

Policy recommendations on cycling tourism for the countries of the Danube region



**FOSTERING ENHANCED ECOTOURISM PLANNING
ALONG THE EUROVELO CYCLE ROUTE NETWORK IN
THE DANUBE REGION
ECOVELOTOUR DTP-055-2.2
FINANCED BY:
INTERREG DANUBE TRANSNATIONAL PROGRAMME**

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1. Introduction

EcoVelo Tour Project (Fostering enhanced ecotourism planning along the Eurovelo cycle route network in the Danube region (DTP-055-2.2) aims to develop cycling tourism and ecotourism in connection with the Eurovelo international cycle routes crossing the Danube Region. It exploits synergies of the Eurovelo network, works out and ensures communication opportunities for ecotourism in the region, promotes cultural and natural values through cycling tourism, and strives for preserving biodiversity, landscape elements and air quality while developing ecotourism strategies.

The demand for active tourism is on the rise both worldwide and in Europe. The number of cycling tourists in Europe is growing dynamically every year, generating around € 44 billion a year in revenue (<https://ecf.com>). Several European countries have introduced and implemented national cycling strategies. Recently, these national strategies and/or action plans set activities and precise goals for the development of cycling at the national level.

On the website of European Cyclists' Federation (ECF) there is an overview of the current situation of cycling in all EU Member States. On ECF website tables show for each country the existence of a national strategy on cycling, the current and targeted cycling modal shares and an estimation of the level of investment for cycling (<https://ecf.com/what-we-do/cycling-all-policies/national-cycling-policies>).

The aim of this study is to synthesize research findings carried out by national teams (Austria, Bulgaria, Germany, Hungary, Romania, Serbia, and Slovakia) on cycling tourism in the Danube region as well as to enable project partners to formulate policy recommendations for their countries and for the whole Danube area. In addition, this study also provides professional support and exchange of experiences to countries with less developed cycling tourism.

2. Methods

The policy recommendations have been developed using the following research methods.

2.1 Desk research

The project partners gathered secondary data for each country available from different national and international sources, related to cycling tourism in national perspective. After offering a general presentation regarding the state of national cycling tourism for each participating country, the national teams formulated policy recommendations for their own countries.

2.2 Qualitative research

The objective of the empirical research was to collect policy recommendations regarding cycling tourism for the whole project area covering all the seven project countries. The qualitative research was based on the desk research results. The main topics defined by the national policy recommendations (desk research) are followings:

- Strategic planning
- Legislation and administration
- Development of infrastructure and services
- Marketing
- Awareness-raising
- Safety

The first step of the qualitative research was to create an expert database covering all participating countries with the help of the consortium partners. This database contains names and organisations of cycling experts from each county. Besides synthetizing the opinions of experts, this database ensures a solid base for knowledge transfer.

Expert interviews formulated the base of the qualitative research. Using the expert database, we carried out 7 in-depth interviews with experts from participating countries. The interviews were conducted by Dr. Krisztina Keller, Corvinus University of Budapest (Corvinus, Hungary) via Skype with one exception, the Romanian expert, Ion Boncea sent his answers via e-mail. The interviews took place between 1 November 2020 and 20 December 2020. Table 1 displays the interview partners including their organizations.

Table 1: Characteristics of the participating cycling experts

Country	Name	Organisation
Austria	Christian Schrefel, Julia Beckel	17&4 Organisationsberatung GmbH, Radlobby/Radtourismus Österreich
Bulgaria	Kiril Kaloyanov, Radostina Petrova	Bulgarian Association for Alternative Tourism
Germany	Frank Hoffmann	German Cyclists Federation
Hungary	Ádám Bodor	Budapest Transport Privately Held Corporation
Romania	Ion Boncea	Explorer Association of Tulcea
Serbia	Jovan Eraković	Ciklonaut Beograd, Certified Eurovelo Inspector
Slovakia	Ján Roháč	Ekopolis Association

Source: own research, 2020

3. Policy recommendations on cycling tourism in the countries of the Danube region

3.1 Policy recommendations on cycling tourism for Austria

3.1.1 Introduction

The main motives of summer tourists coming to Austria are clearly hiking and mountain climbing. Cycling and mountain biking holidays are the eighth most popular holiday motif, accounting for a share of about eleven percent of all responses, according to a study of the Austrian Chamber of Commerce conducted in 2018 (Wirtschaftskammer Österreich 2019). This means that cycling is just behind cultural holidays with a share of about twelve percent of all responses (To be seen as a nation of culture is one of the leading motives for the Austrian self-image).

In comparison with other countries, Austria has a well-developed supply with touristic cycling infrastructure. In the classic cycle tourism sector, Austria has the European pioneer Danube cycle path as well as two five-star cycle paths according to ADFC classification. The Danube cycle path is part of the EuroVelo Route 6 Atlantic - Black Sea. Four of the currently 16 EuroVelo routes cross the territory of Austria. The entire range of Austrian cycle routes covers around 14,000 kilometres. In addition to the ongoing improvements of the cycling infrastructure, there has also been a surge in the quality of cycle-friendly guest and accommodation facilities in recent years. In 2013, a quality initiative was launched with the introduction of the ADFC "Bett + Bike" (bed & bike) quality label. Starting from around 250 establishments, more than 400 are now quality-certified as "Bett + Bike" accommodations in Austria.

Cycle tourism infrastructures benefit not only cycle tourists but also the local population. Censuses and surveys along the Austrian section of the Danube Cycle Route show that about 40 percent of the trips are made on everyday routes. A further third are one day leisure trips. High quality long-distance cycle paths can thus be an important backbone for enhancing the attractiveness of everyday cycling and attractive leisure activities in a municipality.

While the majority of Austrian cycle tourists is very satisfied with landscape and nature as well as with route guidance, route quality and cycle routes in general, their satisfaction is clearly declining for factors like interference with car traffic, bicycle parking facilities, bicycle transport in public transport on arrival and departure and safe luggage storage. However, satisfaction with travel to and from the destination and with transport connections has improved in recent years. For ten percent of one-day bicycle trips and 33 percent of multi-day bicycle trips, a train is used for part of the journey. On Austrian long-distance trains, the number of racks available for bicycles is limited and reservation is obligatory. A bicycle ticket costs ten percent of a second-class ticket with a minimum of two euros. An expansion of the number of bicycle transport racks would significantly increase the attractiveness of cycling holidays in Austria. Apart from taking the bicycle with you, the Austrian rail operator ÖBB also offers door-to-door luggage transport. The door-to-door transport of a bicycle within Austria costs 49 Euros.

In order to exploit the economic potential of cycle tourism, regions need to address different needs of diverse customer segments. To create a longer lasting bond between cyclists and a region, it is necessary to convey impressions that will be remembered. Above all, emotional encounters and sensual experiences are remembered and passed on. This also increases the chance of attracting new tourists. To achieve this, regions must try to offer three elements: leading products that provide orientation in an increasingly confusing world, stories that inspire dreams and appeal to emotions, and opportunities to immerse oneself in the local cycling offer with all senses.

E-bikes open up cycle tourism for new, additional customer segments. The use of e-bikes in cycling tourism is increasing rapidly. Whereas in 2016 about 13 percent of German cycling tourists were using an e-bike, in 2017 and 2018 this figure had risen to 18 and 23 percent, respectively. This means that almost every fourth German bicycle tourist is using an e-bike. Around 16 percent of Austrian cycle tourists use an e-bike on multi-day tours. While river valleys have been the preferred cycling destinations for less fit cyclists, the use of e-bikes is shifting this preference towards more mountainous destinations with more demanding elevation profiles. In addition, the use of e-bikes makes longer daily stages feasible even for less experienced cyclists.

On a day trip, Austrian cyclists spend an average of slightly under 34 Euros. Just over half of this amount is spent for gastronomy, followed by travel expenses with a share of 20 percent. The remainder is divided between expenditure in the retail sector, bicycle rental, service, equipment, cable cars, lifts and other. On cycling holidays lasting several days, Austrians spend around 94 Euros per person and day. From this amount, about 43 percent is spent on accommodation, about 36 percent on gastronomy and about ten percent on travel to and from the destination. The remainder is divided between retail, bicycle rental, service and equipment, cable cars, lifts and other expenses.

3.1.2 Policy recommendations

First, the current Austrian tourism strategies were screened for measures and recommendations regarding cycling tourism. In a second step, additional recommendations were developed to fill any identified gaps in the existing strategies.

Neue Wege im Tourismus

In the sections about infrastructure the Austrian tourism strategy “Neue Wege im Tourismus” makes the following statements (Bundesministerium für Wirtschaft, Familie und Jugend, 2010, pp. 14f, 24f):

- Create/extend the bicycle infrastructure country wide
- Create incentives to build infrastructure which can be used all year round and across municipalities¹
- Cross-border cooperation between municipalities
- Improve inter-modality and links between tourism and transport (e.g. bicycle train in Carinthia)
- Harmonized standard for infrastructure (signage/signposting, maps and captions and categories)

Plan T - Masterplan für Tourismus

The latest Austrian tourism master plan contains the following relevant statements (Bundesministerium für Nachhaltigkeit und Tourismus, 2019):

- Establish a culture of cooperation, for knowledge exchange, foster cooperation between stakeholders (p.18f)
- Create/improve or strengthen regional structures and added value chains (p.28f)
- Create/improve easy access to financial resources and aids for developments (p.32f)
- Create structures for sustainable mobility and improve inter-modality (p.26f)

¹ Own translation, original in German: „Anreize zur Schaffung touristischer Infrastruktur, die ganzjährig und gemeinde-übergreifend genutzt werden kann“

You like it? Bike it!

“You like it? Bike it!” is the first Austria-wide bicycle tourism advertising campaign coordinated between the federal and provincial governments (Österreich Werbung, 2019):

- Strong web presence by clustering local, regional and national tourism organizations to present a single combined tourism region
- Target-group oriented online advertising

Masterplan Radfahren 2015-2025 (p.31ff)

The Austrian cycling masterplan for the period 2015 to 2025 contains the following policies (Heinfellner, Ibesich and Kurzweil, 2015):

- Improvement of bicycle highways
- Improvement of inter-modality between walking, cycling and public transport
- Improving coordination of bicycle traffic between national, regional and local stakeholders
- Improve funding and financing of bicycle infrastructure
- Adapting and improving road, traffic, spatial planning laws/legislations for bicycle traffic

Additional recommendations by BOKU-ITS

- **City tourism:** Improvement of the bike-sharing offers in larger cities (at least in their city centres) following the example of Antwerp, Barcelona, Paris etc. making the bicycle an attractive alternative for city tourists
- **Mountain bike tourism:** Lifting the general ban on cycling in forests (Austria is the last country among its neighbouring countries with such a ban) to make mountain bike tourism more attractive

Table 2: Summary of the policy recommendations for Austria

Priority Topic	Recommendation	Status Quo Description	Proposed Policy Change Description	Date for Implementation	Affected Stakeholder(s)	Final Recipient(s)
1. Infrastructure	Extend and update cycling infrastructure	At times fragmentary cycling networks with varying levels of quality, partly outdated infrastructure	Create a safe and convenient cycling network with harmonised standards that is accessible and easy to use. Allocate funding towards construction and planning personnel for cycling infrastructure and enforce consideration of cycling infrastructure at road construction and refurbishment	2020-continuous	Municipal administrations State administrations	All cyclists, including everyday users as well as tourists

<p>2. Infrastructure</p>	<p>Extend or establish public bike sharing systems</p>	<p>Some systems are available, mostly in cities, but with a comparatively low density of docking stations</p>	<p>While dedicated cycling tourists bring their own bikes or arrange rentals in advance, public bike sharing systems provide the opportunity for “regular” tourists to access touristic destinations by bike instead of car. Systems can be established with financing both from public funds and from funds from advertising on bikes. Ease of use, upkeep of bicycles and sufficient density of docking stations for hire and return of the bikes are crucial.</p>	<p>2022-2025</p>	<p>Municipal administrations State administrations</p>	<p>All cyclists, including everyday users as well as tourists</p>
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3. Inter-modality	Improve inter-modality and public transport service availability	While regional trains already allow for easy transport of bicycles, capacities in long-distance trains are severely limited. Some touristic regions and attractions lack access to user-friendly public transport.	Create solutions for bicycle transport also in long-distance trains, especially on lines connecting destinations with a focus on cycling tourism. Establish public transport connections also in rural areas, to access attractions and to provide a backup for cycling tourists. Promote partnerships between touristic regions and transport operators.	2023-2030	Transport operators Destination Management Organisations (DMOs)	Tourists from within the country as well as from abroad Local population
4. Legislation and administration	Lifting general ban on cycling in public forests	General ban on cycling in public forests except for a few signposted routes. Different rules in different federal states add to confusion.	Lifting the general ban and granting cyclists access to public forests. Limit future access restrictions to well-defined cases, requiring justification. Clarify issues of legal liability in public forests which underlie the current ban.	2021	Federal legislators Federal forest administration	Local as well as foreign tourists and cyclists Mountain bike tour guides and rental services

5. Marketing	Continue successful marketing campaigns like “You like it? Bike it!” to promote cycling as a way of experiencing nature and the mountains	Experiencing mountains and the Austrian landscape is a high-ranking motif among tourists. However, not many are aware of the possibility to do this while cycling.	Provide funding for future campaigns and widen the target groups that are being addressed.	2021-2025	National Tourism Board Destination Management Organisations (DMOs)	Cycling tourists as well as conventional tourists who might give cycling a try
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Source: Baumgartner, 2002; Bundesministerium für Nachhaltigkeit und Tourismus, 2019; Bundesministerium für Wirtschaft, Familie und Jugend, 2010; Heinfellner, Ibesich and Kurzweil, 2015; Leuthold, 2001; Österreich Werbung, 2019; Radkompetenz Österreich, 2019; Stejskal-Tiefenbach et al., 2014;

3.2 Policy recommendations on cycling tourism for Bulgaria

3.2.1 Introduction

The current situation regarding tourism policy based on an analysis of the National Tourism Act and the Strategy for Sustainable Development of Tourism in the Republic of Bulgaria 2030 (adopted in 2014 and updated in 2018) has many problems that must be taken into account for the compilation of policy recommendations regarding cycling tourism.

There is no specific legislation for cycling tourism in the Tourism Act. The Tourism Strategy positions the entire tourism sector on the sustainability path, but deeper look in the measures of the Strategy shows that it comes mainly to economic sustainability. Road infrastructure policies are within the competence of the Road Infrastructure Agency (part of the Ministry for Regional Development) with its regional offices. The Tourism Act specifically regulates only tour operators, hotels, restaurants, SPA centers, guides, ski instructors, ski infrastructure and beach operators. Cycling routes are only mentioned as a type of tourist attraction, but nothing else is mentioned e.g. definition or criteria for establishment of a cycling route.

Regarding regional policy it is important to note that Ministry of Tourism only regulates the national policy. At regional level, tourism policy is in the domain of the Regional Governor (28 administrative regions), whose main function is to coordinate and control action of municipalities who operate all tourism policy instruments on local level. At regional level, there is initiative for Tourism regions management organizations, which are NGOs established by public and private tourism stakeholders in 9 tourist regions (the regions with their boundaries are established with act of the Minister of Tourism in 2013), which are entirely different from the administrative regions. This fragmented structure is an obstacle for an effective implementation of tourism policies.

Tours and events are organized by private companies, sport clubs and individually by cyclists. Both cycling and mountain biking disciplines are practiced, but probably due to lack of established routes for cycling mountain biking is more popular. Another reason is typical mountainous relief in Bulgaria especially in the region around the capital of Sofia, which is the main tourist generating region.

3.2.2 Policy recommendations

Adoption of legal framework for the development of bicycle routes in Bulgaria

Definition of a bicycle route

The complex nature of bicycle routes and the competences in various institutions for their development impose the need for a precise definition of the concept. The definition should reflect all the important components that make up the cycling route, incl. tourist attractions, road infrastructure, services, communication tools and organizational structure. The legal definition of bicycle routes will create a basis for their development to be integrated into the national policy regarding tourism and road infrastructure.

Elaboration of requirements for the components of bicycle routes

In order to create a safe, high-quality and practically feasible bicycle route, it is necessary to take into account the demand for cycling tourism on one hand, and the potential for development of the environment, on the other. In order to make such an assessment, a system of uniform requirements for bicycle routes is needed. When elaborating the requirements for Bulgaria, the most important question to be solved is to determine the characteristics of road infrastructure, which can be included in the composition of the routes.

Development of a signpost standard

Currently it is impossible to place road signs on the national road network, which are not included in the Ministerial Act for signalization of roads with road signs. There isn't a designated sign for cycling routes in this Ministerial Act, which is the most serious regulatory obstacle to the development of bicycle routes in Bulgaria. Creating a signposting standard is a key priority for exploiting the potential for cycling tourism development. However, the development of such a standard requires a legal basis for cases where it can be applied, i.e. this activity should be subject to the legal definition of what a bicycle route is.

Planning and implementation of the bicycle routes in Bulgaria

Inventory and assessment of compatibility according to the requirements for the components of bicycle routes

An inventory of the cycling routes components must precede planning, highlighting the problems and deficits that need improvement. Based on the information gathered, the compatibility with the requirements for the road infrastructure, services and tourist attractions should be assessed and a plan for the implementation of the necessary improvements should be outlined. The information from the inventory should also be used for the creation of a database for the route, which will serve in the subsequent product realization.

Design and construction of a route guidance system for the bicycle route

The inventory of the components along the route allows the collected information to be used in the design of a signpost system, which includes not only the directions and distances to the destinations, but also some more important landmarks and tourist sites in the immediate vicinity of the route. The signpost system should also reflect the possibility of marking different options for crossing a section (deviations), indicating their features - lack of asphalt, access to landmarks, shorter crossing, etc.

Planning and implementation of road infrastructure improvements

Based on the inventory and assessment of the compatibility of the road infrastructure with requirements for bicycle routes, a plan with the necessary improvements and a schedule for their implementation should be prepared. The schedule should prioritize activities that lead to improved bicycle safety and at the same time are characterized by low capital intensity, e.g. placement of warning signs "Attention, cyclists!" at the sections of the route with existing motorized traffic. The activities related to the construction of bicycle lanes should be included in the programs for development of the road infrastructure and should be implemented within the framework of the planned reconstructions and construction of new roads. Part of the schedule for infrastructure improvements is also the construction of the signage system. Its implementation should be prioritized, as it will significantly improve safety by guiding cyclists to the safest route. The signage system can also be built in stages by prioritizing sections in which the road infrastructure meets the safety requirements, e.g. on low-traffic roads, especially where they are an alternative to roads with heavier traffic.

Infrastructure maintenance

Maintaining the infrastructure is a key activity for the long-term quality assurance of the cycling route. This includes pavement repairs, inspection and repair of the signposting system, cleaning of vegetation near the road and other activities that are part of the general maintenance of the road infrastructure.

Monitoring of cyclist use, performance evaluation and planning of improvements

Monitoring the use of bicycle routes should not be underestimated as a key element of development. There are various technological solutions for automated counting of bicycle traffic, with which usage data can even be monitored in real time. Usage information is useful in assessing the impact of cycling route development, outlining demand trends and assessing necessary changes to be integrated into route development plans.

Realization of the product on the Danube bicycle route in Bulgaria

Standardization of route services

Cycling tourists are a specific market segment that has certain needs in the use of tourist services. The systematization of these needs in relation to the various tourist services (accommodation, meals, transport) and the development of prescriptions to suppliers for the relevant practices to meet them significantly increases the quality of supply, especially when applied to the entire route. This can be achieved by introducing a standard for travel services that are suitable for cyclists (bike-friendly label). The labelling of the sites that have introduced the standard helps cyclists to easily identify them and serves as a marketing tool for the sites themselves.

Creating and maintaining a database of route components

The information from the initial inventory of the route is the basis for the creation of a database to be used for its promotion. Information on the condition of roads, the availability of services and the attractiveness of landmarks can be used to create various communication tools. Structuring the information into a single database will facilitate the process of its updates.

Development of communication tools

There are various opportunities to promote cycling along a cycling route. The main priority is to maintain useful, accurate and up-to-date information. It is mandatory to create a modern website with well-structured, detailed and up-to-date content, which contains information about the condition of the roads (including problem areas), the attractiveness of the sights, places for providing tourist services and other useful information. Additional opportunities for product communication are the development of a mobile application, printed materials, the production of souvenirs etc.

Brand communication

Combining communication tools into a single marketing strategy and formulating a brand identity will increase the effectiveness of promoting the route. This process can include various activities of an event nature - competitions, mass cycling along the route, trips organized for journalists and tour operators, social media campaigns and more.

Coordination mechanism for bicycle route network management

The integration of the various processes necessary for the development and management of cycling routes into a common organizational structure requires the implementation of an integrated approach to achieve coherence between sectoral policies for tourism development and road infrastructure at national, regional and local levels, and with the participation of the public and private sector.

Based on the analysis of the legal environment for the tourism development in Bulgaria, several conclusions can be drawn to support the understanding of the needs of the coordination mechanism:

- the policies aimed at infrastructure have a developed organizational structure at all territorial levels, which is based on a partnership between the Ministry of Regional Development and Public Works, the Ministry of Interior and the municipalities;
- tourism development policies have more limited possibilities for coordination between the national and local levels, as the Tourism region's management organizations mentioned in the Tourism Act are not obliged to include all stakeholders in the region;
- at the municipal level the local policies for development of tourism and road infrastructure are realized;
- NGOs should be involved in the coordination process at the level for which they have the necessary competences and representation.

There are two main deficits in the required organizational structure. On the one hand, there is a lack of interaction between the Ministries of Tourism and Regional Development, which is necessary for the coordination of the national network of bicycle routes. On the other hand, the different municipalities through which a route passes are many in number and are located in different areas, which impose the need for a horizontal coordination mechanism for interaction between them - both in terms of road infrastructure development and the implementation of tourism product.

Based on foreign experience in coordinating the development of bicycle routes and the national situation, there is a need for the establishment of an interdepartmental unit (working group, commission), in which representatives of competent public authorities and non-governmental organizations at national level should participate. The functions of the unit should include defining the requirements for bicycle routes, the procedure for determining their physical route and planning their development. The involvement of all stakeholders in the process of

development of bicycle routes needs to be subordinated to a common document (program, strategy), which brings together the goals, tools and subjects in the process of development of bicycle routes.

Table 3: Summary of the policy recommendations for Bulgaria

Priority Topic	Recommendation	Status Quo Description	Proposed Policy Change Description	Date for Implementation	Affected Stakeholder(s)	Final Recipient(s)
1. Adoption of legal framework for the development of bicycle routes in Bulgaria	Definition of a bicycle route	Complex nature of bicycle routes and competences in various institutions for their development	A definition which reflects all the important components that make up the cycling route, incl. tourist attractions, road infrastructure, services, communication tools and organizational structure.	2021-2022	Government Municipalities NGOs	Cycling route developers
	Elaboration of requirements for the components of bicycle routes	Lack of system of uniform requirements for bicycle routes	Elaborating the requirements to create a safe, high-quality and practically feasible bicycle route	2021-2022	Government Municipalities NGOs	Cycling route developers
	Development of a signpost standard	Lack of a designated signposting standard for cycling routes in the Ordinance for signalization of roads with road signs	Creating a signposting standard	2022-2024	Government Municipalities NGOs	Cycling route developers

2. Planning and implementation of the bicycle routes in Bulgaria	Inventory and assessment of compatibility according to the requirements for the components of bicycle routes	Lack of structured information about the cycling routes	An inventory of the cycling routes components	Continuously	Cycling route coordination body	Cycling route developers
	Design and construction of a route guidance system for the bicycle route	Lack of signposts	Design and construction of a signpost system	Continuously	Cycling route coordination body	Cyclists
	Planning and implementation of road infrastructure improvements	Some sections need special cyclist infrastructure	Activities related to the construction of bicycle lanes to be included in the programs for development of the road infrastructure and to be implemented within the framework of the planned reconstructions and construction of new roads	Continuously	Road authorities Companies	Cyclists

	Infrastructure maintenance	Infrastructure suitable for cycling is not being maintained	Planned pavement repairs, inspection and repair of the signposting system, cleaning of vegetation near the road and other activities that are part of the general maintenance of the road infrastructure	Continuously	Road authorities Companies	Cyclists
	Monitoring of cyclist use, performance evaluation and planning of improvements	No information existent	Use of various technological solutions for automated counting of bicycle traffic, with which usage data can even be monitored in real time.	Continuously	Road authorities	Route developers
3. Realization of the product on the Danube bicycle route	Standardization of route services	No cycling friendly labels existent	Introducing a standard for travel services that are suitable for cyclists (bike-friendly label)	Continuously	Cycling route coordination body Businesses along route	Cyclists

	Creating and maintaining a database of route components	No common database existent	Gathering of Information on the condition of roads, the availability of services and the attractiveness of landmarks into a single database	Continuously	Cycling route coordination body Businesses along route	Route developers
	Development of communication tools	Scattered information	Creating a modern website with well-structured, detailed and up-to-date content, which contains information about the condition of the roads (including problem areas), the attractiveness of the sights, places for providing tourist services and other useful information.	Continuously	Cycling route coordination body Businesses along route	Route developers Cyclists

	Brand communication	No brand existent	Combining communication tools into a single marketing strategy and formulating a brand identity	Continuously	Cycling route coordination body	Businesses along route
4. Coordination mechanism for bicycle route network management	Coordination mechanism for bicycle route network management	Scattered competences among government, municipalities and NGOs	Establishing an interdepartmental unit (working group, commission), in which representatives of competent public authorities and non-governmental organizations at national level should participate	2021-2023	Government Municipalities NGOs	Route developers Cycling route coordination bodies

Sources: Kaloyanov, K. (2019) Research and development of cycling tourism along the Danube river in Bulgaria, Sofia

3.3 Policy recommendations on cycling tourism for Germany on the example of East Bavaria

3.3.1 Introduction

„East Bavaria (OB) is one of the most sustainable tourism regions in Germany” – this is one of OB’s most important policy and mission statements for future actions.

Sustainable tourism includes regional economic effects (income in the region visited, contributions to regional economic cycles), the strengthening of culture and identity and the quality of life. Bicycle tourism can achieve this above all if the offers are integrated into regional value creation chains, regional specialties of local producers are included, and the revenues also flow into the preservation of landscape and culture.

The prerequisite for "advantages for the population and regional economy" is the successful acquisition of guests. The prerequisite for this is an attractive, customer-oriented offer. In cycling tourism, this means above all high product and experience quality. The “Guidelines for sustainable bicycle tourism” (WP3) provide suggestions and standards.

Due to the Corona pandemic, the holiday interest is currently focusing on one’s own homeland. Above all people want to be in nature. Cycling is a big trend this year.

Dr. Stefan Mang from CenTouris (UP) confirms this with information from a guest survey in the current corona situation: “Many people have confidence in their own country. Caution comes before normality. Proximity to home, hygiene concepts and self-sufficiency have become important. That quickly leads to cycling tourism as a preferred form of vacation, which you can currently experience in increasing visitor numbers on the Danube Cycle Path.”

3.3.2 Policy recommendations

In terms of OB's mission for sustainable growth of the tourism sector in East Bavaria the ecotourism strategy foremost aims for the combination of cycle tourism with travel/transfer via public transport which meets the essential criteria of sustainable tourism: low consumption of resources, small ecological footprint, small CO₂ footprint.

This, by the way, is also one of OB's policy recommendations included in the strategy. Another policy recommendation would be the integration of service providers and the hospitality industry. The use of regional products is the prerequisite for regional economic cycles and can strengthen the preservation of landscape and culture. A prerequisite for this is the organization and sale of appropriate offers.

The **National Cycling Plan 2020 (NCP 2020)** by the German Federal Ministry of Transport, Building and Urban Development is a vast compendium of policy recommendations and workbook for national, regional, and local tourism organizations as it also includes a chapter on cycle tourism (https://www.bmvi.de/SharedDocs/EN/Documents/VerkehrUndMobilitaet/national-cycling-plan-2020.pdf?__blob=publicationFile) OB uses the NCP 2020 as a guidebook for better turning the strategy into action.

What follows are citations of the "National Cycling Plan 2020" (NCP).

Improve the regulatory framework for cycling and harness potential

In 2008, the nationwide modal share of cycling was 10 %. On this basis, cycling's share of the total volume of traffic can be significantly increased over the period to 2020 as the NCP 2020 is implemented. The potential to do so exists, provided that a cycle-friendly environment is created. The bases for a possible increase in cycling are changes in the societal environment plus the fact that a significant proportion of the journeys made by the public each day are shorter than five kilometers.

Promote cycling as a component of an integrated transport and mobility policy

Cycling, as an important part of the road scene, must be an element of an integrated transport and mobility policy pursued by the Federal Government, the federal states, and local authorities. At Federal Government level, therefore, the objectives of the NCP 2020 to promote cycling will inform the fundamental transport development strategies, for instance the Energy and Climate Change Strategy or the Mobility and Fuel Strategy.

Cycling, as an integral component of good transport infrastructure, is also playing a part in the preliminary deliberations on the preparation of a new Federal Transport Infrastructure Plan in conjunction with the evolution of mobility. Altogether, cycling, together with walking, will be considered even more than in the past as a further pillar of the mobility system alongside motorized transport and public transport. This applies to future plans, programs and strategies and to the organizational structures. The federal states and local authorities are recommended to adopt a similar approach.

Implement the vision of “cycling as a system”

The NCP 2020 – like its predecessor, the NCP 2002-2012 – is based on the vision of “cycling as a system”. If we are to achieve this, we need more than just cycle-friendly infrastructure. Just as important are intensive communications and public relations activities as well as the field of service. The only way to exhaust the potential inherent in cycle is by conducting activities in all these fields. It is therefore necessary that policymakers at all levels – Federal Government, federal states, and local authority – take all three elements into account in their plans and programs, attaching equal importance to each element and underpinning them with action. Specific action strategies can be found for the individual fields in the relevant chapters on the action areas.

Contribute towards tackling societal challenges

Promoting cycling can contribute towards tackling various societal challenges. The issue of health plays a special role here. The exercise that people get on a bicycle and the associated physical activity can improve their circulatory function, strengthen their immune system, and generally support their motor skills. Children can benefit from this. In addition, the reduction in climate change emissions and the prevention of noise, fine particles and other pollutants reduce the pressure on people and the environment and create a better climate in both urban and rural areas. Against the background of demographic change, cycling is a major building block in safeguarding people’s mobility and enabling them to enjoy social inclusion.

Table 4: Summary of the policy recommendations for Germany on the example of East Bavaria

Priority Topic	Recommendation	Status Quo Description	Proposed Policy Change Description	Date for Implementation	Affected Stakeholder(s)	Final Recipient(s)
1. Improve the regulatory framework	Improve the regulatory framework for cycling and harness potential	In 2008, the nationwide modal share of cycling was 10 %. On this basis, cycling's share of the total volume of traffic can be significantly increased over the period to 2020 as the NCP 2020 (National Cycling Plan 2020) is implemented.	The bases for a possible increase in cycling are changes in the societal environment plus the fact that a significant proportion of the journeys made by the public each day are shorter than five kilometers.	Immediately	General Public German Federal Ministry of Transport Building and Urban Development	Local authorities (towns and municipalities) General Public

2. Promote cycling	Promote cycling as a component of an integrated transport and mobility policy	Cycling, together with walking, is considered even more than in the past as a further pillar of the mobility system alongside motorized transport and public transport.	At Federal Government level the objectives of the NCP 2020 to promote cycling will inform the fundamental transport development strategies, for instance the Energy and Climate Change Strategy or the Mobility and Fuel Strategy. Cycling, as an integral component of good transport infrastructure, is also playing a part in the preliminary deliberations on the preparation of a new Federal Transport Infrastructure Plan in conjunction with the evolution of mobility.	2020 onward	Organizations (interest associations and societies) involved in cycling, private companies (developers)	Local authorities (towns and municipalities) General Public
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3. Cycling as a system	Implement the vision of “cycling as a system”	<p>The NCP 2020 – like its predecessor, the NCP 2002-2012 – is based on the vision of “cycling as a system”. If we are to achieve this, we need more than just cycle-friendly infrastructure.</p>	<p>Intensive communications, public relations activities, service. The only way to exhaust the potential inherent in cycle is by conducting activities in all these fields. It is therefore necessary that policymakers at all levels – Federal Government, federal states, and local authority – take all three elements into account in their plans and programs, attaching equal importance to each element and underpinning them with action.</p>	2020 onward	<p>Federal Government Federal states Local authority</p>	<p>Federal Government Federal states Local authority</p>
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4. Tackling societal challenges	Contribute towards tackling societal challenges	Promoting cycling contributes towards tackling various societal challenges.	<p>The issue of health plays a special role here. The exercise that people get on a bicycle and the associated physical activity can improve their circulatory function, strengthen their immune system, and generally support their motor skills. Children can benefit from this.</p> <p>In addition, the reduction in climate change emissions and the prevention of noise, fine particles and other pollutants reduce the pressure on people and the environment and create a better climate in both urban and rural areas. Against the background of demographic change, cycling is a major building block in safeguarding people's mobility and enabling them to enjoy social inclusion.</p>	2020 onward	Federal Government Federal states Local authority	General Public
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Source: German Federal Ministry of Transport, Building and Urban Development: National Cycling Plan 2020, Own representation by OB, 2020.

3.4 Policy recommendations on cycling tourism for Hungary

3.4.1 Introduction

In line with international trends, there is a growing demand for active tourism services in Hungary among foreign and domestic tourists. In the active tourism sectors, cycling is a priority, and it attracts a wide range of target groups. Cycling as a leisure time activity has been dynamically increasing in Hungary since the early 1990s.

The geographical features of Hungary are excellent in terms of cycling tourism. The country has a varied, spectacular landscape and the places of interest are in relative proximity to each other, so several regions can be explored on two wheels during a longer bicycle tour. Due to the topography of the country, cycling tours can be completed even by families with children. The climate is suitable though 6-8 months for cycling; the number of rainy days is low, however, most of the precipitation typically falls between May to July, and a secondary maximum precipitation also develops in an extensive part of the country in the autumn, which lowers the season extension benefits of cycling tourism.

The National Cycling Concept 2014-2020 was written in 2013 by the Cycling Roundtable (composed of Hungarian cycling and environmental organizations and the European Cyclists' Federation). It was adopted by the Ministry of National Development and Minister of State for Infrastructure through the National Cycling Charter. The National Cycling Programme Hungary 2014-2020 aims to support the National Cycling Concept and Network Plan and the National Transportation Strategy through four main objectives: infrastructure development, raising awareness, recreational cycling, bicycle industry and trade.

Regarding the European market of cycling tourism, Hungary can be classified as one of the developing countries, where services and catering for cyclists show intense improvements. Long lasting success can only be achieved by creating a complex development on the supply side. This will require coordination of infrastructure, tourist attractions, the quality of services and target group-oriented marketing activities in the future.

Since 2010, 1,300 kilometres of new cycling routes have been developed, providing the cyclists with more than 9,000 kilometres of recommended cycling routes, including 4,000 kilometres of separated bike paths or shared use routes for pedestrians and cyclists. The goal is to have a cycling route network of 15,000 kilometres by 2030. The development and high- quality maintenance of the primary cycling routes – the EuroVelo routes, Budapest-Balaton route and the Balaton Cycle Loop – is the priority. Between 2014 and 2020, more than HUF 200 billion was spent on the construction of bicycle paths utilizing both domestic and EU funding. In the European Union, Hungary used the highest proportion of the funds received for this activity.

In 2018, the Hungarian Cyclists' Club conducted research with the support of the Ministry for Innovation and Technology. According to this survey, 70% of respondents use bicycles, 17% have bicycle as their primary means of transport, and 38% cycle at least once a week. Examining the 28 countries of the European Union, Hungary ranks third - following the Netherlands and Denmark - in terms of everyday cycling. The Southern Great Plain has the highest number of people riding bikes, 16% of Budapest residents cycle several times a week. The research also found that women cycle more in everyday life: 18% of women and 16% of men use bicycles on a daily basis. The vast majority of the population considers the development of cycling-friendly infrastructure a good idea, which may be the main driving force behind switching to cycling.

In order to ensure the high quality of services, the Hungarian Cycling Tourism Association plans to introduce the BikeFriendly international cycling tourism rating system, which is also recommended by the European Cyclist Federation. Systems that classify accommodation, restaurants and points of interest or even routes that meet the needs of cyclists can significantly increase the turnover and awareness of primarily small and medium- sized businesses.

Based on this introduction, we developed the following recommendations.

3.4.2 Policy recommendations

More effective coordination and supervision regarding tender projects

At the national level, the Ministry for Innovation and Technology is responsible for the coordination of cycling affairs (ranging from the operation of the network to creating regulations). It also decides on the developments financed from the central budget and provides the necessary resources. As for investments for tourism purposes, decisions are often made by external actors (such as the Centre for Development of Active and Ecotourism or the Hungarian Tourism Agency) following the consultation with professional partners (e. g. the Hungarian Cycling Tourism Association). There is a proper coordination and communication among the actors. The TOP 2014-2020 touristic calls (TOP-1.2.1) could be mentioned as a bad example: lack of coordination and supervision resulted in problematic and useless projects.

Strategic planning using a complex approach to transport and development of infrastructure

A mutually reinforcing strategy, including cycling tourism and everyday cycling, should reflect a complex approach to transport, as an integrated part of sustainable transport developments and relating to other transport areas (especially public transport). Its creation should be based on the best practices of other European countries, so we recommend setting up a knowledge base that would be available to all interested parties. Experts involved in cycling developments and in the provision of services should gain experience by taking part in study visits and, in Hungary, by inviting foreign experts.

The developments focus on infrastructure, the construction of the cycling network and road maintenance. Moreover, the bike path itself, high-quality bike stands, bike stations and attractions (bike parks, traffic parks) should be designed as brownfield investments taking ecosystem services into account so as not to occupy further valuable areas from nature.

When cycling tourism services are created, information board systems and touristic attractions need to be enhanced besides bike paths, as well as connecting with other tourism industries (e.g. cultural tourism). The main indicator of developments should not be the length of cycle paths, but the number of cycling trips and the number of cyclists. To this end, traffic counters (can be automatic (<https://veloclass.hu/hu/map>) or manual) and measurement plan must be devised, which can help us to determine the bicycle traffic in Hungary.

Furthermore, there is a need to evaluate changes in cycling habits and attitudes at regular intervals through primary research. This survey, together with traffic data, assessment of the condition and size of infrastructure, review of accident data and economic impact of cycling-friendly developments, will help implement further developments. These improvements on one hand should not put extra burden on the ecosystems and the services they provide, but on the other hand they should satisfy the cyclists' demands.

Developing and harmonizing the bicycle-sharing system and supporting the spread of electric bicycles

Cycling is also very popular among city visitors. By improving cycling conditions, the bicycle-sharing systems are designed to encourage more people to choose cycling as an alternative method of transport while taking a short city trip. In addition to the system in Budapest, bicycle-sharing services are available in eight Hungarian cities (Debrecen, Esztergom, Győr, Hévíz, Kaposvár, Nagykanizsa, Pécs, Szeged), the number of which should expand. It would be important to harmonize the existing bike-sharing systems, e. g. to establish a common platform in order to use all systems with the same card/subscription/registration.

At the same time, actions should be taken to promote the use of electric bicycles. For instance, the electric vehicle support system should be extended to power assisted bicycles, and e-bike charging stations should be installed along biking trails. Public e-bike grant program was launched in October 2020. More than 200 e-bikes were granted for national parks.

Development of services in cycling tourism

The success of cycling developments is determined not only by the length and quality of the road network, but also by the improvements in comfort, orientation and safety of tourists. Regarding bicycle-friendly restaurants and accommodation, environmental criteria should be applied, e.g. the use of renewable energy and, where possible, the purchase of local products. A nationwide cycling tourism web portal and mobile application must be created, along with new cycling rest stops including bicycle stations, refreshment points and service packages. Bicycle rental and repair services should be improved in a system to cover the entire territory of the country. Luggage shipping services are available in several cycling destinations but it is not easy to find them. These are operated by tour operators or bike friendly accommodations.

Creating safety in cycling tourism and education

The Hungarian government has set safety standards for cycling, such as the proper use of the bicycle, wearing a reflective vest, fitting the bicycle with lights, and ensuring that the cyclist is easily detected even in low visibility. In order to prevent accidents, warning signs were placed at pedestrian crossings stating that cyclists are supposed to push their bikes. 30 km/h zones, traffic-calmed areas and cycle-only roads were created for safe cycling.

It is necessary to organize more awareness-raising campaigns to increase the safety of cyclists, and we also consider the education of schoolchildren in cycling and promoting school trips by bicycle are recommended. Traffic code should be more cycling friendly.

Marketing and awareness-raising actions for cycling and cycling tourism

Promoting renewed and newly created bike routes and services requires a comprehensive marketing strategy that includes pricing, sales, and marketing communications. Awareness-raising events should be organized to promote cycling. The Bike Path of the Year competition is considered as a best practice for this purpose.

Table 5: Summary of the policy recommendations for Hungary

Priority Topic	Recommendation	Status Quo Description	Proposed Policy Change Description	Date for Implementation	Affected Stakeholder(s)	Final Recipient(s)
1. More effective coordination and supervision regarding tender projects	Better coordination and supervision regarding cycling tourism tender projects	The Ministry for Innovation and Technology is responsible for the coordination of cycling affairs, and it also decides on the developments financed from the central budget and provides the necessary resources. Tourism decisions are often made by external actors (such as the Centre for Development of Active and Ecotourism or the Hungarian Tourism Agency) following the consultation with professional partners.	The project should be coordinated and supervised much more effectively.	2020-2022	Ministry for Innovation and Technology Centre for Development of Active and Ecotourism Hungarian Tourism Agency Organizations involved in cycling tourism (e. g. the Hungarian Cycling Tourism Association) Nature conservation organizations and experts	Centre for Development of Active and Ecotourism

2. Strategic planning using a complex approach to transport and development of infrastructure	<p>Applying a complex and mutually reinforcing approach to the development of sustainable transport systems and integrating cycling tourism and everyday cycling into them.</p> <p>Development of intermodality, enabling the transport of bicycles on vehicles.</p>	<p>There is no real coherence between transport developments, either between individual transport sectors or between geographical areas. The developments in cycling focus mainly on infrastructure and path maintenance. The development of additional cycling infrastructure lags behind the construction of cycle paths.</p>	<p>Establishment of seamless door-to-door mobility chains.</p> <p>Creating intermodality.</p> <p>Integration of cycling-related support measures for non-cycling projects.</p> <p>Putting more emphasis on additional cycling infrastructure considering the need for conservation of natural values.</p> <p>Creating a national measurement network and plan for mapping of cycling traffic.</p> <p>Assessment of cycling habits and attitudes at regular intervals to support cycling-friendly developments.</p>	<p>2020-2025</p>	<p>Ministry for Innovation and Technology</p> <p>Centre for Development of Active and Ecotourism</p> <p>Local governments</p> <p>Organizations involved in cycling tourism</p> <p>Public transport companies</p> <p>Local population</p> <p>Nature conservation organizations and experts</p>	<p>Ministry for Innovation and Technology</p> <p>Centre for Development of Active and Ecotourism</p> <p>Local governments</p> <p>Local population</p>
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3. Developing and harmonizing the bicycle-sharing system and supporting the spread of electric bicycles	Development and harmonization of bicycle-sharing transport systems and supporting the spread of electric bicycles	<p>Cycling is popular among city visitors, but only eight Hungarian settlements have bicycle-sharing systems.</p> <p>The popularity of pedelecs (electric bicycles) is growing, especially among the older age group, but is yet not widespread due to its high price and scarcity of rental opportunities.</p>	<p>Expanding the number of alternative methods of transport (bicycle-sharing services, rent-a-bike schemes).</p> <p>Promoting the use of electric bicycles; extending the electric vehicle support system to power assisted bicycles. Installing e-bike charging stations along biking trails.</p>	2020-2025	<p>Local authorities (municipalities)</p> <p>Destination management organizations</p> <p>Services providers</p> <p>Cyclists</p> <p>Local population</p>	<p>Local authorities (municipalities)</p> <p>Destination management organizations</p> <p>Service providers</p> <p>Cyclists</p> <p>Local population</p>
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<p>4. Developing of services in cycling tourism</p>	<p>Developments for the comfort, orientation and safety of cycling tourists</p>	<p>There is no nationwide website and app for cycling tourists.</p> <p>Bike-friendly accommodations and restaurants are rare, they can be found mainly in cycling tourist destinations.</p> <p>The access to attractions is often difficult by bike.</p> <p>The range of services available for bicycles (e.g. mobile repair services, public tyre inflators and cycle washes) is limited.</p>	<p>Creation of a nationwide cycling tourism web portal and mobile application. Developing bike and nature friendly accommodations, bicycle rental and repair/luggage shipping in a system to cover the entire territory of the country. A bike friendly certification scheme is needed for cover accommodations, restaurants and attractions.</p>	<p>2020-2025</p>	<p>Ministry for Innovation and Technology</p> <p>Centre for Development of Active and Ecotourism</p> <p>Local authorities (municipalities)</p> <p>Destination management organizations</p> <p>Service providers</p> <p>Cyclists</p> <p>Nature conservation organizations and authorities</p> <p>Cycling NGOs</p>	<p>Local authorities (municipalities)</p> <p>Destination management organizations</p> <p>Service providers</p> <p>Cyclists</p>
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<p>5. Creating safety in cycling tourism and education</p>	<p>Improving the transport culture Reducing the number of bicycle accidents by setting higher safety standards Segregating cyclists on roads Creating property security (theft protection)</p>	<p>The transport culture is problematic, according to statistics; the number of fatal bicycle accidents per one million inhabitants in Hungary is one of the highest in the EU. (If we compare with the kilometers cycled (transport performance), Hungary performs better.) Since 2014, if a cyclist is able to drive his/her vehicle safely, he/she may have alcohol in his or her body.</p>	<p>Segregating traffic in more areas by constructing cycle tracks as brownfield investments do not threaten natural values to enhance road safety. Organizing more awareness-raising campaigns to increase the safety of cyclists and to promote cycling as an environmentally friendly mode of transport. Education of schoolchildren in cycling and promoting school trips by bicycle.</p>	<p>2020-continuously</p>	<p>Hungarian government Local authorities Cycling organizations Schools Cyclists Local population</p>	<p>Local authorities Schools Cycling organizations Cyclists Local population</p>
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6. Marketing and awareness - raising events	Creating a marketing plan to promote cycling tourism Organization of awareness-raising events to promote cycling	The national marketing plan for cycling tourism is missing, the role of promotion of cycling is underestimated. Lack and inaccuracy of online information can be experienced. The promotion of cycling events is not sufficient, cycling event calendar is missing.	Promoting renewed and newly created bike routes and services with a comprehensive marketing strategy including pricing, sales, and marketing communications. Establishing a unified online information system. Introduction of rating and trademark systems to improve quality.	2020-continuously	Centre for Development of Active and Ecotourism Hungarian Tourism Agency Cycling organizations Cyclists Local population	Centre for Development of Active and Ecotourism Hungarian Tourism Agency Cycling organizations Cyclists Local population
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Sources: National Cycling Concept 2014-2020, National Cycling Programme Hungary 2014-2020, National Tourism Development Strategy 2030

3.5 Policy recommendations on cycling tourism for Romania

3.5.1 Introduction

Romania has a very high potential for cycling tourism, but currently has an extremely low level of capitalization, and one of the important causes is the lack of a specific infrastructure, mainly the lack of marked cycling routes (bicycle tourism).

There is an increased interest and demand in Romania for marked and approved cycle tourism routes from the part of individual tourists, cycling associations and travel agencies in the country and abroad, as well as from local public authorities and local development associations and regional groups (Local Action Groups - LAGs, Intercommunity Development Associations - IDA, local associations for tourism promotion and development) that have already developed or want to develop and implement projects for cycling routes.

The importance of cycling tourism development is also highlighted in the Romanian Ecotourism Strategy developed in 2009 and updated in 2015.

Considering the state of sustainable mobility, the most serious factors include the uncurbed rise of individual motorized transport due to a higher standard of living of the population. Car ownership is perceived as an indicator of status and personal esteem.

Some of the city officials also emphasize the missing system education in this area, which is often built only on officials' personal commitment and initiative. Sustainable forms of mobility like walking and cycling are disadvantaged, which often results in long waiting times at crossings for pedestrians or underdeveloped infrastructure for cyclists. Public transport is often viewed as an alternative option, and not as a reasonable first choice as the preferred form of mobility within cities.

An increasing issue is also the lack of parking policies in cities systematically facing the growing volume of static traffic. In the big cities of Romania, a gradual shift towards sustainable mobility has been observed in recent years, one of them being the use of bicycles as a mode of transport.

Another key issue is the role of cycling as a mode of transport at all levels of public administration, especially when it comes to its staff and related financial coverage. Because of the understaffed capacities, cycling policy is based mainly on the activities of civic associations and local initiatives.

Moreover, cycling does not currently form an integrated part of urban transport systems and is not perceived as a fully-fledged mode of transport, while city planners often ignore the existence of cycling transport. Good examples from abroad, with the possibility of implementing policy transfers from other countries (e.g. Austria with a similar experience), an increasing awareness of climate change as well as the rising traffic density lead some groups to prefer bicycle over other modes of transport. In this context, the positive impact of EU policies, favoring sustainable mobility, is also obvious.

Inappropriate development of infrastructure network does not take into account the increase of cycling phenomenon. The institutional commitment from the part of the national authorities (Ministry of Education and Research and Ministry of Health) is poor, which is reflected in the lack of strategic relevant documents related to cycling policies.

3.5.2 Policy recommendations

The recommendations represent measures with the possibility of their immediate, medium-term and long-term implementation, which are directed towards different stakeholders, and which mitigate identified barriers and focus on a few priority areas.

Adoption of a legal framework on the creation and approval of cycling routes

The creation, arrangement and approval of cycling routes will allow Romania to negotiate from solid positions the reconfiguration in the area of Southeast Europe of the structure of the European EuroVelo network and various international cycling routes, the allocation of regional and cross-border development funds, and to obtain an improvement of the image of tourist destination in this field in strong development.

The adoption of the unitary legislative framework also prevents the development of inhomogeneous projects that could create confusion and discourage long-distance cycling. Considering the incipient character in Romania of the development of marked cycling tourist routes, it is possible to obtain from the beginning a compatibility and integration in a unitary and harmonious whole of this category of tourist facilities.

The formalization of this legislative framework will unblock several existing initiatives and will encourage the emergence of new ones in the field so that in the short and medium term will greatly increase the absorption of specific funds available and the number, length and quality of marked cycle routes, and thus bringing direct and indirect economic and social benefits.

Signaling the cycle routes

Signaling ensures great cohesion for the cycle network by regulating the use of roads, streets and paths, warning on hazards and difficulties and indicating points where individual trips may start and end (Department of Transport and Main Roads, A guide to signing cycle networks, July 2009).

Providing cycle route direction signs is particularly useful for the community because it:

- widens the usage of the cycle network;
- increases the visibility of routes both for cyclists and other traffic participants;
- guides the riders toward destinations along the cycle network.

Signaling of the routes is essential for cyclists in the complex street network of the cities and it can notify bicycle riders about the routes which are shorter and low trafficked. Marking the cycle network can help the public to become aware of the many route possibilities other than the main road sign network.

In the absence of directional signs, cyclists are unable to easily work out where routes lead or even if the route is functional (if the route is feasible for cycling). However, street marking on their own may not be appreciated by the riders or seen only as ad-hoc measures. Instead, these improvements have to be seen in the broader context of cycle routes designed to help cyclists complete their journeys.

Establishing a set of norms for the cycling infrastructure legally recognized

In order to facilitate the use of cycling as a sustainable daily transport mode, adaptations in infrastructure will be needed.

In planning and designing cycling infrastructure in cities, we faced two often contradictory needs:

- taking cyclists seriously as specific road users. This implies creating space for cyclists and their specific needs.
- integrating cycling infrastructure into an often restricted public space, that means accommodating rival claims for space from various users, as well as ensuring the quality of urban design.

In dealing with this, over the years two seemingly opposed planning philosophies have emerged:

- The network/segregation approach that considers cycling infrastructure as an additional network in its own right. The basic assumption is that cycling and road traffic are incompatible to each other. Therefore, separate and dedicated infrastructure networks, with its own technical design norms, are needed for safety reasons and for meeting the needs of both.
- The holistic/mixed approach. In this view, the entire existing street and road network is to be claimed for cyclists (and pedestrians), through traffic-calming and sharing space with motorized traffic.

We would recommend the holistic approach because it is based on the assumption that road traffic needs to adapt itself to low-speed users and to be slowed down in order to increase safety. This fits in with a growing concern for high-quality urban public space, shared by all and open to various social uses.

Mandatory Establishment of Bicycle Parking Spaces in Residential Areas, public institutions and office buildings

The future development of cycling in Romania is hindered by the limited possibilities of safe parking and storage bicycle facilities in residential areas, standards and regulations being more favorable to individual motorized transport. One of the reasons for the refuse of the residents to use bicycles inside cities is their problematic storage and parking. A related problem is the very high rate of bicycle theft, which highlights the need to set up a safe form of bicycle storage. Actually, there is no law requirement for building contractors to create the mentioned bicycle rooms. A first solution would be the introduction of a legal obligation on establishing places for parking and storing bicycles in new residential buildings and areas.

Developing and implementing a national cycling plan

In Romania, cycling is not included in national policies on transport, health and environment because it is not considered as a mode of transport on its own. Moreover, cycling is not integrated in professional education forming future city planners.

A coherent international framework will support national and local stakeholders to focus their efforts on cycling promotion and in addressing the aforementioned issues. The creation of a National Cycling Plan (NCP) as a strategically important policy document for national authorities will help them to provide a legal framework for developing cycling at different policy levels and to support regional and local authorities in promoting cycling. In order to ensure national coherence, public authorities should coordinate, supervise and update the implementation of the NCP, with the involvement of all relevant stakeholders at regional and local levels.

Systematic Collection of Data on Cycling

The data on cycling in Romania are not collected systematically. Relevant information on different modes of transport could allow the municipalities to make the most effective decisions and to implement the so-called evidence-based policies.

Road survey by point counters allows the implementation of cycling-friendly measures (i.e. building new cycle paths, increasing the capacity of existing biking trails, reorganizing crossways etc.) in those places used by cyclists most frequently is of great importance. Another solution is representative mobility surveys among city residents. The Ministry of Transport as well as the stakeholders associating Romania towns and municipalities should support this kind of solutions.

Development of the Cycling Awareness Programme

In Romania, the most serious and constant issue about cycling is the poor education and the lack of awareness-raising measures aimed at the general public, despite several campaigns and initiatives that promote cycling as a form of sustainable mobility (Bike to School, Bike to Shop or Bike to Work). Since these ones are often perceived only as a formality with little impact, it is necessary to focus on activities with greater impact, which will spread the awareness of the bicycle transport benefits, especially among those groups of people who are not otherwise interested in this topic.

Direct cooperation between the Ministry of Transport and the Ministry of Culture with the national Radio and Television is mandatory in order to identify possibilities of integrating the theme of cycling into the programme structure of the public television: education programmes for children or for a wide audience promoting healthy lifestyle, environmental protection and transport security. Additionally, the involvement of The Ministry of Education should result in stressing the importance of school programmes.

Using cycling as a tool to promote physical activity and thus improve healths

Well-organized guidelines for physicians and public health professionals, raising awareness about the benefits of the active mobility on personal health could be helpful in increasing the capacity of the health sector to effectively promote cycling and walking and to provide their patients with the right information.

Creating strong “cycling working groups” and appointing National Cycling Office and County Cycling Officers

Cooperation between the relevant stakeholders from the local, regional and national levels within the transport, health, environment and economic sectors allows a better understanding of the different needs and requirements. Therefore, Romania should appoint a National Cycling Officer (NCO) and County Cycling Officers (CCO) - fully dedicated to cycling. An effective NCO and CCO should be able to acknowledge the links to other related policies as health and environment and to identify lead principles for cycling promotion in order to support cycling with a clear implementation mechanism, including timeframe, deadlines and responsibilities.

Table 6: Summary of the policy recommendations for Romania

Priority Topic	Recommendation	Status Quo Description	Proposed Policy Change Description	Date for Implementation	Affected Stakeholder(s)	Final Recipient(s)
1. Adoption of a legislative framework	Adoption of a legal framework for the creation and approval of cycling routes	Currently, there is no legislative framework for the creation, arrangement and approval of cycling routes.	The formalization of this legislative framework will unblock many existing initiatives and will encourage the emergence of new ones in the field so that in the short and medium term will greatly increase the absorption of specific funds available and the number, length and quality of marked cycle routes, and thus direct benefits. and indirect, economic and social that the development of this branch of tourism brings.	2020-2023	Organizations (interest associations and societies) involved in cycling transport Ministry of Tourism of Romania	Local authorities (towns and municipalities) Ministry of Tourism of Romania

2. Adoption of a legal framework	Mandatory Establishment of Bicycle Parking Spaces in Residential Buildings and public institution and office buildings	<p>Currently, there is no legislative obligation for building contractors to set up the mentioned bicycle rooms, neither to consider any other requirements of cyclists, unless there are cycling paths close to the building or there is no planned cycling route.</p>	<p>Examples of good practice suggest that a possible starting point from an unsatisfactory state is the introduction of a legal and enforceable obligation on establishing rooms designated for parking and storing bicycles in new residential buildings. It is necessary to define the spatial requirements of the designated spaces depending on the number of housing units and their size as well as other technical specifications of this proposal.</p>	2020-2030	Organizations (interest associations and societies) involved in cycling transport companies (developers)	Section of Construction Ministry of Transport of Romania
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3. Management	Developing and implementing national cycling policies supported by a national cycling plan	In Romania, cycling is not considered as equal mode of transport and it is not included in national policies on transport, health and environment.	A coherent plan adopted internationally will support national and local actors to streamline their efforts on cycling promotion and in addressing the issues above. National cycling plan (NCP) would be strategically important policy document for national authorities, as they provide a framework to develop cycling at different policy levels and support regional and local authorities when promoting cycling.	2020-2023	Organizations (interest associations and societies) involved in cycling transport private companies (developers)	Local authorities (towns and municipalities) Ministry of Tourism of Romania
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4. Capacity Building	Systematic Collection of Data on Cycling	In Romania, there is no systematic collection of data on cycling.	Data collection in case of cycling transport can be realized through financially low-cost applications and the authorities should be better informed about these possibilities. Particularly relevant is the form of point counters or representative mobility surveys among residents.	2020-ongoing	Organizations (interest associations and societies) involved in cycling transport Ministry of Transport of Romania Association of Towns of Romania	Local authorities (towns and municipalities)
5. Education and awareness-raising	Development of the Cycling Awareness Programme	Although at the national level there are several campaigns promoting the development of the cycling transport, these campaigns are rated only as formal ones with a weak impact.	Direct cooperation between the Ministry of Transport of the Romania and the Ministry of Culture of Romania with the Radio and Television of Romania is needed in order to identify possibilities of incorporating the theme of cycling into the programme structure (children education programmes and programmes for a wide audience, etc.).	Immediately	Ministry of Transport of Romania Ministry of Culture of Romania Ministry of Health of Romania Ministry of Education, and Research of Romania	Radio and Television of Romania

	Using cycling as a tool to promote physical activity across all settings to improve public health	In Romania, there is no well - structured guidelines for physicians and public health professionals.	Well-structured guidelines for physicians and public health professionals, raising awareness about the links between active mobility and health and also addressing issues that might be related to specific health conditions in certain groups of patients could be helpful in increasing the capacity of the health sector to effectively advocate cycling and walking and provide their patients with correct information.	2020-ongoing	Ministry of Culture of Romania Ministry of Health of Romania Ministry of Education and Research of Romania.	Physicians and public health professionals
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6. Management	Creating strong “cycling working groups” and appointing a National Cycling Office and County Cycling Officers	In Romania, there is no National Cycling Officer (NCO) and County Cycling Officers (CCO) - fully dedicated to cycling.	<p>Contacts and regular exchanges of ideas between the relevant stakeholders from the local, regional and national level as well as the transport, health, environment and economic sectors create a better understanding of the different needs and requirements. It is recommended that Romania establish a National Cycling Officer (NCO) and County Cycling Officers (CCO)- fully dedicated to cycling. An effective NCP and CCO should: (a) be intersectoral (i.e. acknowledging links to other related policies as health and environment) (b) identify guiding principles for cycling promotion (c) identify actions to promote cycling with a clear implementation mechanism, including timeframe, deadlines and responsibilities.</p>	2020-2025	Organizations (interest associations and societies) involved in cycling transport private companies (developers)	Local authorities (towns and municipalities) Ministry of Tourism of Romania
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Source: Strategic status quo analysis; Department of Transport and Main Roads, A guide to signing cycle networks, July 2009

3.6 Policy recommendations on cycling tourism for Serbia

3.6.1 Introduction

Cycling tourism in Serbia is not recognized as a special thematically type of tourism, and it is classified as recreation, adventurism or a sport / if it is competitive cycling /, in the Strategy tourism development of the Republic of Serbia 2016-2025. Ministry of Tourism and national/ local tourist organizations encourage cycling tours in projects.

There are many local cycling clubs that deal with competitive cycling, organizing competitions, and training young people. These clubs rarely organize local tour for the population, let alone for cycling tourists.

The tourism strategy for Serbia is outdated, and doesn't address the development directions of cycling tourism, although there are resources on country level. Some parts of the territory are plains, suitable for the construction of bicycle paths, marking local paths and connecting with EUROVELO routes (there are three EuroVelo routes that pass through Serbia). In addition to the plains, the mountainous areas of Serbia are suitable for mountain/cross-country cycling, which generate a high level of adrenaline in tourists. Some regions within the country are making efforts to provide, to the local population, the possibility of safer bicycle transportation by building partial bicycle paths and marking them, but these paths are poorly maintained and there are not enough of them in terms of a connected system of bicycle paths. Apart from a few sites of some cyclists' association, the information about the bike paths is scarce and incomplete, and there are hardly any adequate information boards placed out. (Such boards are mostly placed along two signposted EuroVelo routes, No. 6 and No. 13.)

A few years ago, the Danube Competence Center Belgrade (Dunavski centar za kompetitivnost Beograd) set up recognizable EUROVELO info boards in the area of Vojvodina, and from Belgrade to the border with Romania and Bulgaria, just to help cyclists who want to reach the Black Sea.

In the years 2004-2005 the route EuroVelo 6 in Serbia was traced and established by Ciklonaut Belgrade with the organizational and financial support of GIZ (German development agency). The route was completely signed in the years 2007-2009, again with the organizational and financial support of GIZ and was then handed to the Ministry of Tourism for the regular annual maintenance of the signposting system.

In the years 2012 the route EuroVelo 13 in Serbia was traced by Ciklonaut Belgrade and then fully developed and formalized in 2014, through the project “ICT in the Southeast Europe” leaded by the ECF and with the DCC („Dunavski centar za kompetitivnost”, Danube Competence Center, Belgrade - the national EuroVelo coordinator) as a partner from Serbia. The route was fully signposted in 2016, with financial support of the Ministry of Tourism.

Public transport is impoverished, but there is constant (although a bit slow) development in that sense.

The railway line Belgrade-Novı Sad - Budapest (the main railway approach to Vojvodina from Belgrade) is under reconstruction, therefore not very suitable for cyclists. To reach Novi Sad, at this moment one has to go first to Batajnica, 16 km from Belgrade, and then take a train to Novi Sad from there. Then there are trains from Novi Sad to other parts of Vojvodina province (to Subotica and Zrenjanin) and to Budapest via Subotica.

The end of the reconstruction for the part Belgrade – Novi Sad (which also means direct approach from Belgrade to Subotica) is scheduled for November of this year and trains will have designated space for bicycles. As for the part Novi Sad- Budapest, the end of the reconstruction is scheduled for 2024. and (although it is expected) it is not clear yet will there be trains with support for bicycle transport.

The buses don't have a storage room for transporting bicycles, except in the compartment where the luggage is transported. The only exception is a bus line Belgrade – Donji Milanovac – Kladovo, which now has a rack for bicycles and provide convenient transport east from Belgrade to the Iron Gates region of the EuroVelo. This is a result of a project conducted by DCC and GIZ and as a consequence of that, passengers can transport their bicycles free of charge. The only minus is that the line is purely promoted and most of foreign cyclists (and even most of domestic ones) do not know about it.

Many local railways are also under reconstruction and there is no information about when they will be put into operation again. (But the process is constant and at this moment main directions east from Belgrade – towards Niš and Bulgarian border – and west/south from Belgrade, towards Croatian/Bosnian border etc, are already reachable by trains that have designated space for bicycles and are marked as such in the online schedules and ticketing systems.)

But still, the tourists who want to skip some distances through the country, must cycle on the public roads outside the settlements, and often in the settlements, which is always a risk.

Although in some parts of the country the bicycle is a traditional mean of transportation, insufficient efforts have been made to provide the local population with safer roads, let alone to recognize this type of tourism as an excellent potential.

The cycling development systems in the EU is a very good roadmap for the future, and it is necessary to include this type of transport in the priorities. Namely, if tourists don't want to ride a bicycle through the country continuously, they have to come by car or in a commercial tour package that will provide transport vehicle, where they will carry their bicycles and ride them at the places where they stop. There are timid first attempts, to ensure the rental of bicycles (electric and ordinary), on some larger destinations, but the system is incomplete, and the bicycles aren't maintained properly.

Cycling tourism and local cycling are promoted by associations, who don't have enough influence or resources to seriously influence decision-makers, to make them treat cycling differently. Cycling is not taken seriously enough, as a resource for development, so there are no relevant strategic documents (the EuroVelo 13 is a nice exception, as a result of the before mentioned development project). Therefore, other types of tourism include cycling in their activities.

Urban planners rarely think about the cycling infrastructure, even though it is an essential need of the population and only through great pressures or in the case of project funding from the EU, it is planned as an integral part of road construction.

Recommendations related to the policy of alternative transport options - cycling, are of a general character and apply to the entire territory of the country, so that preferably in the future, examples of good practice from the EU and other developed countries, will be implemented at the national level in Serbia.

3.6.2 Policy recommendations

Providing information to tourists

Providing local information to cycling tourists is of great importance. This includes placing info boards in visible places with important phone numbers, information, websites important for eco-cycling tourists, as well as designing a logo for service providers of eco- cycle tourists that will be recognisable and using it in promotional materials. All the above is not enough, if strong Wi-Fi networks, QR codes and the possibility of obtaining information via mobile phones on bicycle paths are not available. All information that is important for cyclists should be kept on a single platform which is updated continuously. Since there is no special strategy for cycling tourism in Serbia, it is extremely important to drive a national campaign that will primarily deal with a unique system of marking cycling routes, providers, services and everything for the need of the cyclists.

Building partnerships

When we are talking about building partnership first of all it is very important to create a database of all tourism service providers that in some way appear on the supply side in cycling tourism. On the other hand, it would be interesting to create shorter and longer tours, along a natural asset or about natural wealth, which pass near a Eurovelo route, but also separately from it, in order to connect individual thematic tours, not only in terms of cycling tourism, but also such topics that can be reached by bike. After this, a good cooperation's should be established. Especially, Cooperation with other providers of tourist services. They should cooperate and develop new projects and joint tourist products, packages. Further, Cooperation of local population and tourists: every resident of the local community who rides a bicycle should be an ambassador of eco-cycling tourism, to give information to tourists, guide them, help with bicycle repair. Last but not the least: regional cooperation is very important in order to develop joint program packages, tours, with joint marketing and market presence and to harmonize of the offer with the criteria at regional level.

Quality improvement

Quality improvement includes: Training service providers (multi-level training of stakeholders on tourism-related skills for providing a uniform offer) and establishment, implementation and maintenance of quality systems (development of a quality system specially adapted to cycling tourism, introduction of a system for service providers and its periodic review)

Development of transport approach

With regard to transport, the development of attitudes has significant development potential. Transport is undergoing constant renewal, newer and newer trends are emerging, one of the features of which is the ecological approach. As most modes of transport are highly polluting, the widest possible use of environmentally friendly transport in terms of environmental policies cannot be ignored. The essence of this intervention is to steer the population in the direction of environmentally friendly modes of transport, by promoting them and highlighting their benefits. Attitudinal development should start at a young age and be extended to all age groups in order to reach the widest possible circle and thus ensure long-term results.

Infrastructure development

Infrastructure development includes maintenance and building new bicycle paths, resting areas, complex resting areas and installation of public bicycle systems. When talking about bicycle paths it is important to reconstruct and construct new clearly marked and safe local trails, marking objects that are eco-cycle friendly. Small resting areas should be built for short stops, with safe storage and parking lots. Complex resting areas should be suitable for camping and meals, with complete infrastructure. Installation of public bicycle systems means construction of micro and macro-regional system of public bicycles that can be used not only in the city / settlement, but also in the region.

Traffic counter

Installation of equipment for counting traffic on busier bicycle paths should be useful for further planning of cycle tourism.

Intermodal development

A common form of cycling tourism is hiking in a remote area. You have to get to the countryside by another means of transport, which can be a personal vehicle or public transport. The aim of this intervention is to achieve the possibility of transporting bicycles on various means of public transport, especially rail, as most hikers like to hike on their own bikes. As we also take into account international relations, there is a need for interstate cooperation, which can only be implemented by state bodies. The aim is to set up wagons in rail transport that are suitable for transporting bicycles, so that journeys of up to thousands of kilometres can be made, so that cycling tourists can discover destinations that have not been available to them until now.

Table 7: Summary of the policy recommendations for Serbia

Priority Topic	Recommendation	Status Quo Description	Proposed Policy Change Description	Date for Implementation	Affected Stakeholder(s)	Final Recipient(s)
1. Providing information to tourists and creating a national ecotourism image	Providing local information to cycling tourists (info boards, online, maps)	There is only a Eurovelo 13 signpost and there is no information. International routes EuroVelo 6 and route Sava are also completely signposted.	- placing info boards in visible places with important phone numbers, information, websites important for eco-cycling tourists	2020-2021	NGOs Local self-government	Domestic and foreign cycle tourists

	Unique national signalisation	<p>Apart from the Eurovelo signposts, other signposts are diverse.</p> <p>EuroVelo signposts have their own design, and for all other (domestic) routes there is a different, unique design specified in the National master plan for tourist signalization.</p>	<ul style="list-style-type: none"> - building a system that is easily recognisable and wherever tourists go, they can get the same information during the cycling tour 	2020-2025	<p>NGOs at national level</p> <p>State institutions</p>	<p>Domestic and foreign cycle tourists</p>
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	Connection to the Eurovelo system	Except for Eurovelo signs, the system is not customized. Same comment as above.	marking, building and organising the necessary promotion of all three Eurovelo routes through Serbia	2020-2025	NGOs at national level State institutions European institutions	Domestic and foreign cycle tourists
	Creating a national image	There is no unique recognizable logo, approach and system for cycling tourism	intensifying national media campaigns on cycling tourism as a sector with excellent potential in Serbia	2020-2025	State institutions Sports and cycling associations Travel agencies	Domestic and foreign cycle tourists
	Targeted advertising for cyclists	On a very short scale	targeting of the developed cycling tourism packages to potential tourists		NGOs Local and state institutions Receptive travel agencies Cyclo friendly accommodation	Tourist receptive agencies Cycle tourists

2. Building partnerships	Database of service providers	There is no unique register of service providers	Creating a database of all tourism service providers that in some way appear on the supply side in cycling tourism.	2020-2021	NGOs	Tourist receptive agencies Cycle tourists
	Developing thematic bike tours	A small number of well-known trails in public	<p>Creating shorter and longer tours, along a natural asset or about natural wealth, which pass near a Eurovelo route, but also separately from it, in order to connect individual thematic tours, not only in terms of cycling tourism, but also such topics that can be reached by bike.</p> <p>Organising additional creative workshops for crafts or so-called survival tours.</p>	2020-2025	NGOs	<p>Tourist receptive agencies Cycle tourists Local sport associations</p>

	Cooperation with other providers of tourist services - development of joint tourist products, packages	Tourism service providers cooperate very poorly	Integrating other tourist products with eco- cycling tourism in the offer: wine routes, cultural-historical objects, events, gastronomic routes, recreation and spa, forest and meadow trails, theme parks, attractions Encouraging the sale of local products and networking of service providers.	2020-2030	NGOs Travel agencies Other travel service providers	Tourist receptive agencies Cycle tourists
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	Cooperation of local population and tourists	The local population is partially aware of the trails or is not sufficiently informed to be able to provide comprehensive information	Every resident of the local community who rides a bicycle should be an ambassador of eco-cycling tourism, to give information to tourists, guide them, help with bicycle repair Organising joint local tours of eco-cycle tourists with the local population	2020-2028	NGOs Forums through local communities	Tourist receptive agencies Cycle tourists
	Regional Cooperation	There are advances in cooperation that need to continue	Inside and outside the country, development of joint program packages, tours, with joint marketing and market presence Harmonisation of the offer with the criteria at regional level	2020-2030	NGOs Local and state institutions Sport and cycling associations	Tourist receptive agencies Cycle tourists

3. Quality improvement	Training service providers	They are not sufficiently informed what standards they need to meet for cycle tourists	Multi-level training of stakeholders on tourism-related skills for providing a uniform offer	2020-2021	NGOs Cycle associations	Tourist receptive agencies Cycle tourists
	Establishment, implementation and maintenance of quality systems	Accommodation and other providers should expand the quality system to the requirements of cyclists	Development of a quality system specially adapted to cycling tourism, introduction of a system for service providers and its periodic review	2020-2030	Service providers and accommodation facilities	Cycle tourists
4. Development of transport approach	Local population	Not enough is being done to raise awareness because the cycle infrastructure is not maintained regularly	Raising public awareness about eco-cycling tourism and educating local population about the potential of eco-cycling tourism Development of transport attitudes, especially	2020-2030	NGOs Sports associations Local government	Local people

5. Infrastructure development	Bicycle paths	Infrastructure is neglected and unmaintained, somewhere devastated, slow construction of new ones	<ul style="list-style-type: none"> - constructing clearly marked and safe local cycle paths - reconstruction and construction of new bicycle paths 	2020-2030	Local self-governments and state institutions Public enterprises	Local people Cycle tourists
	Rest areas	There are resting places for cycle tourists at some longer parts of the EuroVelo 6 and a few of them on the EuroVelo 13. There is a certain number of resting places on other defuined domestic routes.	Construction of bicycle rest areas of small dimensions, for short stops, with safe storage, parking lots	2020-2030	NGOs Local self-governments Public companies	Local people Cycle tourists

	Complex rest areas	There is only one such place, on Serbian-Romanian border.	Construction of a rest area for cyclists suitable for camping and meals, with complete infrastructure		Local self-governments and state institutions Public companies	Local people Cycle tourists
	Installation of public bicycle systems	There are only private initiatives on a small scale, and public system in some cities.	construction of micro and macro-regional system of public bicycles that can be used not only in the city / settlement, but also in the region	2020-2030	Local self-governments and state institutions Public companies	Local people Cycle tourists
6. Traffic counter	Installation of equipment for counting traffic	It does not exist in the region, except on the EuroVelo 6 route: in Belgrade, at the Entrance of the route to Serbia from Hungary and Croatia, and in the Iron Gate area.	Equipment for counting traffic on busier bicycle paths	2020-2030	NGOs and local self government Public companies	Local people Cycle tourists

7. Intermodal development	Connecting various forms of transport, especially modern electric systems	Public transport does not recognize the cycle of need, the railways are under reconstruction. In the recent years new train sets appeared on all major domestic routes and the trains have designated space for bicycles.	Initiating the integration of bicycle traffic with public transport systems, ensuring safety	2020-2030	State institutions Local government Public companies	Local people Cycle tourists
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Source: Strategija razvoja turizma Srbije od 2016-2025 godine

3.7 Policy recommendations on cycling tourism for Slovakia

3.7.1 Introduction

Like other countries in Europe, Slovakia has experienced a boom in the development of bicycle transport and increased demand for cycling. The use of cycling in leisure and recreation is growing. The development of infrastructure to support recreational activities and recreational cycling stimulate tourism and at the same time contribute to the economic recovery, especially of rural communities.

We can talk about cycling as a specific form of tourism, which, however, requires quality infrastructure. It requires built and marked cycling routes according to the degree of difficulty and the necessary tourism infrastructure on the route (restaurants, accommodation facilities, etc.). It has the character of road cycling or mountain tourism according to the location of cycling routes and the nature of the terrain.

The Slovak Republic officially has more than 13,000 km of marked cycle paths and several strategic documents have been prepared, which, in addition to the topic of bicycle transport, also deal with the issue of cycling tourism. Since 2013, the Ministry of Transport, Construction and Regional Development has prepared various national strategic documents: National Strategy for the Development of Cycling and Cycling in the Slovak Republic, Support for Hiking and Cycling, Tourism Development Strategy of the Slovak Republic until 2020, National Strategic Reference Framework 2007-2013, Rural Development Program of the Slovak Republic 2007 - 2013, Tourism Development Strategy of the Slovak Republic until 2013.

One of the most important milestones in the history of the development of bicycle transport in Slovakia is considered to be May 10, 2019, when the National Council of the Slovak Republic approved the “Act on the Provision of Subsidies to Support the Development of Bicycle Transport and Cycling. The law was a response of the Slovak government to the growing demand for cycling infrastructure. We can say that today there is nothing to prevent Slovakia from significantly supporting the ecological form of transport over shorter distances and also cycling, which is important for the development of tourism in Slovakia.

In order for everything to work as it should, in addition to national strategies, the cooperation of organizations and various entities operating in the field of bicycle transport and cycling tourism is important. Equally important is the creation of regional strategies, concept papers and action plans. The strategy for the development of cycling and cycling tourism in the Košice self-governing region, the strategy for using the potential of the Trenčín self-governing region for the development of cycling infrastructure are positive examples of policy implementation and creating additional conditions for cycling support in the regions.

In the context of cycling, it is important to think primarily of the users themselves (cyclists). Families with younger children and less able cyclists prefer shorter safe routes with a solid surface and less elevation. Families with older children also dare to take longer routes and combine cycling with a visit to cultural monuments and a stay in nature. We must not forget the long-distance cyclists who are on the road for several days and need quality services. The last group are sports and mountain bikers who use bicycles for active sports. They cycle on long or demanding routes with a large elevation gain. They participate in various competitions and mass events such as marathons. They ride on all surfaces, including challenging roads in mountainous terrain and in bike parks. For these reasons, too, it is important to think primarily about the needs of the users themselves when designing measures.

3.7.2 Policy recommendations

Network development and modernization of tourist cycling routes

One of the main conditions for the development of cycling tourism is to improve the state of cycling facilities in Slovakia in order to connect existing cycling routes into a comprehensive network, complete cross-border corridors and define the main international corridors. Cycling routes are marked in such a way that they pass through towns, villages and extra-urban areas, on state roads, local and special-purpose roads, in various natural environments and prioritize tourist destinations. In particular, there are routes with a safe, quality surface for families and recreational cyclists. In some places, the problem is continuity and links to neighboring regions. There are no routes for demanding and technically skilled cyclists and bike parks.

Development of additional services and additional infrastructure for cycling

It is important to support programs that will help improve basic services for cyclists. In particular, it is about improving the links between cycling and other modes of transport. An equally important factor is the improvement in the area of accommodation, catering and information services offered to cyclists. It is also important to support existing and create new storage rooms, bicycle service, but also smaller additional infrastructure such as bridges, footbridges, rest areas, etc., which can be part of the bike path.

Raising awareness and promoting the development of cycling and cyclo traffic

In addition to the construction of cycling infrastructure, it is important to systematically inform the public not only about ongoing activities, but also the importance and impact on health, lifestyle and the support of ecological transport to work or various trips. Properly chosen communication and better information will make the topic of cycling more accessible to various target groups. It is important to organize Education - seminars, workshops, conferences, excursions, traffic education and public discussions.

Marketing and promotion of cycling and bicycle transport

Tourism products combine accommodation, catering and transport services, services of tourist attractions, agencies, travel agencies, destination marketing organizations, etc. The aim of marketing is, in cooperation with actors in the field of tourism, to create and promote a tourist offer and products that will reflect the requirements of domestic and foreign visitors. Cycling and bicycle transport can be promoted in various ways: press, TV spots, internet, events, promotional and information materials, exhibitions and tourism fairs at home and abroad. However, forms of marketing and promotion must be adapted to the target groups.

Table 8: Summary of the policy recommendations for Slovakia

Priority topic	Recommendation	Description of status quo	Description of proposed recommendation	Date	Afected partners	Final recipients
1. Modernization	Network development and modernization of tourist cycling routes	There is no comprehensive network of interconnected cycle paths with a safe, high-quality surface for various user groups. In some places, the problem is continuity and links to neighboring regions. There are no routes for demanding and technically skilled cyclists and bike parks.	Improving the state of cycling facilities in Slovakia in order to connect existing cycle routes into a comprehensive network, complete cross-border corridors and define the main international corridors.	2020-2030	Ministry of Transport and Construction of the Slovak Republic Ministry of Investment Regional Development and Informatization of the Slovak Republic Associations and organizations operating in tourism	Small and medium-sized enterprises Tourism organizations Non-profit organizations Municipalities Cities Legal entities and entrepreneurs

2. Additional services and infrastructure	Development of additional services and additional infrastructure for cycling	<p>The biggest problem is the lack of infrastructure and services on the bike paths that connect various tourist attractions. This often discourages visitors. Better services = more visitors, which is important for the development of tourism.</p>	<p>Support programs to help improve basic services for cyclists. In particular, it is about improving the links between cycling and other modes of transport. An equally important factor is the improvement in the area of accommodation, catering and information services offered to cyclists. It is also important to support existing and create new storage rooms, bicycle service, but also smaller additional infrastructure such as bridges, footbridges, rest areas, etc., which can be part of the bike path.</p>	2020-2030	Ministry of Transport and Construction of the Slovak Republic Ministry of Investment Regional Development and Informatization of the Slovak Republic Associations and organizations operating in the field of tourism	<p>Small and medium-sized enterprises Tourism organizations Non-profit organizations Municipalities Cities Legal entities and entrepreneurs Local residents</p>
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3. Awareness and promotion	Raising awareness and promoting the development of cycling and cycling	<p>Although cycling has become quite popular in recent years, people mostly use other transport options in the region and visit attractive places. Good education, better information about the possibilities of cycling or the promotion of a healthy modern lifestyle would significantly help cycling.</p>	<p>In addition to the construction of cycling infrastructure, it is important to systematically inform the public not only about ongoing activities, but also the importance and impact on health, lifestyle and the support of ecological transport to work or various trips. Properly chosen communication and better information will make the topic of cycling more accessible to different target groups. It is important to organize Education - seminars, workshops, conferences, excursions, traffic education and public discussions.</p>	2020-2030	Ministry of Transport and Construction of the Slovak Republic Ministry of Investment Regional Development and Informatization of the Slovak Republic Associations and organizations operating in the field of tourism	<p>Small and medium-sized enterprises Tourism organizations Non-profit organizations Municipalities, cities Legal entities and entrepreneurs Local residents</p>
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4. Marketing and promotion	Marketing and promotion of cycling and bicycle transport	<p>There is a lack of targeted marketing and promotion of existing services as well as mutual cooperation of various actors. Cyclists are looking for information about various products. Well-targeted campaigns would certainly help to develop more effectively.</p>	<p>Tourism products combine accommodation, catering and transport services, services of tourist attractions, agencies, travel agencies, destination marketing organizations, etc. The aim of marketing is, in cooperation with actors in the field of tourism, to create and promote a tourist offer and products that will reflect the requirements of domestic and foreign tourists.</p>	2020-2030	Ministry of Transport and Construction of the Slovak Republic Ministry of Investment Regional Development and Informatization of the Slovak Republic Associations and organizations operating in the field of tourism	<p>Small and medium-sized enterprises Tourism organizations Non-profit organizations Municipalities Cities Legal entities and entrepreneurs Local residents</p>
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Sources: Stratégia využitia potenciálu; Trenčianskeho samosprávneho kraja pre rozvoj cyklistickej infraštruktúry; Cykloturistika v regionálnom rozvoji cestovného ruchu nitrianskeho samosprávneho kraja; Národná stratégia rozvoja cyklistickej dopravy a cykloturistiky v Slovenskej republike; Stratégia rozvoja cyklistickej dopravy a cykloturistiky v Košickom samosprávnom kraji

4. Policy recommendations regarding cycling tourism in the Danube region

4.1 Strategic planning

Strategic planning is essential, because unforeseen effects are common for destinations and tourism providers. Thoughtful planning is needed to counteract these.

There aren't national cycling tourism strategies in the examined area, separated national tourism strategies and national cycling strategies exist. National cycling strategies are in different stages (non-existing, not updated, updated) in the Danube region. The question arises, in what form could the countries learn from each other most effectively. Experts from cycling field agreed that knowledge transfer is the best through study trips, stressing the importance of continuous cooperation.

"Normally we learn from the experience of cyclists who came to Romania from Western-Europe, they can tell us the differences between countries. But is not enough, a partnership is needed between institutions and cycling clubs from the EU countries, a constant change of information." (Romania)

This is not easy because there is often no budget for that. *"Visiting each other only makes sense if the key stakeholders are there and they discuss the main topics, like infrastructure, marketing, safety."* (Austria) There is a general lack of practical study tours with experts from/in countries with well-developed cycling tourism and cycling infrastructure, and with strong legal, institutional, and organizational support. *"Study tours in less developed countries in this sense with experts from more developed countries would be very valuable too."* (Serbia)

There are European countries, which could serve as good examples for a well-thought-out/well elaborated national cycling tourism strategy. Austria could be a good example, not only because of the strategical thinking but the state of the infrastructure and the mentality makes it the most developed cycling country along the Danube. *"Cycling tourism is demand-oriented and the strategies should follow this. In the last 30 years river-cycling paths became popular and good strategies take this into consideration. [...] Successful strategies are concentrating on day-to-day cyclists and cycling tourists as well. 70% of cyclists stay local, only 30% are willing to make greater distances."* (Austria)

“A good strategy has to start with legal regulations and infrastructure, increasing the knowledge of advantages of cycling tourism with promotion activities, like organisation of bike rides along the Danube, with journalists, cycling club members, politicians, etc.” (Romania)

Switzerland’s cycling strategy was named as good practice by three experts because of its range. The Swiss strategy interconnects the main types of tourism activities. The development started in 1998, it took only three years to develop Veloland (<https://www.schweizmobil.ch/de/veloland.html>) in a professional way. The Swiss national tourism organisation’s main problem was to bring the different regions together.

Based on the opinion of two experts, Germany has a good national strategy aiming for: Let’s keep Germans in Germany! The most important decisions are taken not on national, but on regional level. According to the Serbian expert the German strategy shows *“realistic ways to establish a sustainable and coordinated cycling tourism offer and deals with government structures (lobbying, implying public pressure)”*.

Denmark is another good practice example, starting to build its national network in the ‘90s. Denmark is a good example from a traffic point of view, not from a touristic point of view. Namely, it rather connects A and B in an efficient way, than showing touristic attractions around the cycling route.

Monitoring is one of the most neglected areas in cycling tourism. Data should be collected for more efficient (environmentally friendly) planning regarding the impacts of cycling tourism on the natural environment. Cycling tourism should be planned (as “normal tourism”) from the market demand and with an open communication process to all stakeholders – including environmental organisations. ECF/Eurovelo and ADFC have published guidance on the route development process. In this process ecologists should be involved, even in the phase of planning the infrastructure. Currently, however the environmental impact is seldom part of the analysis.

The communication is an essential part of the process as well.

“In protected areas it has to be explained, why it is protected. It is a knowledge process.” (Germany)

The status of the natural environment should be constantly monitored, how the tourist flow has an impact on the nature (are the animals frightened and affected by noise, are the species moving out from the territory). Data has to be collected and used scientifically.

The EcoVeloTour project has the aim to link cycling tourism and ecotourism. Therefore, we need to find the answer to that question, how can the concept of ecosystem services (the services nature provides e. g. wood from the forest, clean air, drinkable water, calmness while spending time in nature) be highlighted when developing cycling tourism. Cyclists are generally concerned about the environment, their activities are sustainable, if they do not arrive by car to their cycling destination. The impact of cycle tourism on the natural environment is much lower than other tourism infrastructures. All interview partners stressed that cyclists are generally interested in nature, the target group is environmentally friendly. *“Cyclists are part of nature.”* (Slovakia) They *“love all nature-near services, in rural areas they are seeking for small shops and support locals. Everybody, even the churches can earn along the trail. Some directly, some indirectly.”* (Germany) For cyclists the main motive to travel is nature, *“cycling tourism is itself an ecotourism activity.”* (Romania) Building infrastructure, which does not harm ecosystems and giving information to the wider public about natural treasures and the way of protecting them are essential. The experts agreed that giving information about the ecotourism services has high potential, because it offers opportunities for teaching and explaining, and cycling tourists are interested in them.

Despite this there are few problems regarding the environmental impact of cycling.

“There are some places (in Austria, along the Danube) where overtourism is a huge problem. There are some methods of visitor management (wider trails, more rest stations, toilets, litter bins, often emptying of the litter bins), but the consequences (what happens if wild animals eat the garbage) of overcrowded trails are hard to measure. Also, hard to identify how much additional traffic is caused due to cyclists going somewhere by car to cycle there. The mountain bikers are often accused to destroy the flora and fauna.” (Austria)

The problems arisen due to enhanced tourism activities need to be addressed and counterbalanced. The development of a unified measurement and evaluation system will allow determining regional or even attraction-level tourist load-bearing capacity as well as environmental impacts. With this, responsible authorities can signal (possibly with public involvement) any negative trends and immediately may intervene. This is the only way to ensure that the planned increase in tourist traffic does not lead to a deterioration of the environment neither jeopardize the quality of life of the local population. Furthermore this kind of system contributes to that the affected attractions do not become unenjoyable and that the affected environmental values and their quality do not deteriorate significantly.

Further questions arise like

“Would tourists be ready to use more nature-friendly ways of accommodation in sensitive areas? (camping, eco-villages, etc.)”

“How they (think to) respect the natural environment? It is important to reveal their concerns, suggestions, mistakes (on their side and on the side of local authorities, hosts, etc.)” (Serbia)

Statistics (e.g. number of tourists, length of stay, consumption (quantity), sort of accommodation used) should be collected for planning regarding the cycling tourism flows in the Danube region in order to avoid the volume of tourism harmful for the natural environment and for the local communities. Tourist database should also contain environmental data.

Network of counters on the routes is not enough, *“a good monitoring system is needed, questionnaires for tourists, national parks”*. (Serbia) *“Systematic surveys, manual data collection is needed, asking for demographic specifications, origin, motivation. The minimum standards can be found on the Eurovelo website.”* (Hungary)

According to experts the touristic behaviour should be monitored as well, cycling tourism is a great chance for regional development.

“A cyclist would never ask for German beer in Romania, he prefers local products.” (Germany)

This is in line with efforts addressing rural development, increasing the supply of traditional, local products and services based on local resources, as well as enhancing awareness and demand for them.

Even regarding the monitoring, it is worth to look at good practices. The national cycling tourism analysis data of ADFC could serve as a good practice (<https://www.adfc.de/dossier/radreiseanalyse>).

“Lower Austria has a good monitoring scheme (evaluation of usage, spending). They started to focus on overtourism and face their failure.” (Hungary)

We asked the experts, in which areas should the countries along the Danube cooperate with each other regarding cycling tourism, what common goals should they set. As mentioned earlier the knowledge transfer is key to success.

Our interview partners made the following recommendations to enhance cooperation and to set common goals for the countries or for regions with similar characteristics:

- developing high-standard infrastructure (4 meters wide trails, enough stops and toilets),
- building routes along the borders (e. g. Hungary-Slovakia)
- initiating local collaborations regarding cycling services (ongoing CZ-PL-SK-HU project)
- enhancing promotion (outside the region, because the countries are inside rivals),
- developing good signposting,
- enhancing digitalization (trend in the last 5-6 years),
- ensuring safety (no crossing on high-speed roads, max. 50-70 km/h),
- sharing specific knowledge,
- building common strategies,
- strengthening tourism capabilities.

“One interesting approach could be the one that is already used by national parks and other protected areas along the Danube: zones with similar natural and/or topographic characteristics connect more tightly because their problems, solutions and strategies are naturally more alike. For example, Nature reserve Wachau that has attributes of a gorge, maintains strong relations with similar areas along the river (Iron Gates National Park, etc.)” (Serbia)

“The connections between the countries at the border points should be developed, the financial resources should be allocated in the border areas.” (Bulgaria)

The experts were asked, which organization should initiate and manage cooperation among the countries. Their opinions were diverse.

“In my opinion the initiation of cooperation should start from Eurovelo, state institutions, the traffic police, parks and reservations administrations, cycling clubs and tourism actors. All of them should create a new department within their organisation with members from all parts involved.” (Romania)

“Eurovelo could play a role, but it has no capacity for that. It could give the frame, but it has no separate budget for that. The Danube Commission deals with other topics. The International Cycling Federation would be suitable, which covers the whole Danube area.” (Austria)

“An international working group led by tourism organisation would be the solution. The most relevant stakeholders should manage the development, including the concerns of environmental protection.” (Germany)

“Setting up a new organisation would be too ambitious; collaboration would be enough.” (Slovakia)

The German expert made it clear that the most difficult task regarding collaboration is the involvement of stakeholders, it is hard to reach their involvement. If the challenges are big, stakeholders come faster together with more enthusiasm.

4.2 Legislation and administration

The interviewed experts agreed that there are deficits in the legislation of cycling tourism in some countries in the Danube region. The Highway Codes should be improved and made more cycling friendly (e.g., minimal distance for overtaking a cyclist: 1,5 m). The signposting systems should be harmonised, and the guides should be certified. The regional roads are loaded with heavy traffic, the reconstructions should incorporate cycling trails as well. *“No one wants to cycle next to cars.” (Germany)*

The experts' opinions regarding legislation were highly different, depending on the status of development and the administrative structure of the countries. In Austria not the legislation is the most important issue, but the positive attitudes on mayors' level. They decide about building new tracks, about signposting, about maintenance. *“The top-down approach is false, the key message should be: Let us give space to them, do not forget them.” (Austria)*

In less developed countries is the legislation regarding cycling tourism more problematic.

“There are only internal regulations of ministries; although a harder legislation would be needed, not only recommendations.” (Serbia)

“In Romania there is a lack of legislation, so one good law, inspired by an existing law in Western part of the European Union is needed.” (Romania)

“The legislation regarding the standards for infrastructure is different. Hungary and Serbia are better in legislation of signposting standards, while Bulgaria and Romania are dealing only with transport issues, but not with cycling tourism. The requirements of land use are different as well. It would be important to distinguish cycling on roads, in forests, in agricultural areas. The regulation of behaviour of cyclists is solved in these countries.” (Bulgaria)

One of the most discussed issue regarding the legislation of cycling tourism is the general ban on cycling in public forests. Some years ago, there was an initiative in Bulgaria for banning cycling in public forests but cycling organisations were successful to prevent this. All interviewed experts agree in that there is no general need to ban cycling in public forests.

“Generally the forest should be everyone’s.” (Austria)

The pressure, however is growing on the nature. Thus some environmental organizations are fighting against cyclists in forests because they see a risk in off-road cycling, which harms the flora and fauna. According to the Hungarian expert *“the main discussion is between mountain bikers and private forest owners.”* The interview partners suggested different solutions: the Austrian experts opted for non-biking periods: *“giving time to the nature to recover”*, while the German expert was convinced that *“environmental protection should be managed with modern visitor management techniques.”*

Some local organizations see cycling in the forests as a social conflict, part of the overtourism discussions. There are tensions between different bikers as well as between bikers and non-bikers. The separation of horse-riding, biking and hiking trails could be a possible solution. For settling the conflict all stakeholders need to sit down, discuss, and define how many visitors pose the limit for the concerned region.

The legislation could be specific as well, depending on the given situation/destination. The current limitations are not accepted by each expert: *“In nature parks not all the restrictions are acceptable, as long as a forest road exists, it should be used for cycling tourism.”* (Romania) In the legislation *“even the type of bikes could be taken into consideration”* (Serbia), mountain bikes are more aggressive and harmful to the forest environment then trekking bikes.

While looking for the answer to what is the ideal structure to administrate cycling tourism in the Danube region, we have to take into consideration that the national structures are diverse. Hungary is the most centralised country among the Danube countries with a strong national coordination since 2010. It is an effective system, but the national authorities have a possibility to put great pressure on stakeholders. The other endpoints are the most developed countries like Austria and Germany, where cycling tourism is the competence of the federal states based on the subsidiarity.

The importance of the issue is highlighted due the fact that there are ongoing projects regarding administration of cycling tourism along the Danube (https://pro.eurovelo.com/projects/2020-03-03_transdanube-pearls---eurovelo). There is a need for that, because administration is often *“too bureaucratic, there are nonsense standards.”* (Slovakia) The Austrian experts stressed the importance of evaluating cycling related services. External audits are needed to increase the quality of this service. *“A phone line and an email address (feedback loop) have to be set up, which tourists can call or write to if they see a problem on the trail or if they need help.”* (Austria)

The interviewed experts had different notions about the future administration of a common cycling tourism organization. Some saw the most effective solution in an independent new organisation: *“There is definitely need for a central international authority that would deal with all aspects (coordinated development, promotion and lobbying in neighbouring countries, standardization of the tourist offers and services along the whole Danube, etc.). Something like what ECF does in developing, managing, and promoting of the EuroVelo network.”* (Serbia) *“An association with members from Eurovelo, state administrations, traffic police, tourism sector and cycling clubs.”* (Romania) In the opinion of other experts it should be coordinated *“on national level, NGOs could support their activities.”* (Bulgaria)

4.3 Development of infrastructure and services

For realising a transnational Danube cycling tourism product, a considerable amount of financial resources are needed. For tourism projects local, regional, national, and European resources can be combined. According to the interviewed experts more resources would be needed and should be spent in a more harmonised manner. Austria and Germany have been investing steadily for 20-30 years, now rather maintenance and signposting are in the focus. Slovakia and Hungary have had most investments in the last years, they have put incredible amounts in building trails.

The question arises how efficiently these available resources are used currently in the project area. We can state that there are also significant differences between the countries in this topic. In Serbia, Romania and Bulgaria the sources are insufficient, and they are not used efficiently. *“A 300.000 EUR project could be realised from 100.000 EUR.”* (Serbia)

In some countries lobbying is needed for financing by ministries, because local communities can carry out only insignificant projects from their own resources. There are often activities in not satisfying quality (conferences, promotion materials, websites), sometimes with duplications.

“Currently financial resources are used only for not correctly prepared strategies, not for building infrastructure.” (Romania)

“Quality and useful projects with good (specific enough) goals should be set up, these would guarantee the efficiency.” (Bulgaria)

Serbia deals with the additional problem of not being an EU-member and thus not having access to certain EU funds. In Slovakia, the public procurement is the main barrier to develop trails. Signposting and marketing are underfinanced, maintenance is underestimated. Germany and Austria have other mechanism, more sources, more funds. In these countries the key to reach sustainability, thus long-lasting infrastructure and services should be developed. Marketable products are needed, *“money should not come from the government or the EU all the time”*. (Germany)

There are several best practices in the Danube region regarding cycling tourism infrastructure and services. The popular Eurovelo 6 is an example to follow, especially the Passau-Vienna route with *“excellent infrastructure, services, signposting, campaigns”*. (Bulgaria, Romania) The cyclists have to be convinced to continue their route to the Black Sea. Regarding quality measurement it is worth looking at the checklist on the following website: (<https://www.adfc.de>)

With regard to waymarking on low traffic public roads, Serbia would be a good example according to the Hungarian expert.

The interviewed experts were asked about four important cycling services and products: the bicycle sharing systems, the bicycle renting systems, the e-bikes and the public service transportation of bicycles.

The bicycle sharing systems are mainly developed for the local public as means of transportation. It can even be an ideal solution for commuters. (<https://ec.europa.eu/energy/intelligent/projects/en/projects/bike2work>)

The bicycle sharing systems are limited to city centres. Tourists within cities can use them for short distances, but they are not suitable on regional level because of two reasons. First, these bicycles are heavy and not comfortable on the long term, second, they are developed for an “average” user’s weight and height. In Bulgaria there was an attempt for developing a bicycle-sharing system across seven provinces, but they did not attract enough costumers.

For longer distances cycling tourists prefer to bring their own bikes. If it is impossible, holiday guests rent bicycles normally for 1-2 days. Therefore, high-quality renting systems are needed with information points along the Danube. Currently, only a few service providers can survive due to their marketable services, qualified employers, and high demand. *“The best, most usable and attractive way (at the same time a bit futuristic...) would be to offer an international service. One should be able to, for example, pick a bicycle in Vienna or Belgrade, ride to the Danube Delta, and to leave the bike there.”* (Serbia)

The use of electric bicycles is in trend. In Hungary the number of e-bikes reached the number of “normal” bikes, although their prize is quite high for the residents of the country. The process was speeded up in Austria, Germany and Hungary with supported purchase. In Romania and Bulgaria, a transnational project aims to establish a network of electric bicycles in the whole cross-border area to achieve improved sustainable individual transport mobility. (<http://danube-ebike.net/en/home/>)

For the e-bikes technical support is needed, maintenance is necessary along the whole route. The greatest problem: the charging issue is unsolved, the batteries last maximum for one day. There are several types of chargers on the market, therefore users are forced to bring their own chargers on their journey. A low-cost effective solution is not on horizon yet, however better and standardized batteries will solve the problem in the future. In regard to the charging points, we met two different opinions among the experts: *“For a good spread of electric bicycles, a number of charging points have to be made* (Romania) *contra “there is no need for building charging stations, it is possible to charge everywhere, e. g. in restaurants, hotels.”* (Serbia)

The popularity of e-mountain biking is growing as well. However, some national parks in Slovakia are planning to prohibit the usage of e-bikes, because precious nature is destroyed. The Slovak expert named a concrete example: in Kráľova hoľa (Low Tatra) there is a 13 km long uphill section, which could be earlier performed only by few bikers, now many e-bikers are able to beat the ascent.

The experts described the situation of inter-modality and public transport service availability in the Danube region as an area to be improved. The situation is different in individual countries.

“It follows the general level of national development and decreases while going downstream. It is excellent in Germany and Austria, decent in Slovakia, very good in Hungary, and insufficient in Croatia, Serbia, Bulgaria, and Romania. (Source: the first-hand experience from traveling along the Danube in 2015, 2018, and 2019.) (Serbia) In some countries there are “not enough places for bikes, some trains are without bicycle transportation.” (Slovakia)

There is a need for more capacities: based on a research in Germany, 40% of cyclists would use public transport. *“Cycling tourists are keen to not cycle around but to end somewhere, therefore public transport system is needed.” (Germany)* The situation will be better from 2023 on. The European Union is committed to encourage green mobility; thus, it will become much easier for passengers to take their bikes on board.

The current situation is different in terms of means of transport. The transportation of bicycles on ferries is solved. By buses there are successful examples, like shuttle services especially for cyclists. The Passau-Vienna trail was a good example for that, but the service was stopped in 2019. In Germany bus companies work together with cycling organisations, their aim is to fill the vehicles during the week with workers and pupils, at the weekend with tourists. Even outside of the project area there are bus companies with bicycle trailers, e.g. in the Czech Republic there is transfer service from Prague to the mountains.

Cyclists prefer the train as means of transport for convenience. The Tauernradweg was mentioned as an example for transforming an old, not used enough trainline to a vivid one, where traffic is generated mainly by cyclists. The Railjet in Austria was mentioned by the Hungarian expert as best practice for transporting bicycles on trains. There is an obligation to reserve on Railjets in advance, which is not beneficial for spontaneous cycling, but otherwise cyclists may not receive free seats. *“More space would be necessary for bikes and a more flexible reservation system as provided earlier by IC Trains.” (Austria)*

In some countries, uncertainty is also a problem when planning a bicycle trip. *“The situation is unclear. In international trains and buses (e. g. to Serbia) you have to negotiate with the crew if they allow it.” (Bulgaria)*

4.4 Marketing

The interviewed experts agreed that joint promotion of cycling tourism in the Danube region is necessary and is already happening through websites, maps. The region needs a real and honest presentation, *“we must communicate if we have traffic-loaded routes.”* (Bulgaria)

The German expert outlined each step of the process:

1. define the product, target groups = EV6;
2. define acting organisation, involvement of stakeholders;
3. finance (sustainability, co-financed by projects);
4. define message and design campaigns.

Regarding the coordination and financing of these transnational campaigns, experts' opinions had diverging opinions. The Bulgarian experts meant that joint messages should be financed by every country itself. It is already part of the national marketing in case of Germany and Austria. The Serbian expert would give the leading role to an international Danube cycle tourism authority, which should be set up, the campaigns would be financed by the EU. According to the Romanian expert, *these campaigns could be financed “by local administrations or tourism infrastructure owners”*.

Experts recommended that it is easier to make a campaign for a certain cycling product, not a general one for a big area. It would be worth planning the campaign not for the entire course of the Danube. *“A transboundary marketing campaign is most efficient when in all involved countries the same infrastructure, same legislation exists. If this is not the case a campaign should be carried out with more specified details from every country. It can be done punctually, in those areas where, practicing cycling tourism exists at minimum probability.”* (Romania)

With regard to the main message, we got the recommendations: *“under the flagship Danube Cycle Route the diversity could be promoted”* (Hungary), and *“the main message could be the opportunity to spend time in plain air, to see the beautiful landscapes.”* (Romania)

The interview partners named some transboundary marketing campaigns, which serve as best practices in promoting cycling/cycling tourism as a way of experiencing nature. In May 2004, a cycling tour was organised on the occasion of EU enlargement along the Danube through Hungary, Serbia, Romania and Bulgaria. The Danube by Bike project was financed by the European Commission's Directorate General for European Neighbourhood Policy and Enlargement Negotiations.

According to the Serbian expert, one excellent way for promotion could be using a slogan like “*Cycle the protected Danube*”. There are 25 national parks, nature parks and protected areas along the river from the source to the Delta. Cycling from one to the other and visiting them guided by local experts (rangers, biologists, ornithologists, etc.) would give an absolute new and sensational insight of the river. *“Personal experience: after “simply” cycling along the Danube twice, to collect the EuroVelo 6 route data for the ECF, I had the opportunity to do exactly what was mentioned above and was shocked by how different was that experience. (Blogs written for the DanubeParks.org can be seen here:*

<http://www.interreg-danube.eu/approved-projects/danubeparksconnected/section/cycling-the-danube>.”(Serbia)

4.5 Awareness-raising

Raising awareness is one of the most important tasks in each Danube country. We were looking for the answer, how the level of awareness and appreciation of cycling could be increased, and which are the most effective formal and non-formal environmental education methods.

Changing awareness (get out of car) is hard, the motivation for change could be to find not the fastest, but the nicest way to gain experience. In addition to traditional marketing tools like promotion or taking part in fairs, the social media plays a significant role. Influencers could have a great influence. Lobbying at the state authorities can also have a big impact on launching outreach campaigns. *“If we have well informed institutions, it would be easier to inform the public and to create strategies, marketing messages and environmental education methods. In my opinion the most effective environmental education method is the open space method, when we are in the middle of nature, where we can understand the importance of it. The physical connection is the most important.”* (Romania)

The “Bike to work” campaigns could serve as best practice for cycling awareness programme for the Danube region. They have a great impact not only on employees, but even on workplaces.

4.6 Safety

To improve safety in cycling tourism in the Danube region is essential, *“from basics of a touristic product: safety, comfort, nature; safety comes first.”* (Germany) We examined what steps should be done to increase safety.

Safety is mainly a question of infrastructure, less dependent on human behaviour. Road safety is the most important issue because motorisation is increasing. Better infrastructure is needed, and trails should be separated from automobile traffic considering Eurovelo standards. At narrow, but busy places (like roundabouts, bridges) the conditions have to be especially improved. It is worth to follow the EuroVelo Guidance on the route development process.

„The only efficient way is definitely by establishing more and more cycling paths especially in Southeast Europe countries where road infrastructure has insufficient quality and traffic culture is at unsatisfactory level. As enhanced safety is a long-term goal, one must not neglect other, but faster achievable measures to raise awareness e. g. strong public campaigns.” (Serbia) There are also relatively cheap improvements in road infrastructure that can bring significant increases in safety (marking bicycle lanes; solving dangerous local points; panels warning on cyclists in tunnels which are activated when cyclists enter a tunnel, etc.).

The risks are highly different, in Bulgaria and Romania shepherd dogs are walking free, while outside the project area in Croatia mine fields mean considerable risks. Cyclists have to be aware of local rules, of local circumstances, of how to cycle on different types of roads. Law enforcement is necessary, if there is a lack of respect towards each other.

For developing cycling tourism in the Danube area, we have to consider the strengths, weaknesses, opportunities and threats. The SWOT analysis is one of the oldest and most widely used methods of strategic planning, ready for the structure and evaluative summary of complex ideas. With the help of strategic directions, projects can be designated. The SWOT analysis was based on the interviewed experts' view.

Strengths:

- Danube is an attractive geographical area
- *“It is a big thing to cycle from the source to the Black Sea”* (Germany)
- A lot of rural areas – populated enough, but the settlements are mainly in cycling distance
- Being such a long river, the Danube offers an incredibly valuable and attractive insight to different histories, cultures and ways of living
- Good mixture for different target groups, some adventurous parts (hilly ones)
- Possibility to cycle in the forests
- Many bottom-up approaches in cycling tourism

Weaknesses:

- Uneven quality of infrastructure, scope and quality of the tourist offer
- Density of population (RO and BU: the settlements are too far from each other)
- Far from the source markets (with the exceptions of Austria and Germany)
- In the South-Eastern part of Europe there are no certified cycling-friendly services
- Cycling is not a recognized tourism activity by all local and national authorities
- Safety problems (sharing road with cars, busy roads)

Opportunities:

- Growing interest in cycling and active holiday
- “*Follow the water*” approach is popular among cyclists
- After Budapest downstream undiscovered part of Danube – unknown area – inspiration for many tourists
- History of cycling tourism in Germany and Austria with great demand
- More income and free time in the new EU member states
- Potential breakthrough for underdeveloped regions

Threats:

- Different countries and endowments, hard to harmonise
- Less developed countries at the lower reaches of the Danube
- Growth of traffic Budapest downstream (lack of separated cycling trails)
- Intensifying motorization (less suitable for cycling routes)
- Lack of interest of state institutions

5. Conclusions

The project partners overviewed the current situation of their own countries using desk research and formulated national policy recommendations. They revealed that there are seven areas to improve regarding cycling tourism: 1. strategic planning, 2. development of infrastructure, 3. development of services, 4. legislation and administration, 5. marketing, 6. awareness-raising and 7. safety. The summary of these recommendations can be found in Table 9.

Table 9: Summary of national policy recommendations

Strategic planning		Development of infrastructure	Development of services	Legislation and administration	Marketing	Awareness-raising	Safety
Austria		Extend and update cycling infrastructure	Improve inter-modality and public transport service availability	Lift general ban on cycling in public forests	Continue successful marketing campaigns like “You like it? Bike it!” to promote cycling as a way of experiencing nature and the mountains		
		Extend or establish public bike sharing systems					
Bulgaria	Planning and implementation of the bicycle routes in Bulgaria		Realization of the product on the Danube bicycle route	Adoption of legal framework for the development of bicycle routes in Bulgaria			
Germany (Bavaria)	Improve the regulatory framework for cycling and harness potential				Promote cycling as a component of an integrated transport and mobility policy	Contribute towards tackling societal challenges	

	Implement the vision of “cycling as a system”					
Hungary	More effective coordination and supervision regarding tender projects	Developing and harmonisation of bicycle-sharing systems and supporting the spread of electric bicycles	Development of services in cycling tourism	More effective coordination in the organizational structure responsible for cycling policy	Marketing and awareness-raising actions for cycling and cycling tourism	Creating safety in cycling tourism and education
	Strategic planning using a complex approach to transport and development of infrastructure					
Romania	Developing and implementing a national cycling plan	Mandatory establishment of bicycle parking spaces in residential areas, public institutions and office buildings		Adoption of a legal framework on the creation and approval of cycling routes		Development of the Cycling Awareness Programme

	Systematic collection of data on cycling			Creating strong “cycling working groups” and appointing National Cycling Office and County Cycling Officers		Using cycling as a tool to promote physical activity and thus improve health	
Serbia	Building partnerships	Quality improvement			Providing information to tourists		
	Traffic counter	Infrastructure development	Development of transport approach				
			Intermodal development				
Slovakia		Network development and modernization of tourist cycling routes			Marketing and promotion of cycling and bicycle transport	Raising awareness and promoting the development of cycling and cyclo traffic	
		Development of additional services and additional infrastructure for cycling					

Source: own research, 2020

Based on these national analyses, transnational empirical research was carried out by the research team of the Corvinus University of Budapest. The Corvinus team carried out expert interviews from seven project countries for developing regional policy recommendations. Findings of our qualitative study show that the most effective way of knowledge transfer is organising study tours and site visits. It is worth studying good, well established national cycling strategies. The Austrian, German, Danish and Swiss strategies were recommended to study more deeply.

Several data regarding the impacts of cycling tourism on the natural environment should be collected for more efficient (environmentally friendly) planning. The status of natural environment should be constantly monitored, e. g. how and to what extent the tourist flow impacts the nature. The data has to be collected and used scientifically. This gives a clear guide for policymakers to make natural environment more important in strategies and in realising cycling tourism projects.

In order to enhance cooperation among countries of the project area, the following common goals should be achieved:

- developing high-standard infrastructure,
- building routes along and crossing borders,
- initiating local collaborations regarding cycling services,
- enhancing promotion,
- developing good signposting,
- enhancing digitalization,
- ensuring safety,
- sharing specific knowledge,
- building common strategies,
- strengthening tourism capabilities.

Regarding legislation, the Highway Codes should be improved and made more cycling friendly in the examined countries. The signposting systems should be harmonised, and the guides should be certified. The regional roads are loaded with heavy traffic; thus, the reconstructions should incorporate cycling trails as well.

The interviewed experts agreed that more resources would be needed, but currently there are great differences in their methods of use. In Austria and Germany currently rather maintaining and signposting are in the focus, Slovakia and Hungary had most investments in building trails in the last years.

By synthesizing the suggestions of all project countries, we can conclude that governments and policy makers across the Danube region should be concerned with development or improvement of intermodality, bicycle renting systems and spread of e-bikes. (The bicycle-sharing system are not in focus of touristic development; these bikes mean mainly means of transportation for the local population).

The experts had the opinion that joint promotion of cycling tourism in the Danube region is worth, but they had different views regarding the method of execution, the responsible organisation and the financial sources.

Two important issues, the awareness-raising and safety were described by the experts as essential tasks.

Formal and non-formal environmental education methods have to be used for convincing people to get out their cars and use bicycles. Outreach campaigns launched by NGOs and state institutions have significant effects. The safety is mainly a question of infrastructure, less dependent on human behaviour. Therefore, better infrastructure is needed, and trails should be separated from automobile traffic based on Eurovelo standards.

Table 10: Summary of regional policy recommendations

Strategic planning	<p>Developing well-thought-out / well elaborated national cycling tourism strategies</p> <p>Building infrastructure, which does not harm ecosystems and giving information to the wider public about natural treasures and the way of protecting them</p> <p>Planning cycling tourism from the market demand and with an open communication process to all stakeholders including environmental organisations</p> <p>Ensuring knowledge transfer through practical study trips with experts from / in countries with well-developed cycling tourism and cycling infrastructure, and with strong legal, institutional, and organizational support</p> <p>Collecting data for more efficient (environmentally friendly) planning regarding the impacts of cycling tourism on the natural environment to avoid the harmful volume of tourism for the natural environment and for the local communities.</p> <p>Developing a unified measurement and evaluation system with determining tourist load-bearing capacity of the natural environment as well as other environmental impacts at regional or even attraction-level</p>
Development of infrastructure and services	<p>Getting more financial resources, combining local, regional, national, and European resources for cycling tourism projects</p> <p>Lobbying for financing by ministries in some countries</p> <p>Spending in a more harmonised and efficient manner</p> <p>Avoiding activities with not satisfactory quality (conferences, promotion materials, websites) and with duplications</p> <p>Ensuring high-quality renting systems with information points along the Danube</p> <p>Providing technical support for bikes and e-bikes</p> <p>Improving inter-modality and public transport service availability in the Danube region</p>

Legislation and administration	<p>Involving the stakeholders in the development process, defining how many visitors pose the limit for the concerned regions</p> <p>Evaluation cycling related services with external audits</p> <p>Improving the Highway Codes and making them more cycling friendly</p> <p>Harmonising the signposting systems</p> <p>Certifying the cycling guides</p> <p>No general need to ban cycling in public forests, local circumstances need to be considered</p> <p>Separation of horse-riding, biking and hiking trails could be a possible solution for elimination tensions between different bikers as well as between bikers and non-bikers</p>
Marketing	<p>Joint promotion of cycling tourism in the Danube region</p> <p>Presenting the area in a real and honest way</p> <p>Launching transboundary campaigns for certain cycling products with the main message “opportunity to spend time in free air, to see the beautiful landscapes”</p> <p>Using slogans like “Cycle the protected Danube”</p>
Awareness-raising	<p>Increasing the level of awareness and appreciation of cycling</p> <p>Looking for the most effective formal and non-formal environmental education methods in each country</p> <p>Using social media, influencers and traditional marketing tools like promotion or taking part in fairs</p> <p>Lobbying at the state authorities for launching outreach campaigns</p>
Safety	<p>Building better infrastructure, separating trails from automobile traffic considering Eurovelo standards</p> <p>Improving road infrastructure: marking bicycle lanes; solving dangerous local points (narrow, but busy places like roundabouts and bridges); panels warning on cyclists in tunnels which are activated when cyclists enter a tunnel</p> <p>Following the EuroVelo Guidances on the route development process</p>

Source: own research, 2021

There are also some limitations to our study. First, some respondents possessed proper knowledge only about their own country and often even only about a smaller region within that country. Second, the too long interview guideline did not allow an in-depth discussion of every question. Finally, the number of respondents was limited to one expert per country. Despite the challenges of the qualitative study, the results provide a relevant insight into cycling tourism of the project area.

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7. Appendix

Policy recommendations – Interview guidelines

Strategic planning

1. Strategic planning is essential, but the national cycling tourism strategies are in different stages (non-existing, not updated, updated) in the Danube region. In what form could the countries learn from each other most effectively?
2. Which country could serve as a good example for a well-thought-out/well elaborated national cycling tourism strategy? Which steps of the strategy making process are crucial to be followed?
3. What do you think about how cycling tourism and ecotourism can be connected? How can the concept of ecosystem services (the services nature provides e.g. wood from the forest, clean air, drinkable water, calmness while spending time in nature) be highlighted when developing cycling tourism?
4. Monitoring is one of the most neglected areas in cycling tourism. What kind of data should be collected for more efficient (environmentally friendly) planning regarding the impacts of cycling tourism on the natural environment?
5. Which statistics (e.g. number of tourists, time spent in the destination, consumption (quantity and behaviour)) should be collected for planning regarding the cycling tourism flows in the Danube region in order to avoid the volume of tourism harmful for the natural environment and for the local communities?
6. In which areas should the countries along the Danube cooperate with each other regarding cycling tourism? What common goals should they set? Which organization should initiate and manage cooperation among the countries?

Legislation and administration

7. Which deficits are in the legislation of cycling tourism in the Danube region?
8. What is the ideal structure in your opinion to administrate cycling tourism in the Danube region?
9. What is your opinion about general ban on cycling in public forests?

Development of infrastructure and services

10. How efficiently are the available financial resources used in cycling tourism in the Danube region?

11. What do you consider as strengths and weaknesses regarding cycling tourism in the Danube region?
12. What are the opportunities and threats regarding cycling tourism in the Danube region?
13. Could you describe any best practices in the Danube region in regard to cycling tourism infrastructure and services?
14. How should the bicycle-sharing system be developed in the Danube region?
15. How could the spread of electric bicycles be supported in the Danube region?
16. How would you describe the situation of inter-modality and public transport service availability in the Danube region?

Marketing

17. Is it worth promoting cycling tourism jointly in the Danube region? If yes, who should coordinate and finance these campaigns? What should be the main message of the campaigns?
18. Which transboundary marketing campaign could play a leading role in promoting cycling/cycling tourism as a way of experiencing nature?

Awareness-raising

19. Raising awareness is one of the most important tasks in each Danube country. How could the level of awareness and appreciation of cycling be increased? Which are the most effective formal and non-formal environmental education methods?
20. Which cycling awareness programme could serve as best practice for the Danube region?

Safety

21. What steps should be done to improve safety in cycling tourism in the Danube region?