, no shared goals among cycling-related organizations • No unified image or strategy is created for further development • Interest toward healthier lifestyles decreases • Agricultural machinery damages existing biking routes

5. Strategies

Development of bicycle tourism in the areas covered by the project, based on the identified strengths and opportunities, threats and weaknesses

The areas covered by the project have conditions that are preferable for bicycle tourism. The initiative that includes Hungary and Croatia is predominantly built on the region's cultural and natural potential. The area has diverse geographical conditions which is suitable for a range of cyclists as its flat areas or slight rises can serve leisure, pastime cyclists and serious performance cyclists will enjoy the more challenging hilly, mountainous areas.

Environmental features are also diverse. There are many protected areas (Zselic Natural Preserve Area, East-Mecsek Natural Preserve Area) where cyclists can ride across when they select the southern Hungarian and northern Croatian regions as destination for their trip. The most beautiful protected areas of the Mecsek can be found here, the Danube-Drava National Park and the Kopacsi Wetland in Croatia, where biodiversity is still very high. **Taking advantage of the diverse geography is definitely worth it and also to direct and build future bike routes towards the natural values of this area.**

Cycling in nature is a suitable activity for all ages with lots of health benefits and it is also one of the best alternatives of a daily exercise that can be carried out in the framework healthy lifestyle.

Larger cities like Pécs or Osijek have a lively and high-standard cultural life with several attractions to see and activities to do. **The two cities have been sister towns for a long time in terms of cultural and economical cooperation. Connecting the two cities with a bicycle route would enhance this relationship and would make it easier for visitors of both cities to commute between the two locations.**

Pécs was Cultural Capital of Europe in 2010. The number of visitors, not only from Hungary and Europe, but from all over the world was much higher in that year. The effects of that can still be felt in the city and in other parts of the region. However, the city had been home to many national and international events prior to the ECC year, which has not changed since 2010. For example, the National Theatre Festival takes place in Pécs every year where several foreign theatre groups (mostly Hungarian-speaking) participate.

The international folklore festival and choir festival have taken place in the city several times. Other towns of the region also organize events every year that are known at a national, European or worldwide level. A good example is Orfű, where one of recent years' most popular pop music festival takes place, or Mohács whose traditional Buso-walking (or Whacking Day) is part of the world's cultural heritage. **Connecting the different departments of tourism is essential as their synergy has a deeper impact than any of them in itself. Cultural attractions of Osijek and Pécs bring many tourists into the region. Bicycle tourism would be a nice addition to the existing cultural programs. It would be worthwhile to promote this by offering discounts (e.g. price discounts on concerts and festivals for those arriving by bicycle).**

A well-developed health tourism is also present in the region. Harkány and Siklós are located near the border in Baranya County. The spa in Harkány is nationally and internationally famous for its thermal water that has excellent health benefits due to its high concentration of sulfur. **Cycling pairs well with health tourism. With a more effective marketing campaign it would be possible to link the two branches of tourism. The target customer group needs to be identified as well as means to market for them effectively and an infrastructure that enables its development should be formed.**

A large number of built heritage sites from several different historical ages can be found in the area of both Croatia and Hungary. Outstanding numbers of memorablias and heritage from past ages can be found in historically significant cities like Pécs and Osijek. In Pécs, one can find the early Christian necropolis, a Turkish mosque and minaret, to a neo-romanesque cathedral all spanning through different ages and building styles in history. Historical sites can be found in smaller towns like the castle in Siklós and Szigetvár. **With the building of bike stands, resting areas, drinking-water fountains near the sites, and bicycle routes connecting the different attractions, as well as special offers for those arriving on bicycles would most likely attract more bicycle tourists to these historical attraction.**

Wine tourism plays an important role in the touristic offers of both countries. In the part of the area belonging to Hungary, wines from Pécs and from the Villany wine region are widely known. The Villány Wine Road, which attracts many tourists already, was created as a result of the cooperation among wine-makers of Villany and the Villany Vineyards. In Croatia, well-preserved wine cellars can be found carved in the loess wall around the Banska Kosa region, where the vineyards of Szlavón and Erdőd provide a spectacular view. **Connecting the wine regions by bicycle routes would further promote the current popularity of these regions. It would be worth to develop cheap guest houses where bicycle tourist could stay overnight for a reasonable price and where they would be able to store their bikes safely in a covered, locked area and where basic repairs and cleaning could be performed as well.**

The University of Pecs has one of the largest student population among Hungary’s higher education institutions. Students here more and more often opt for bicycles as a cheap and fast alternative of transportation, which at the same time is not harmful for the environment.

*Table 1: Number of Students and Number of Foreign Students at the University of Pecs
(Source: Hungarian Central Statistical Office)*

Year	Total Number of Students (person)	Number of Foreign Students (person)
2012	24 154	1 843

Among the university’s students there are many from abroad (8%) who study in Hungary with different scholarships. Western countries often have a more developed biking culture so students arriving from these nations often prefer cycling.

Cycling-related civil organizations exist in both countries. The activities of these organizations include protecting the interests of cyclists, conducting studies and surveys necessary to build new biking infrastructure, and environmental education. In many cases, they organize events on a weekly basis. There is no place in Pécs or in the surrounding areas where cyclists could meet, socialize, share experiences, or where they would be able to come up with and share ideas or simply just fix their bikes, organize events, or watch bike races together. **Such Cyclist Community Centers would offer great opportunities for cyclist to meet, have workshop activities and share creative ideas. Besides that it would create a sphere for people sharing the same interests, it would also allow for creative cycling events, campaigns and and cyclist brainstormings.**

Around larger cities, it is increasingly normal to have a smaller settlement structure. Small towns with low populations are located close to each other. It offers great opportunities for the development of rural tourism. Bicycle tourism could also help small villages that are increasingly suffer from depopulation, to retain and attract population. The increasing demand could boost the development of existing services, and could help new developments. As a result of this, new jobs would be created, settlements could grow in population and residents' income would rise, and eventually employment rates would improve as well. **Involving masses into cycling would be worthwhile. If there is a large mass, service providers will appear more easily as well along a given cycling route. Using marketing tools to increase people's awareness of the advantages and positive effects of cycling and other opportunities in the region would be important. If the number of cyclists rises, it is more likely to have more service providers as well (snack bars, repair shops, guest houses, etc.) along biking routes.**

Visitors often choose cycling as a means of transportation in and between towns. The EuroVelo international bike route crosses the region at several points, offering a great opportunity to boost international tourism. Developments between the two countries can help the creation of a "cycling Euroregion". The most often cited criticism towards the region's biking routes is that they are scattered, not linked together and do not create a network. As a result of individual tenders, settlements build bicycle routes separately (e.g. Villány-Nagyharsány; Harkány-Siklós; Bóly-Villány) but their integration into a larger system is not or just partially resolved in the region. **Developing a regional Bicycle Concept would greatly contribute to the conceptualized extension of existing biking routes, instead of the present scattered system. Involving cyclist organizations into the planning process would be essential, given that they are the active users of these routes, they know other consumers and cyclist communities.**

The region is very easily accessible. Thanks to the M6 motorway and the M60 highway, Pécs, the region's center, which is a good starting point for longer biking trips, is only a few hours' drive from Budapest.

Since the region spans across two countries, it offers an excellent opportunity to develop existing cooperation and to build new economic and social relations. **Further economic cooperation between the two countries still has many possibilities. Cooperation between the countries would have a deep impact on the civil sector as well.**

In the areas covered by the project there are already existing biking routes and low-traffic sideroads which could serve as a good base for the creation of a continuous and extensive biking route system.

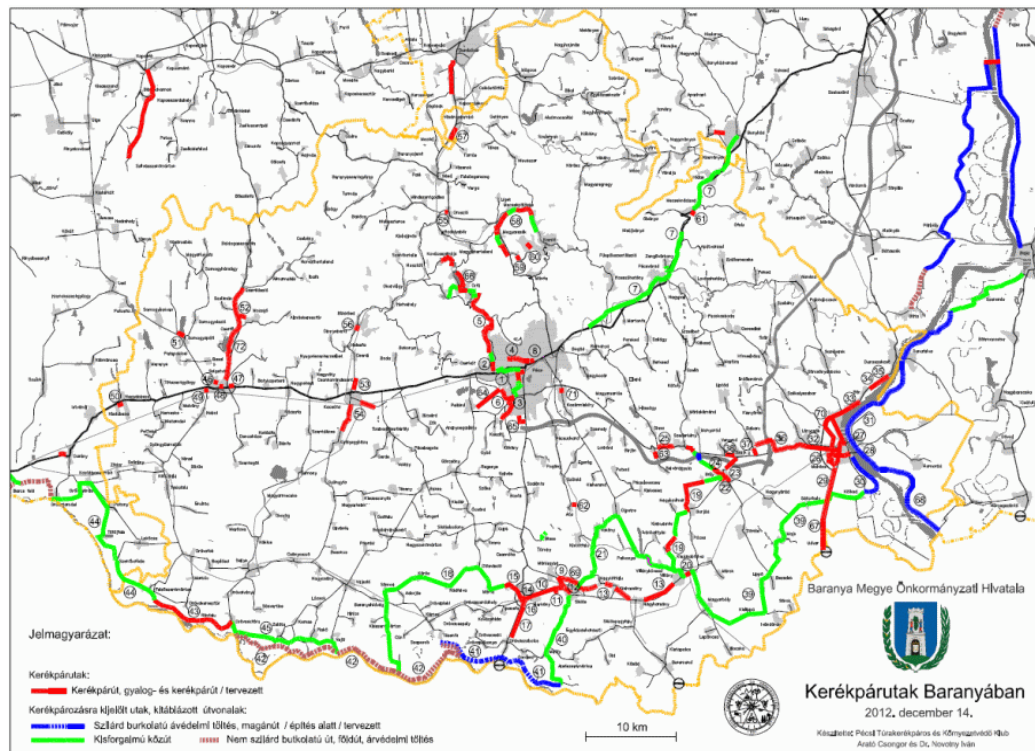


Figure 24: Bike Routes in Baranya County

Croatia's joining the EU on July 1st, 2013 greatly facilitates the development of international bicycle tourism as border control between the two countries have effectively become non-existent. As a result of this, cyclists can easily cross over from one country to the other, although the number of crossing points is limited.

The excellent relations between Croatia and Hungary could be strengthened further as a result of the project. Additionally, the project can be an accelerator of further international economic and civil cooperation. With respect to the fact that the border between Hungary and Croatia becomes non-existent (Schengen Treaty), international tourism is expected to increase, strengthening economic and touristic relations, and more tourists are expected to travel between the two countries. **To take advantage of this, it is advisable to increase cultural cooperation, the creation of international events, festivals and offering more touristic products, programs, and alternatives.**

In Hungary, main tourist destinations are the capital, the northern parts of the country, the Plains and the Balaton area. In Croatia, most tourists target the coast. Since the region is away from both countries' "main attractions", developing and expanding the areas linked to international bike routes would make it more well-known and would increase its utilization as a tourist destination. **In order to get ahead and develop, it is important to enhance the touristic attractiveness of the region with**

different marketing tools. Currently, the Balaton, Lake Fertő and Lake Tisza are publicly considered to be the main destinations for bicycle tourism, but an international biking route which partially follows the River Drava would be an exclusive and unique offer on the market.

The region has many towns with low populations where the number of residents continues to decline, mostly due to lack of employment opportunities and bad infrastructure. **As a result of the expansion and development of biking routes, new jobs would be created on the basis of the services related to bicycle tourism, and thus the migration of residents forced by circumstances could stop. The development of biking routes would potentially be an accelerator for other projects and isolated towns could join the circulation of the area.** Additionally, revenues of residents as well as towns would increase which would enable local governments to conduct further investments. In the near future, businesses would have more opportunities to access funding through tenders. **Invitations for tenders will include some especially aimed at county and district levels. If (bicycle) tourism-related businesses could develop as a result of the extra funding, then it would create jobs for locals and would benefit bicycle and pedestrian tourists alike. Therefore in the future tenders should be compiled in a way to allow bicycle service providers or potential service providers to access European Union funding.**

The developments contribute greatly to the popularization of cycling. Cycling is a way of transportation that means no harm to the environment. An increase in the number of cyclists would support environmental protection efforts. Additionally, among the main goals of cyclist organizations are increasing awareness and actively protecting the environment. Most such organizations regularly organize events for children and adults alike where youngsters and their parents are shown the advantages of environmental awareness and its positive effects on the environment.

Cycling as a means of transportation is only at its early stages in Hungary so for this very reason, it is essential that cycling becomes natural for the next generation and a change of attitude should take place. **The idea should be included in the school curriculum both in theoretical and practical form. Transportations safety campaigns organised for schoolchildren would also help to form this new mindset. Currently the image of cycling is not acceptable, especially among younger people. By involving local musicians, athletes, celebrities, this image could be improved, for instance, through the “I cycle too!” campaign.**



Figure 25: Popular TV personality, Attila Till from channel TV2 at a “Zöld Mozgalom” (Green movement) event

(Source: http://www.nlcafe.hu/sztarok/20070507/a_quotzold_sztarquot_-_till_attila_lett/)

More emphasis should be given to involving schools and youth. Children like being active and riding their bikes. **Schoolchildren could get involved via cycling competitions and trips, while high school students and college students could be motivated at events, and through involving actors, musicians, singers, and athletes – popular with their age group.** As of now, cycling is considered an activity that is reserved for the weekends and with family. This should be changed and cycling should be promoted among young people, making bicycle transportation more of a new trend, that is, more popular. Nowadays younger generations can most effectively be reached online – by promotion through apps, online videos, on sharing websites and social sites could make an impact on this age group. The Kresz Park in Pécs would be an excellent location for contests, which would also ensure better utilization of this location.



26: Organized event at KRESZ Park in Pecs (Source: Facebook page of Drótszamár Kerékpáros Kresz-park)

Cycling does not only have positive effects on the environment. Nowadays we hear more often about the importance of regular exercise. For a well-functioning body, physical activity is essential which can help prevent heart- and circulatory diseases. Thus cycling is not only the most environmentally-friendly activity, but the healthiest way of transport as well. By involving schools and promoting healthy lifestyle, we could improve public and children's awareness of the positive physiological effects of cycling. **At locations frequented by young people, those arriving on bikes could be rewarded – e.g. concerts, festivals. The involvement PE teachers/coaches is recommended, since, considering all of the school subjects, they are the most closely linked to cycling and they are the ones who organize cycling trips for schools. With their help, youth could be influenced and their activity could help the students get involved get involved.**

. Nyilván nem ez miatt indulnak el emberek Pécsváradra, kerékpártúrára, de segít azon, hogy az odaérezők jó élménnyel távozzanak és a jövőben ebből a gesztusból még profitálhat is az étterem, hiszen viszik a hely jó hírét.

In areas covered by the project is characterised by small villages, where the typical village has a population of not more than 100. Generally these small settlements have poor infrastructure. Streets and main roads often are in bad condition and are not suitable for motorists or cyclists either. Besides, the image of these villages is also run-down and unattractive for tourists. They lack quality guest houses, restaurants, grocery shops, not to mention healthcare facilities – in villages 24-hour continuous GP services and care often are non-existent. Cultural life is completely missing, the existing community and cultural centers are neglected. Existing historical and natural heritage is often unknown even for Hungarians; efforts to promote them often are weak, they miss the necessary human and financial resources. Historical sites are often neglected, are in bad condition which is also a result of lack of funding and of visitors. Residents are often reserved, not open to visitors, their skills and language knowledge are not advanced enough to provide tourists with information and to create high-quality guest facilities. Unemployment rates are high, so is the resulting migration, mostly among young people who are forced to leave their birthplaces and move

to seek out opportunities in nearby larger towns. **Cleaning up and improving historical sites along bicycle routes would be important as cyclists are more likely to venture out to these areas if they have real destinations, attractions to see. Village cafés, bars and restaurants could offer special deals for visitors – not significant but still meaningful discounts, for example.** A good example is the castle restaurant in Pécsvarad where cyclist groups are offered complimentary refreshment at Pentecost. This, in itself, will obviously not attract cyclists and tourist groups but contributes to the overall positive experience of tourists who can spread the word about the establishment, thus the restaurant also benefits from it.

There are many problems in the areas covered by the project, eliminating and reducing them is a complex and long process which could be facilitated by the construction of biking routes. Boosting bicycle tourism could help create guest facilities which would result in a more open local community, as the residents could experience the favourable effects of the increased tourism. Migration would disappear or decrease as the creation or improvement of cycling-related services would create jobs and new businesses would employ at least some of the local residents. Natural and historical sites would become more known and therefore their condition would improve as well, as there would be available funds for modernisation and development. Developing and improving tourism in villages is an essential precondition of the development of bicycle tourism since cycling is closely linked to a nomadic, rural lifestyle which is more prevalent in tiny, remote villages than in larger cities. Newly opening accommodation, pensions, would improve the unequal distribution of such establishments in the area as currently good-quality accommodation are mostly located in larger towns, at highlighted tourist destinations (e.g. Pécs, Osijek, Siklós, Villány). **Accommodation facilities should meet the needs of cyclists. Cyclists do not look for expensive, exclusive hotels, but prefer simple, cheap locations where they can fix, store, and clean their bikes if needed.**

The country lifestyle is typical in the areas covered by the project which is one of the main attractions, however the large number of fields in agricultural cultivation has a negative effect on the beauty of the scenery and diversity. In this part of Hungary, one of the main sources of income is agriculture, therefore there are many crop fields around the area. As it is shown in the table (*Table 1*), the Southern Transdanubia region has the third largest proportion of agricultural areas in the country compared to its entire area, and its only exceeded by the two traditional counties in the Great Plain. Currently the cultivated areas naturally blend into the surrounding landscape, but future expansion of such activities could negatively affect the scenery, making it boring and unanimous, as their diversity would disappear with the loss of forests and pastures. **Agricultural machinery represents a threat as they can potentially damage existing bike routes. They are driven out to paved roads, breaking and shattering them; they also create such ruts in country roads that make them hard or impossible to cycle on. It is recommended to plan and design future bike routes in a way that they do not intersect or go along agricultural areas. A negative example is the Bóly-Villány bicycle route where machinery has already damaged the road in several cases; on the other hand, good example is the route between Kisbudmér and Kisjakabfalva that takes the cyclist along a forest strip and therefore is exposed to less threat.**

It is essential to maintain resting areas that provide shades under trees, washing facilities and drinking water for cyclists. Cycling is more and more popular among families as well who often arrive with small children – for them it is very important to find a resting area during hot summer days. Ideally, cycling routes would be surrounded by trees and forested areas. Maintaining a diverse landscape, forests therefore is important, and the further expansion of the areas under agricultural cultivation should be limited. **To make cycling more attractive, drinking water fountains, resting areas and repair shops located in settlements need to be built after certain distances.** In lack of appropriate infrastructure it is more difficult to motivate people to take cycling trips.

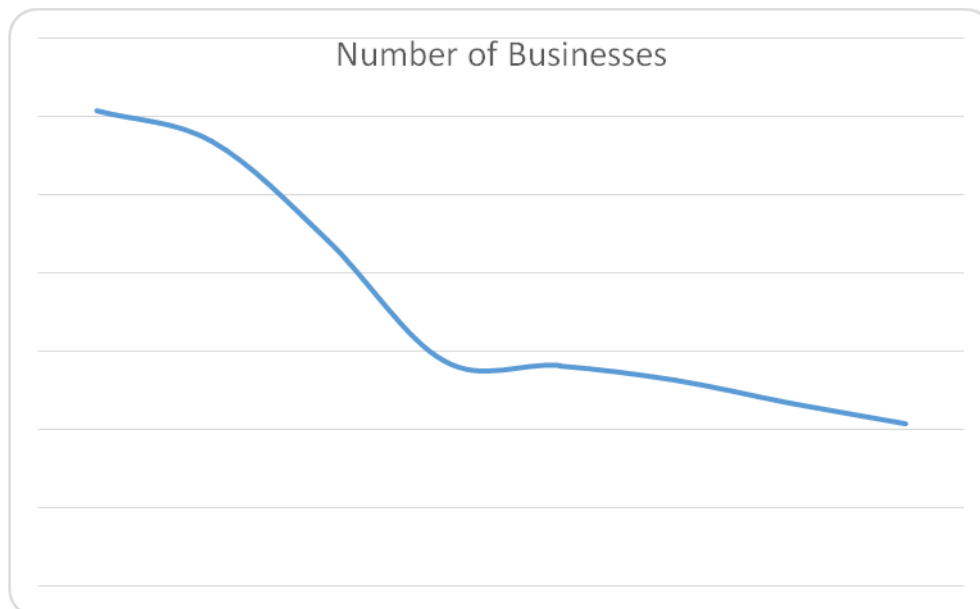
*Table 2: The proportion of areas involved in agricultural cultivation in Hungarian regions
(Source: Hungarian Central Statistical Office)*

Region	Area (hectare)	Crop fields (hectare)	Percentage (%)
Central Hungary	691,900	291,100	42
Central Transdanubia	1,123,700	491,400	44
Western Transdanubia	1,120,900	485,600	43
Southern Transdanubia	1,416,900	689,600	49
Northern Hungary	1,34,800	460,000	34
Northern Great Plain	1,774,900	909,800	51
Southern Great Plain	1,833,900	996,000	54

Local and regional developments often lack self funding which is a result of the worldwide economic crisis. Many local businesses, that had been successful prior to 2008, went bankrupt due to financial hardships or are now in such severe financial situation that merely the covering of their own business expenses has become a challenge and therefore do not have the means and opportunities to afford supporting local development. The construction of the bike route would improve this process as well since many of the local businesses are involved in tourism or related services which could be boosted by the increased number of tourists visiting the region. It is a generating process as the increasing number of incoming guests, and part of the increasing amounts they spend would appear as revenues for local businesses as well. Increasing revenues would show entrepreneurs further opportunities who would be more willing to reinvest some of their revenues into development projects which would result in additional revenues.

Supporting local entrepreneurial spirit through training and lectures, showing them the opportunities that development offers, especially the services that are beneficial for bicycle tourists, should be a priority.

Figure 3 below shows the decrease in the number of local businesses which plummeted at the time of the financial crisis and has been an ongoing trend since. Developing bicycle tourism could help to halt this process as it could increase the number of local businesses and strengthen existing ones.



*Figure 27.: Number of Operating Businesses in the South-Transdanubia Region
(Source: Hungarian Central Statistical Office)*

Besides accommodation and catering facilities, the availability of other quality services is extremely limited in the area. Wine tourism in Villány, the Thermal Spa in Harkány, and the Buso festival in Mohács are excellent, although the latter only lasts for a week each year. In addition, the role of Pécs as a cultural hub is outstanding. **The other problem is the lack of a unified ‘touristic package’ as existing services are often not aligned. Developing bicycle tourism definitely necessitates the development of rural tourism, however, besides existing and popular attractions, the less well-known values should be taken into consideration during the planning of new routes.**

Among the participants of bicycle tourism, there are many sub-groups, each with specific needs. People with families and small children are more likely to seek out leisure activities that are attractive for children, for example visiting nearby castles, zoos, and, in case of good weather, pools, and spas. **Bicycle tourism is becoming increasingly popular among young people – for them a separate ‘tourist package’ would be necessary, which would include adventure parks, wine tours, and possibly opportunities for extreme sports. Young people can be easily motivated by activities that interest them. Bicycle shows and the finish sections of bicycle races could be organized in downtowns.**



Figure 28: Mountain Bike Show in Downtown Bristol

Another obstacle of creating unified offers is the fact that local efforts are often isolated from one another, they do not combine into a regional attempts, and there is no coordination and appropriate cooperation. The creation thereof would be crucial for the development of bicycle tourism. **Creating a unified image would also be important as well as developing a unified strategical approach.** Common marketing, joint investments, projects would contribute greatly to developments in the region. To achieve this, appropriate human resources are essential as well who would be able to coordinate these processes and delegate tasks among civil organizations, local businesses and governments. **A unified Cycling Concept, developed through the involvement of local experts, associations, and cyclist communities, would ensure the synchronized and planning and implementation of regional biking routes.**

The training of human resources is important for other reasons as well, since besides coordination, bicycle tourism includes various organized biking tours. Bicycle tour routes have already been created and include diverse opportunities (Castle Tour, Three Rivers Tour, Wine Tour), but they lack appropriate guides. **The organisation and management of good and enjoyable cycling trips need trained tour guides,** therefore their training requires special attention, the creation of appropriate training structure while avoiding a negative situation caused by oversupply. Sadly, it can be said that very few people take advantage of organized bicycle trips, so besides training, it is of key importance to increase public awareness of existing trips, making information and opportunities concerning cycling available to the public.

Combined methods of transportation are limited in the region, therefore the transportation of bikes is very difficult for those who do not plan to approach biking routes by car. **Railway carriages, often do not include sections suitable for the transportation of bikes, while buses do not offer this option at all.** Improving this situation is essential since cycling is mostly popular among young people, who do not own vehicles but travel by public transport. Larger cities are appropriately accessible but small villages can be very difficult to approach.

Together with this, **the lack of storage options is a serious problem as well.** In downtown Pécs, there are public bike stands at several points, however in the outskirts of town as well as in smaller villages these are virtually non-existent. Therefore cyclists often have to resort to locking their bikes to garbage containers, traffic light poles, roadside trees, which is not safe, can be harmful for the bikes themselves and can disturb pedestrian traffic. **An excellent solution to the problem can be the 300 bikes stands to be purchased in Pécs within the framework of the project, that will make it easier for cyclists to store their cycles near busy public squares, institutions, and tourist attractions.**



Figure 29: Bike Racks in Budapest near the Western Train Station

The above listed obstacles make the development of bicycle tourism in the region involved in the project difficult, although some problems can be turned into positive factors and carry the possibility of development as well. The construction of bicycle routes is a great initiative in itself, as it will make commutation easier for locals and can create a new source of revenue that positively affects economy as a whole.

The development of bicycle routes in the region does not receive priority since conditions of healthcare and educational facilities are poor and their development is more urgent than building bicycle routes. The other, closely linked problem is that the maintenance of existing routes is often

not resolved as local and county governments do not have the necessary funds to include them in their budget, therefore building new routes is pointless if their maintenance is not catered for, their condition will start to decline. Tour organizers and cyclist activists experience that cyclists and tourists prefer not to use dirt roads and sideroads. Dirt roads are only useable in nice weather and if they are not damaged by agricultural machinery, while main roads can be dangerous due to car traffic.

Különböző kampányokkal elő lehetne segíteni a kerékpározás biztonságának növelését.

In the area covered by the project, the largest problem is the lack of bike routes – in Pécs there is a total of 20km bike route, the majority of which is shared with pedestrians along sidewalks and with cars along main roads. This can be a source of many conflicts and accidents. Sadly, drivers of neither Hungary nor Croatia have the appropriate attitude towards cyclists, who are not considered equal partners in traffic. Several accidents could be prevented if drivers were more careful and accustomed to the presence of cyclists on the roads. In most countries in Western Europe, cyclists are considered equal participants in traffic and therefore the number of accidents is much lower. Joint sidewalks and bike routes are good solutions but again, people’s attitudes are a source of many conflicts and accidents. **Various campaigns could facilitate the improvement of the safety of cycling.**



Figure 30: Examples of Biking Campaigns Abroad

It would be important to ease conflict among cyclists, pedestrians, motorists, and bus drivers. In addition to the above mentioned campaigns, a way to achieve this would be to organize forums where the representatives of the affected parties can share their views and present their positions. The workshop series, which is going to be realized in the framework of the project, will be an example

of such forums to which all parties involved in cycling will be invited for a discussion. A series of articles published in local newspapers could be another means, which would introduce the different standpoints, interests, and views of all parties.

Existing cycling routes are often in poor condition and they do not create a continuous system, which makes transportation and traffic even more difficult as many people choose not to set off on a journey if they have to cycle along main roads on certain sections of the route, since they consider these unsafe and unhealthy. The condition of sideroads that would be suitable for cycling is also poor; routes without asphalt surface are also frequent which again raise the question of health due to dustiness that cyclists can potentially breathe in.

An additional problem is that biking routes leading out of town are not solved. The only way to leave the city is to the north, towards Orfű, however the quality of the road needs improvement. The planning and construction of a route towards the south would fill a gap. The preparation of plans is part of the present project, which is a first step towards the creation of a southern exit route. Long term plans include a bicycle route between Pécs and Harkány for which the trace of the old – no longer operating - Pécs-Harkány railway line could be a guide. Obviously, these investments require the acquisition of the necessary funding sources.



Figure 31: Routes recommended for cyclists in and around Pécs
(Source: Official Website of Pécs Túra-kerékpáros és Környezetvédő Klub)

In the areas covered by the project, road marks and signs are unsatisfactory at several points, both in quality and quantity, and foreign language marks and signs are virtually non-existent. To improve this, a joint, coordinated, multi-lingual system with Croatia should be developed which would include

regular check-up and maintenance of existing signs and the continuous replacement of damaged ones.

Therefore, improvements should be divided into phases. Focusing on building new routes and renovating existing ones is not sufficient; **unified and joined touristic offers with Croatia should be created, roadside attractions should be promoted through a common image and marketing and quality accommodation and bicycle services should be offered.** It is a complex development, in addition to the infrastructure, the training of personnel capable of performing the tasks is also important as well as the open-mindedness and entrepreneurial activity of locals to facilitate further improvements.

One of the main threats of the development of bicycle tourism is the potentially emerging competition, instead of the existing cooperation, among the regions across the border. Avoiding this is extremely important as Croatia should be regarded as a partner and not a competitor; the goals are shared, the expected economic effects and revenue growth and thus the economic development on the basis of this hitherto not significant branch of tourism is in the interest of both countries. **Therefore it is fundamental that the shared goals are realized through a common strategy and that communication is continuous between the two nations.** A compromise should be reached in each debated question, as we cannot afford to consider only our own opinion. It would threaten the achievement of positive outcomes of the project and the established good relationship with Croatia as well. Successful cooperation could be the foundation of future joint cross-border projects.

The goals of the project include the aim to capture the attention of tourists home and abroad alike, therefore the failure to achieve this would mean a significant threat. Marketing plays a fundamental role in this as the involved regions are not among the main destinations for foreign tourists in Hungary or Croatia. Conditions should be improved so that the region can compete with coastal and lakeside areas as well as with the Hungarian capital, Budapest. The figure below (*Figure 5*) shows that Pécs and Harkány can compete with the capital in terms of tourist nights spent in the region by Hungarian tourists, but it is not so in case of foreign visitors.

It is positive, however, that tourists from Western Europe are much more used to cycling than Hungarians and for them it is a preferred way of transportation. **However, cycling is not sufficient in itself, its attractiveness should be increased and the creation of unified touristic packages are necessary, that could be aligned with this pastime.**

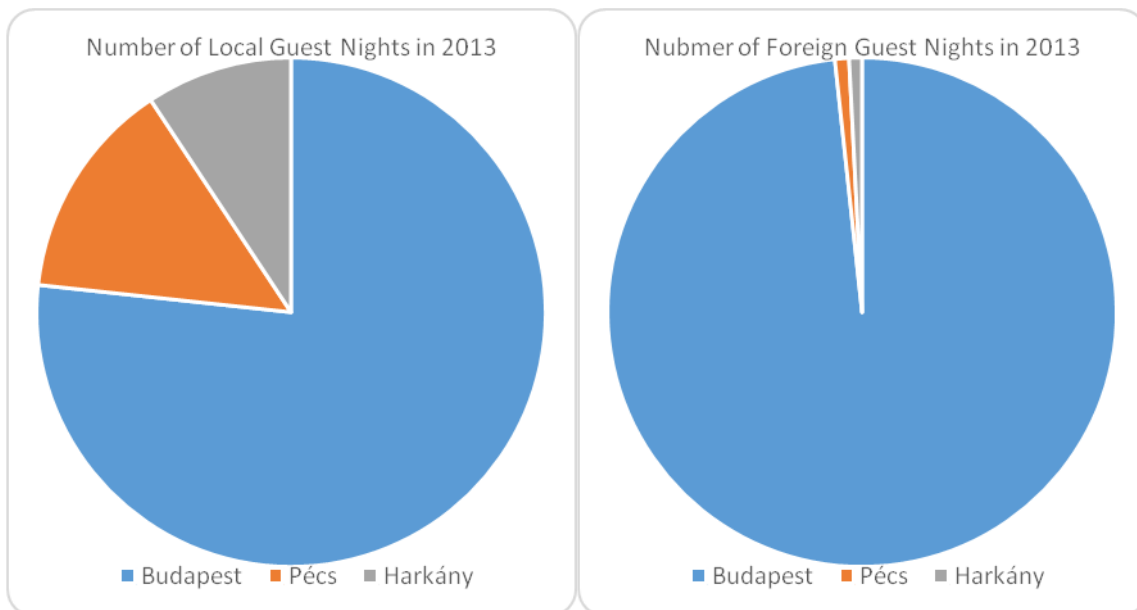


Figure 32. Number of Local and Foreign Guest Nights spent at commercial accommodation in 2013
(Source: Hungarian Central Statistical Office)

It is feared that after construction of a bicycle route system, the expected developments and economic improvements do not take place. This would result in the further decline of already underdeveloped areas and deepening of economic and social problems, instead of bringing about their improvement. The long-lasting effects of the global economic crisis is also a threat which would adversely affect the efforts to lower unemployment and increase the number of visitors and tourists and therefore the increase of revenues would stay below expectations.

An additional threat could be the increasing motorization in Europe which would strengthen cars as status symbols in Hungary. Figure 13 shows that from 2000 the number of vehicles in Hungary had been on the rise until the crisis and has decreased slightly since. Due to rising fuel prices, however, many people look for alternative, cheaper ways to commute to work. **Therefore bicycle routes, even within larger cities, and the standard of the related services should definitely be developed and sufficient number of storage options should be ensured.** Improving public safety within cities is also a priority as the number of thefts is high and it can adversely affect people's willingness to cycle. **Another financial fact that supports the idea of cycling is that the initial investment and cost of maintenance for a bicycle – even without considering the costs of fuel – is only a fraction of that of a car.**

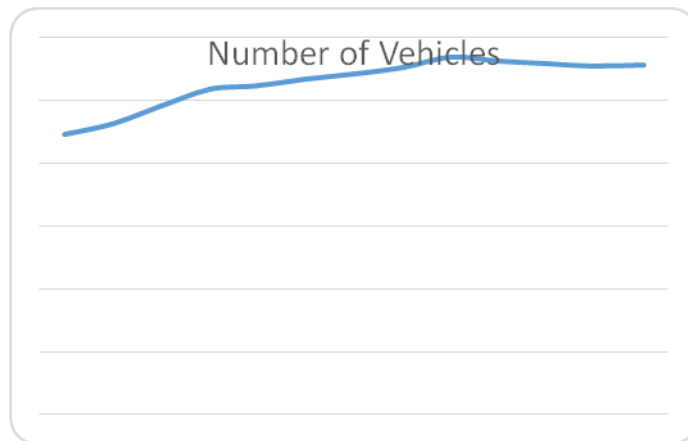


Figure 33: Number of road vehicles in the Southern Transdanubia Region
(Source: Hungarian Central Statistical Office)

Revenues from cycling tourism are often not in line with the scale of investments which does not help to increase locals' willingness for investments. This process could be turned around by presenting potential long term goals results, which would require a strategy developed through thorough research. Communicating these strategies to local entrepreneurs is also a serious task and requires appropriate expertise, and in the course of the presentation, long-term claims should be emphasized and entrepreneurs' expectations should be taken into consideration.

A potential threat is that there no unified image or shared strategy would be created to support further development, and therefore the expected economic growth would not take place or fall short from plans, as if tourists fail to come either from home or abroad, then all the implemented developments have been useless. To avoid this, skilled experts should coordinate all processes and delegate tasks among participants and ensure that goals are acceptable to both parties. **It is important that cycling-related civil organizations and associations cooperate as well, that they have shared goals and work together effectively to achieve success.**

Interest in healthy lifestyle is increasing in Hungary too and more and more people start to adapt this attitude, however it is feared that this trend will die out and interest towards cycling could decline too. Cycling means an excellent alternative for daily exercise as it can be a means of transportation, especially in-town, but it can be a popular leisure activity too which requires a one-time investment and is cheaper to maintain. It provides more freedom than walking and is faster, which is an important aspect of people's lives in today's sped-up world.

The resistance of residents can evolve towards the project if a negative public image is created due to the overly „aggressive” promotion of cyclist culture. This can mean a serious threat because if locals do not feel they own the project and its goals, then they will not support it either. If visiting tourists are not welcome, it will create a negative atmosphere which will eventually keep tourists away and therefore they will not spread the word about these destination and the process will not bring in the expected economic results. A marketing strategy that is supported and embraced by locals needs to be developed, and good communication of future plans is essential as well so the

expected results of investments, which will not only affect tourism but indirectly all other areas of economy in the region, become visible.

Changing the public's attitude is important because if residents of affected settlements do not recognize the opportunities offered by biking routes, then they will not be able to take advantage of them either. This poses a serious threat, which, however can be avoided by appropriately informing the public and boosting entrepreneurial spirit of locals.

To sum up the weaknesses and threats, it is clear that there is an appropriate solution for all the problems but cooperation, the creation of common goals and unified strategies are important as well as the participation of experts in the management of the project. Cycling is a very popular free-time activity, therefore its development is very important and offers tremendous opportunities.

The following steps and developments need to be carried out in the areas covered by the project:

- Linking existing biking routes together to form a system
- Constructing and developing cycling routes towards tourist destinations
- Linking together the different branches of tourism
- Special offers for cyclists
- Creating a synchronized tourism marketing
- Additional infrastructure developments
 - Biking routes
 - Resting areas
 - Drinking-water supplies
 - Cyclist-friendly accommodation
 - Repair stations
- Creating Cyclist Community Centers
- Improving the image of cycling
- Making cycling an activity for the masses
- Developing a Regional Cycling Concept
- Getting cyclist communities, civil organizations involved
- Developing joint Croatian-Hungarian touristic offers
- Taking advantage of natural and cultural heritage
- Making tenders available for bicycle tourism service providers
- Getting schools involved
 - PE teachers/coaches
 - camps
 - events
 - class trips
 - competitions
- Organizing campaigns
- Involving celebrities (e.g. 'I cycle too')
- Cleaning up historical sites and attractions alongside bike routes

- Increasing public awareness of existing bike routes
- Creating accommodations that meet the needs of cyclists
- Careful planning of future biking routes (considering safety, threats, agricultural areas, where machinery could damage biking routes)
- Improving and increasing entrepreneurial spirit in towns along biking routes
- Creating unified, complex touristic offers
- Involving youth with events, bicycle shows, bike races with finish lines in city centres
- Training tour guides
- Improving bicycle storage facilities
- Easing the tension between drivers, pedestrians, and cyclists through campaigns, forums, and active discussions
- Developing biking routes leading outside of town
- Involving biking communities, civil organizations

6. Summary

Hungary offers favourable conditions for the development of bicycle tourism, although despite the many positive values, possibilities of bicycle tourism have not been, or have not been fully recognized yet.

The European Union places special emphasis on supporting the spreading of bicycle transportation and for many reasons. Ideally cycling protects our physical and mental health, does not pollute the environment, decreases our dependency on motorized transportation, fills towns with life, and links settlements in the countryside. Today, bicycles are not only means of transportation or sports equipment, but the symbol of a new lifestyle, an alternative form of active recreation – a healthy and quality form of leisure available for everyone. All developed European nations treat cycling as a priority and Hungary should join in the movement to make cycling a more popular way of transport.

Due to its geographical location, Baranya County is Hungary's southern gateway and as such it plays an important role in our foreign relations – through Croatia towards the Adriatic it has the potential to join in the cooperation of southern and southwestern countries.

Due to the ideal characteristics of Baranya county it is suitable for cycling that leads the cyclist through a countryside of diverse beauties.

The County as well as the region is characterised by short, scattered sections of biking routes that do not form a united system.

There are many existing biking routes all around the county. Long routes suitable for biking tours sadly have not been constructed yet. Independent, short routes can be found all over the area.

The region covered by the project is Baranya County and Osijek-Baranja County which has many strengths, weaknesses, opportunities, and threats, the most important ones are summarized below.

Strengths:

- Ideal natural conditions, low elevation differences which is suitable for cycling
- Undiscovered natural environment at several points
- Besides larger cities, the area has a typically smaller and scattered settlement structure which favours rural tourism that can be connected to bicycle tourism
- Many biking routes and low-traffic sideroads can be found in the area covered by the project
- Existing cross-border cooperation in order to reach common goals

Weaknesses:

- Quality of roads in villages is poor, image of towns is often bad and unattractive for tourists
- Distribution of good quality accommodation is uneven in the region
- No existing unified touristic 'package' in the region as in most cases existing services are not linked together
- Only a handful of trained tour guides, their training is not resolved
- Quality of sideroads suitable for cycling is questionable

Opportunities:

- The bike route realized through the project, could be the motor for further improvements in the region
- Improving the quality of bicycle tourism, increasing the number of guest nights and revenues, decreasing seasonality, creating jobs, involving local entrepreneurs and governments
- Tour routes linking three countries, could be created that would help the realization of a 'cycling EuroRegion'
- Increasing interest towards areas of Hungary outside Budapest and areas of Croatia away from the sea shores
- Constructing bike routes could increase the touristic utilization of the region

Threats:

After having completed the building of a bike route system, other developments will not be realized

- The increasing economic and social degradation of already underdeveloped locations in the countryside
- The number of Guests and visitors would not reach planned levels and therefore revenue growth would not reach the planned amounts either
- Long-lasting effects of economic crisis
- Bike route maintainers will not have sufficient funding for necessary upkeep and developments

The international development of bicycle tourism has become easier since Croatia joined the European Union on July 1, 2013 and therefore crossing the border between the two countries became practically non-existence. As a result of this, cyclists can cross over from one country to the next with ease, however the number of border crossing points is fairly limited.

As a result of the project, the already excellent relationship between Hungary and Croatia can be further improved. Besides, the realization of this project can be the motor for further international economic and civil cooperation..

Improving rural tourism is an essential condition of the development of bicycle tourism as bike transportation is closely linked to a nomadic, country lifestyle which is more likely to be present in a small, remote village than in a large city. Potential guest houses, pensions in villages would help to improve the uneven distribution of accommodation – currently only larger towns and highlighted tourist destinations have good quality hotels (Pécs, Osijek, Siklós, Villány).

The areas covered in the project are characterised by rural attribute – it is one of the main attractions of the region, however it is negatively affected by agriculture which damages the beauty and diversity of the environment.

Often local and regional development projects lack self-funding, the main cause of which is the global economic crisis. Many local businesses, that had been successful prior to 2008, went bankrupt due to financial hardships or got into a situation where covering their own business expenses has become a challenge and therefore do not have the means to afford supporting local developments. Building the bike routes would improve this process as well since many of the local businesses are involved in tourism, trade or related service sector which could be enhanced by the increased number of tourists.

Boosting entrepreneurial spirit in the region via trainings, presentations, events, is an utmost priority; showing entrepreneurs the opportunities of development as well as pointing out those services that are especially beneficial for bicycle tourists.

Besides restaurants and accommodation, the availability of other quality services is limited in the region. Wine tourism in Villány, the Thermal Spa in Harkány, and the Buso Festival in Mohács are excellent, although this latter only lasts for a week each year. Besides, the role of Pécs as a cultural hub is very important. **The other problem is the lack of a unified ‘touristic package’ as often existing services are not aligned.** Developing bicycle tourism definitely necessitates the development of rural tourism, however, besides the existing and popular attractions, the less well-known values should be taken into consideration during the planning of new routes

From a human resources standpoint, it is important that bicycle tourism not only involves coordination but also the organization of biking tours. The planning of biking routes has already been realized, cyclists can take part in diverse tours (Castle tour, Three-rivers tour, Wine tour), however there is still a lack of appropriate guidance. **Skilled and trained tour guides are needed to organize dynamic and popular bike tours,** therefore priority should be given to this – creating quality training structures and also paying attention not to reach an oversupply and suffer from the negative effects thereof.

The above listed obstacles make the development of bicycle tourism in the region difficult, although some problems can be turned into positive factors and carry the possibility of development. Building bike routes is a great initiative on its own, as it will make commutation for locals easier and can create a new source of revenue that positively affects economy as a whole.

To sum up the above, it can be concluded that bicycle tourism is developing and has tremendous opportunities for tourism, health, economy, and for other aspects of life. Cooperation, the creation of unified and complex touristic packages are important as well as promoting people's awareness of health. The present project can contribute to the development and improvement of cycling and general tourism in the region; it can be a foundation for further developments and can improve the cross-border relationships of residents in the area and may facilitate the creation of complex, international touristic packages.

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