

STRATEGY FOR

**DEVELOPING CYCLING
TOURISM AND ECOTOURISM ALONG
THE RÁKOS-STREAM, CONSIDERING
APPLIED ECOSYSTEM SERVICES**

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Table of Contents

1.	INTRODUCTION	6
2.	THE RÁKOS STREAM	8
3.	EMPIRICAL RESEARCH METHODOLOGY OF STAKEHOLDER ENGAGEMENT	9
4.	QUALITATIVE RESEARCH RESULTS	13
4.1	Results of in-depth interviews in preschools and schools	13
4.2	Results of interviews with other stakeholders	17
4.3	Results of the questionnaire survey targeting local residents	25
4.4	Assessment of ecosystem services	35
5.	STRATEGIC FRAMEWORK	39
5.1	SWOT analysis	39
5.2	Vision and mission statement	40
6.	ACTION PLAN	41
6.1	Development of cycling and ecotourism infrastructure and services	41
6.2	Infrastructure and superstructure development	44
6.3	Nature and environment protection, sustainability	46
6.4	Collaboration between stakeholders, involving local residents and NGOs	48
6.5	Education and raising awareness	50
6.6	Marketing communication	51
7.	REFERENCES	55

Executive Summary

The EcoVeloTour tourism project (*Fostering enhanced ecotourism planning along the EuroVelo cycle route network in the Danube region, DTP-055-2.2*) aims to develop cycle tourism and ecotourism in connection with the EuroVelo international cycle routes across the Danube Region. The objective of the project is to harness the synergies of the EuroVelo network, to develop – and provide communication opportunities for – ecotourism in the region, to promote cultural and natural values through cycle tourism, to preserve biodiversity and landscape elements, and to improve air quality within the framework of ecotourism development.

While the characteristics of the project area are favourable for the development of cycle tourism and ecotourism, its potential has not yet – or only to a limited extent – been harnessed. In terms of the condition and service provision of cycle paths and related infrastructure, there are currently no cycling or ecotourism products to speak of along the Rákos Stream. At the time of drafting this strategy (2021), the section of the EuroVelo 14 route that stretches along the Rákos Stream is under planning, and, within the framework of the EcoVeloTour project, a number of improvements – e.g. the creation of a smart cycling rest area, a signposting plan, and a mobile app – are underway in the area, which, in addition to the great assets of the project area, could make it attractive to cycling tourists and ecotourists.

This present strategy targets decision-makers of local governments and tourism service providers in the project area. Its goal is to offer – based on the characteristics of the project area and environmental trends – a destination known to, as well as recognised and visited by, cycling tourists, thereby contributing to the development of local leisure and tourism industry as a driver of economic growth. Furthermore, this strategy is also geared towards the preservation and enhancement of the area's natural assets and the ecosystem services these assets provide, thereby supporting the well-being of stakeholders. Our mission is to create value for society, to preserve (and, where possible, improve) the condition of the environment, and to meet the expectations of stakeholders wherever possible.

Our vision is that, by 2030, the Rákos Stream will be a regionally significant, competitive, innovative and sustainable tourism destination which also keeps local interests in its focus, while preserving natural and human-made assets. Visitors will be guaranteed memorable experiences, owed to the Rákos Stream's high quality, safe – and above all sustainable – ecotouristic and cycling touristic attractions and services, as well as genuine hospitality.

In preparing the strategy, a questionnaire survey was carried out to assess the views of the local population (852 respondents) on the Rákos Stream, while 27 semi-structured and 18 focus group interviews were conducted to map the notions and ideas of other stakeholders. In creating our action plan, the results of the workshops held in May 2019 and October 2020 were also incorporated.

The main target groups for cycling tourism are hikers, short-distance cyclists and visitors on brief, one-day excursions. For the time being, along the various sections of the Rákos Stream, we will find cyclists on one-day rides; visitors of this area are primarily nature-loving local residents looking for half- or full-day outings. The target group can thus be extended to non-local tourists planning multi-day trips, with the medium-term aim of attracting those coming for shorter excursions (1-2 nights). Our long term objective is to draw in tourists planning a cycling holiday, hiking or stargazing for more than 2 nights. To succeed at this, we need to create the conditions for "slow travel", i.e. to expand what we offer in order to encourage visitors to stay longer and discover the cultural and natural values of the area, as well as the local gastronomy.

For all three target groups, we wish to increase the number of visitors and the duration of their stay, the frequency of their trips and their willingness to spend money, but only to the extent where damage to the ecosystems and the services they provide can still be avoided (i.e. overtourism).

Non-tourist users of the area include local residents cycling for leisure or transport. The former mainly use their bicycles for recreational purposes, while the latter use them for commuting to work,

shopping or running errands. Our aim is to convince as many non-cyclists as possible to switch to two wheels, and to encourage non-tourists to ride their bicycles for recreation, so that they can also become short-distance cycling excursionists.

According to the sending area, the primary target group currently includes residents along the Rákos Stream and those living 20-30 km from the stream. As a secondary target group, we aim to win over people living in the Central Hungarian Region in the medium term, while we expect foreign tourists in large numbers only in the long term. Tourists who come to Hungary for recreational purposes and choose cycling as a leisure activity are mainly visitors to Budapest. While, for them, the Rákos Stream and all it offers are not the main attraction, these do widen the range of available experiences. For longer-distance cyclists arriving on the EuroVelo route, we are expecting visitors from European countries that traditionally send tourists to Hungary (e.g. Germany, Austria, the Netherlands).

In terms of lifestyle, young adults, families with children, and middle-aged people are considered to be the key target groups. While they are likely to share in common a love of nature and excursions, an interest in the flora and fauna, they typically seek different experiences depending on their age. Senior citizens constitute the secondary target group.

Based on segmentation by income and education, the primary target group is made up of environmentally aware people with a higher education and

better financial circumstances, while the secondary target group consists of people with lower incomes, who predominantly strengthen the camp of one-day excursionists.

Another target group outside the cyclist tourist sphere that nonetheless represents a significant potential in terms of ecotourism consists of groups of pre-schoolers and schoolchildren who seek out the visitor centre and its attractions for educational purposes. For these younger generations, the use of interactive digital technologies is of particular importance.

Based on the results of our empirical research, the following actions are proposed to achieve the vision 2030:

- development of cycling and ecotourism infrastructure and services;
- development of tourism infrastructure and superstructure;
- nature and environment protection, sustainability;
- cooperation between stakeholders, involvement of local residents and NGOs;
- education and raising awareness;
- marketing communication

While the present action plan aims to develop cycling tourism and ecotourism, it also concerns elements of other tourism products. Although there is a wide range of stakeholders involved and, in some cases, their interests may differ, the planned developments should take into account their views and opinions, and be implemented in a coordinated manner.



1. Introduction

The objective of the EuroVelo project (EcoVeloTour DTP-055-2.2), entitled *Fostering enhanced ecotourism planning along the EuroVelo cycle route network in the Danube region* is to lend support to the establishment and growth of cycling tourism and ecotourism in the micro-regions of the project partners in 7 countries, thereby contributing to the development of the area concerned while preserving its natural values. The project, funded by the Danube Transnational Programme and running from June 2018 to September 2021, aims to promote sustainable tourism, with particular emphasis on the development of the two tourism sectors linked to the EuroVelo international cycle route network crossing the Danube Region. Corvinus University of Budapest, one of the 10 project partners, has undertaken to prepare the Hungarian strategy with the involvement of external experts.

EuroVelo Route 14 stretches along the Rákos Stream. Currently under planning, Route 14 is mainly for tourism purposes, but can also be used for general transport; and it is expected to create great opportunities for cycling tourism. The conditions for this are not yet in place in the area, as currently, the route is separated into distinct sections with cycle paths of varying quality, mostly on the left bank of the stream.

This strategy targets decision-makers of local governments and tourism service providers in the project area, proposing improvements which will ensure that natural assets and the ecosystem services they provide are not damaged – and that, in case of such damage, compensation will be provided.

Our strategy for the Rákos Stream micro-region is intended to serve as a model and an example of good practice in linking ecosystem services and sustainable cycling tourism development. In our work, we have drawn on two guides developed in previous phases of the project (*Guidelines for ESS-based ecotourism strategy*, Hegedüs et al., 2019; *Guidelines for sustainable bicycle tourism*, Aschauer et al., 2019) and the results of two workshops organised during the preparation of the strategy (in May 2019 and October 2020). The process of preparing the strategy and the principles of planning (involvement, choice of value, value-based positioning), as well as the selection and addressing of local stakeholders, are in line with the specification laid out in *Guidelines for ESS-based ecotourism strategy*.

The Rákos Stream is one of the most significant small watercourses on the left bank of the Hungarian Danube, which does not dry up due to its abundant discharge. It varies in appearance from section to section, but it is mostly characterised by highly regulated conditions. There is a lack of coherent stream management, and there are different land-use concepts in effect, most of which increase pressure rather than “sparing” and revitalising the stream.

The Rákos Stream is predominantly surrounded by a built environment, but there are still valuable natural and semi-natural green areas that need to be preserved despite the negative impacts (e.g. illegal sewage dumping, littering, and paving resulting in the impoverishment of wildlife). With a decline in tourism safety and a growing sense of insecurity caused by Covid19, areas with natural assets that are not only accessible by public transport or bicycle but also offer quality and value-for-money services – and where ecosystem services play a role in improving social well-being – are becoming more important than ever before.

In our view, the following aspects are of particular importance in the preparation of the strategy:

- involving as wide range of stakeholders as possible and facilitating networking between them;
- harnessing the tourism potential of the area to the maximum, while avoiding overload and the overuse of its resources;
- promoting the Rákos Stream and building a community of stakeholders, which, during the project, has been reinforced by the creation of a Facebook page (<https://www.facebook.com/rakospatakunk/>);
- collecting and sharing information on the Rákos Stream and its surroundings, by creating an inventory of attractions and an EcoVelo YouTube channel with videos on the action area and the involvement of stakeholders there;
- protecting and enhancing the ecosystem services provided by the stream.

In our strategy, we will identify the objectives and the specific tasks needed to achieve them, i.e. the directions for tourism development, possible sources of funding and the persons responsible for each activity. Our goal is to create a comprehensive chain of services that tourists will perceive as a chain of linked experiences. Our recommendations in the strategy, in addition to “hardware” investments (roads, signposting, bicycle storage, rest areas), also cover the development of “software” elements (e.g. cycle-friendly accommodation, cycle hire, cycling events).

Strategy closure date: 15 September 2021

2. The Rákos Stream

The Rákos Stream originates in the hills of Gödöllő and flows into the Danube at Dagály Thermal Baths. It is the longest left-bank tributary of the Hungarian section of the Danube, flowing through four agglomeration settlements – Sada, Gödöllő, Isaszeg, and Pécel – and five metropolitan districts – Rákosmente, Kőbánya, Zugló, Angyalföld, and the 16th District – with a catchment area whose population numbers around one million.

The Rákos Stream is 44.3 km long (22 km of which is within Budapest city boundaries), with a water surface area of about 0.1 km² (including associated wetlands). In the middle section (near Pécel), the water flow is 150-260 m³/s, with a water speed of 4-5 km/h. The length of the shoreline is about 100 km including associated wetlands; more than three times than Lake Velence. The average water depth (mid-section at Pécel) is 0.5 m and the catchment area is 185 km².



Figure 1. Watercourse of the Rákos Stream

Source: Google Earth, own editing, 2020

The Rákos streambed is regulated along its entire length, running in a concrete lined channel from the administrative border of Budapest. The Budapest section has small artificial structures, many constructed water inlets and illegal sewage discharge points.

Inland standing water has been virtually eliminated by regulation and streambed dredging, and by the construction of stormwater drainage facilities along the stream. When the stream was regulated, a significant portion of the marshes was drained. Various types of wetland habitats, rich in biota, still line the path of the stream. It is worth noting that about 20% of the wild plant species occurring in Hungary

can be found along the Rákos Stream. The importance of the stream is enhanced by the fact that it does not freeze in winter and does not dry up in summer, providing year-round drinking and bathing opportunities for numerous bird species. The entire stream segment comprises an important recreational area, which has preserved its original natural value in many places eastward from the 10th District. The development of a continuous cycle route along the Rákos Stream is compatible with the concept of creating a complex recreational and ecological corridor. However, in addition to transport and tourism considerations, the planning should also take into account nature conservation aspects.

3. Empirical research methodology of stakeholder engagement

The purpose of engaging stakeholders is to identify and consider the consequences of the actions induced by the project on others, and the impacts of those consequences. To do this, it is important to understand the values, thoughts and background of stakeholders, as well as their social environment and the context of their lives. The aim of stakeholder outreach is to gather the broadest and most relevant voices possible; whether we are speaking about numerical or qualitative data and information. In the process, particular attention was directed at involving those stakeholders who have little opportunity to express their thoughts, feelings and opinions in everyday life.

Planning the process of approaching stakeholders began by defining the concepts to be applied (conceptualisation). As a first step, it was necessary to establish a conceptual framework with which the questions used during fieldwork and the analysis of the voices of various stakeholders could be aligned.

The model which served as the foundation of research methodology was based on our interviews with internal stakeholders. The following five sets of questions cover the themes identified in contacting and approaching stakeholders, under which responses, voices and interpretations were collected.



Figure 2. Themes of stakeholder engagement

Source: Stakeholder Engagement, 2020

In addition to these five themes, three cross-cutting dimensions were also identified, which, in addition to providing nuances for each theme, are also meant to help in the subsequent analysis.

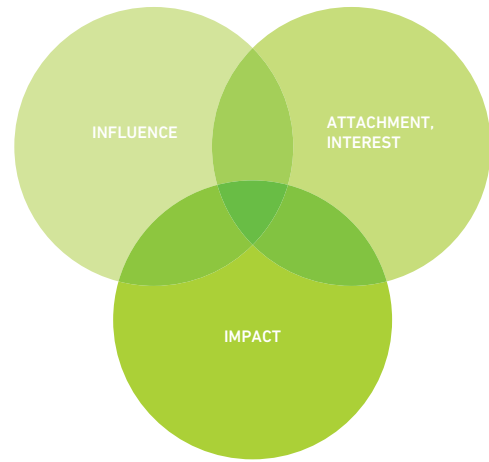


Figure 3. The three key dimensions explored during the process of engaging stakeholders

Source: Stakeholder Engagement, 2020

The meaning of the three cross-cutting dimensions is as follows:

- **Influence:** what kinds of influence does the stakeholder have on ecotourism development and cycle path construction along the Rákos Stream?
- **Impact:** how and to what extent does ecotourism development and cycle path construction along the Rákos Stream affect the stakeholder?
- **Attachment, interest:** what kind of emotional/attitudinal attachment or personal interest does the stakeholder have with respect to the planned ecotourism development and cycle path construction along the Rákos Stream?

The research involved face-to-face, semi-structured interviews, focus group interviews and a questionnaire survey.

During the sampling process, based on the available sources and interviews with internal stakeholders, the following groups of stakeholders were identified, which subsequently provided the guidelines for making contact and conducting further interviews. The plan was to address at least one stakeholder per municipality/district in each group.

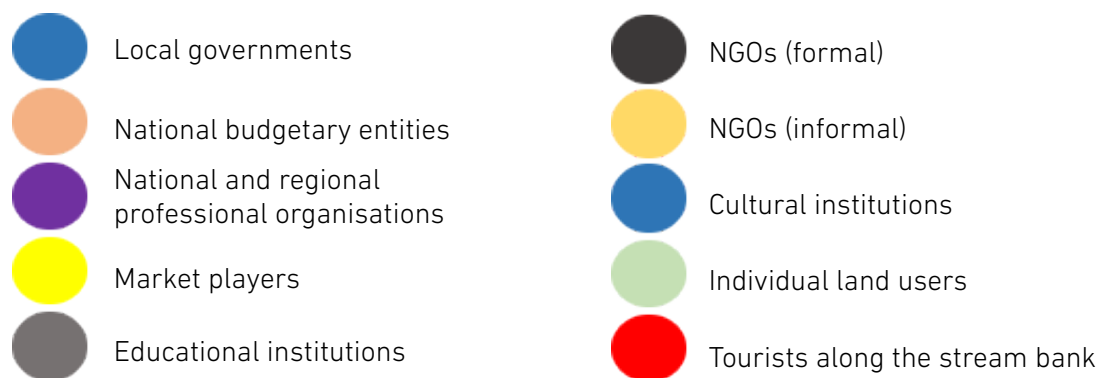


Figure 4. Sample of stakeholder groups

Source: Stakeholder Engagement, 2020

The table below lists the stakeholder groups that have been approached to initiate the process of stakeholder engagement.

Local governments	<p>Budapest (local governments of districts)</p> <p>Municipality of Budapest (Fővárosi Önkormányzat)</p> <p>Pest County (municipalities)</p> <p>Pest County Local Government Office (Pest Megyei Önkormányzat)</p>
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National budgetary entities	<p>Ministry of Innovation and Technology, Cycling Coordination Department (Innovációs és Technológiai Minisztérium, Kerékpáros Koordinációs Főosztály)</p> <p>National Infrastructure Development Company (Nemzeti Infrastruktúra Fejlesztő Zrt.)</p> <p>Hungarian Public Roads Company (Magyar Közút Nonprofit Zrt.)</p> <p>Office of the Government Trustee Responsible for Active Hungary (Aktív Magyarországért Felelős Kormánybiztosi Iroda)</p> <p>Hungarian State Railways Co. (MÁV Magyar Államvasutak Zrt.)</p>
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Market players	<p>Civis Komplex Engineering Ltd. (Cívis Komplex Mérnök Kft.)</p> <p>Tourism service providers (accommodation, catering establishments, cycling tour operators)</p> <p>Online surfaces (www.holkerekparozzak.hu, www.biketourhungary.com, www.vuelta.hu)</p> <p>Other service providers (e.g. grocery shops)</p> <p>Cycle shops (Pécel Bicycle Repair Shop [Péceli Kerékpárszervíz], Bike Kitchen Zugló)</p>
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	<p>Centre for Development of Active and Ecotourism (Aktív és Ökoturisztikai Fejlesztési Központ)</p> <p>Hungarian Cyclists' Club (Magyar Kerékpárosklub)</p> <p>Hungarian Cycling Tourism Association (Magyar Kerékpáros Turisztikai Szövetség)</p> <p>National Association of Cycling-Friendly Municipalities (Kerékpárosbarát Települések Országos Szövetsége)</p> <p>Hungarian Tourism Agency (Magyar Turisztikai Ügynökség)</p> <p>Budapest Festival and Tourism Centre Non-Profit Limited Liability Company (BFTK Budapesti Fesztivál- és Turisztikai Központ Nonprofit Korlátolt Felelősségű Társaság); since 2021: Budapest Brand Nonprofit Zrt (ed. note)</p> <p>Hungarian Hikers Alliance (Magyar Természetjáró Szövetség)</p> <p>Hungarian Cycling Federation (Magyar Kerékpáros Szövetség)</p> <p>Érd District Office of Pest County Government Office, Department of Environmental and Nature Protection (Pest Megyei Kormányhivatal Érdi Járási Hivatal, Környezetvédelmi és Természetvédelmi Főosztály)</p> <p>Duna-Ipoly National Park Directorate (Duna-Ipoly Nemzeti Park Igazgatóság)</p> <p>Centre for Budapest Transport (BKK Budapesti Közlekedési Központ)</p> <p>Budapest Cityscape Nonprofit Ltd. (Budapesti Városarculati Nonprofit Kft.)</p> <p>Urban Development Department of the Municipality of Budapest (Budapest Főváros Városépítési Tervező Kft.)</p> <p>Budapest Sewage Works Pte Ltd. (Fővárosi Csatornázási Művek)</p> <p>ELMŰ-ÉMÁSZ Energy storage Limited Liability Company (ELMŰ-ÉMÁSZ Energiaszolgáltató Zrt.)</p>
<p>National, regional and local professional organisations</p>	
<p>Educational institutions</p>	<p>Preschools</p> <p>Primary schools</p> <p>Secondary schools</p> <p>Universities</p>
<p>Formal NGOs</p>	<p>Hungarian Cyclists' Club (Magyar Kerékpárosklub), national and local group</p> <p>Hungarian Cycling Tourism Association (Magyar Kerékpáros Turisztikai Szövetség)</p> <p>CivilZugló Association (CivilZugló Egyesület)</p> <p>ZÖLD XVII Association for Environmental, Nature Protection and Urban Development (ZÖLD XVII Környezetvédelmi, Természetvédelmi és Városfejlesztési Egyesület)</p> <p>Gödöllő Regional Tourist Association (Gödöllő Környéki Regionális Turisztikai Egyesület)</p> <p>Cyclist Sports and Leisure Association of Rákosmente (Rákosmente Kerékpáros Sport és Szabadidő Egyesület)</p> <p>Hungarian Ornithological and Nature Conservation Society (Magyar Madártani és Természetvédelmi Egyesület), local groups</p> <p>FAUNA Foundation for Animal Protection and Nature Conservation (Fauna Állat- és Természetvédelmi Alapítvány)</p>

Informal NGOs	Facebook groups on nature conservation and local issues Organizers of voluntary events related to nature conservation (e.g. litter picking)
Cultural institutions	Participants in the list of attractions compiled by the project team
Individual land users	Local residents, people who work locally (who also live here or spend longer stretches of time here) Cyclists Runners Pedestrians Families with young children Car owners/motorcyclists Dog walkers Horse riders Farmers Fishermen
Tourists	Geocachers Hikers and tourists Multi-day tourists

Table 1. Members of stakeholder groups identified in the sample

Source: Stakeholder Engagement, 2020

During the process of analysing stakeholder voices, interview narratives and the responses to the questionnaire survey were scrutinised. Content analysis served as the primary method of analysis, sometimes complemented by statistical (quantitative) methods. Validation, as part of the stakeholder involvement process, ensures that the data, content and findings resulting from reaching out to these concerned parties are fed back to as many of them as possible. This both further refines the results and provides an opportunity to answer questions raised during the analysis. Furthermore, it allows stakeholders to feel that their views are reflected in the strategy. During validation, selected stakeholders provided feedback on each of the main strands of the strategy, which was then incorporated into the strategy. The validation process covered the following strategic areas:

- vision;
- SWOT analysis;
- target groups.

The validation process was built on two pillars and is grounded in a document summarising the framework of the strategy. Firstly, experts of relevant local governments commented on the indicated orientations of the strategy through an online round table session. Secondly, comments were received from previously contacted interviewees and stakeholders via an electronic questionnaire. The content and messages collected in these two different ways were incorporated into the strategy. The expected completeness of approaching stakeholders was limited by several factors. The “size” of the terrain, the novelty of the topic, the time constraints and the time of year (winter) forced researchers to make a number of compromises. This was compounded by the global situation caused by COVID-19, which derailed some of our plans for contacting people in person.

4. Qualitative research results

4.1 RESULTS OF IN-DEPTH INTERVIEWS IN PRESCHOOLS AND SCHOOLS

The interviews conducted with staff members of public education institutions – preschools, primary schools and secondary (high) schools – as one of the key stakeholders of the project aimed at exploring the role of the environment in preschool and school activities, identifying attitudes towards environmental education, learning about the usage characteristics of the project area, and clarifying expectations associated with cycling development.

Five in-depth interviews were conducted during the primary research phase: two with preschool teachers, two in primary schools and one in a primary/secondary school. The tasks, the profile of the institution and some other characteristics of interviewees as part of the research are presented in the table below.

Name	Place of work	Position, job description	Institution profile	Other information
Ágnes Balázs	Mór Jókai Reformed Primary School of Rákoscsaba (Rákoscsabai Jókai Mór Református Általános Iskola), ecclesiastical institution since 2011, 17th District	teacher of biology and geology	eco school since 2009, applied twice for the title, "eternal eco school" (örökös ökoiskola) since 2015	began teaching in 1994, teacher at this school since 2002, in 2002 earned graduate degree in environmental protection
Angéla Bíróné Peltz	Csicsergő Preschool of Rákosmente (Rákosmenti Csicssergő Óvoda), previously, Százszorszép Preschool of Rákosmente (Rákosmenti Százszor-szép Óvoda), 17th District	preschool teacher	awarded the title of "green preschool" three times	teaching since 1979
Marianna Braxátor	Sándor Kőrösi Csoma Primary and Secondary School (Kőrösi Csoma Sándor Általános Iskola és Gimnázium), 17th District	primary school teacher (afternoon care, then geography and history), secondary school teacher (geography), eco school coordinator, mentor teacher	"eternal eco school" (örökös ökoiskola) since 2005	teaching since 1983

Name	Place of work	Position, job description	Institution profile	Other information
Katalin Dósa	Százszorszép Preschool of Rákosmente (Rákosmenti Százszorszép Óvoda), 17th District	deputy head pre-school teacher, pre-school pedagogue	learning about the outside world has been a key part of education since 1993, green preschool, base institution	teaching since 1979
Sándorné Vendrei	Lajos Kossuth Primary School (Kossuth Lajos Általános Iskola), 17th District	teacher in the lower grades (1 and 2), team leader in grades 1 and 2, certified teacher	"eternal eco school" (örökös ökoiskola) since 2012	

Table 2. Characteristics of the interviewees included in the research

Source: Own research, 2020

The interviewees have some familiarity with the stream and/or sections of the stream and the developments taking place there; some of them enjoy visiting the area in their free time. The interviews, which took from 30 to 60 minutes, (due to COVID-19 restrictions) were conducted by phone between 2 and 4 June 2020.

CURRENT USE OF THE RÁKOS STREAM

Among the queried institutions of public education, more intensive use was observed where certain sections of the stream bank were in closer proximity to the given preschools or schools, i.e. where the stream bank is accessible easily (typically on foot or by bicycle), quickly and safely. Teachers at these institutions often take children to the stream bank for a variety of purposes, including activities, lessons, afternoon care, and workshops, especially in the autumn and spring. For these institutions, the stream plays a role not only in their everyday, routine activities, but also during special events.

RELATIONSHIP WITH THE ENVIRONMENT AND CLOSE SURROUNDINGS

The aforementioned educational institutions interpret the concept of the environment in broad terms, also including elements of the natural and cultural environment. Nature, as well as natural and cultural values, plays a significant role in their (everyday) activities.

The link between green preschools and the environment can be observed in many areas:

- environmental education is prominently present in their educational programme and curriculum, as well as the annual work plans that incorporate these into a system;
- in the planning of everyday life: initially, daily routines and activities were planned in accordance with the seasons, but later this role was taken over by projects and theme weeks;
- neighbourhood walks: preschool groups regularly "venture out" to nearby areas;
- programmes linked to nature celebrations;
- during leisure activities (e.g. cookouts with parents);
- preschool camps.

Preschool teachers regularly expose children to the natural wealth of the area: they tell them about the animals and plants that populate the stream habitat, and these are the small elements their environmental educational programme is built on.

The link between eco-schools and the environment can also be observed in numerous areas:

- environmental education is prominent in the schools' curricula;
- in the classroom: 1) within the framework of environmental awareness classes, primary school students take nature walks in the surrounding suburban area every

two or three weeks, 2) in ethnography and ethnology classes, they often have activities in the park near the school or visit the Rákos Stream;

- in the afternoons, students often have after-school activities in the form of walks and outdoor programmes;
- the natural environment also provides an ideal “terrain” for explorations realised within the framework of extracurricular and faculty-related activities;
- school events, excursions and leisure activities;
- in connection with tenders;
- in connection with school competitions.

In the case of schools, it is mainly lower-grade primary students and secondary school students who benefit from curriculum-linked field trips and experiences, as the amount of study material in upper primary school does not leave room for extra-curricular activities.

THE ROLE OF LOCAL NATURAL AND CULTURAL ASSETS IN THE ACTIVITIES OF EDUCATIONAL INSTITUTIONS

Teaching children about the local assets found in the immediate and wider surroundings of preschools and schools is seen by respondents as important for a number of reasons:

- it facilitates children’s attachment to the place they live,
- it serves as a learning ground where children familiarise themselves with local values and attain practical skills necessary for everyday life,
- it fosters personal and emotional attachment, which in turn facilitates the cultivation of children’s commitment to their environment,
- it is used as a means of patriotic education.

THE MAIN NATURAL AND CULTURAL ASSETS OF THE AREA, AS PERCEIVED BY THE RESPONDENTS

The following natural and cultural assets were considered by the interviewees to be of great importance in their area.

Natural values	Cultural values
Merzse Marsh (Merzse-mocsár)	Castles in the area – Vigyázó Kastély, Süllyedő Kastély
Lake Naplás (Naplás-tó)	Cross of Vida Hill (Vida-dombi kereszt)
Plane Row (Platánsor)	Csaba House (Csaba Ház)
Rákos Stream, its flora and fauna	Permanent and temporary exhibitions of Erdős Reneé House (Erdős Reneé Ház)
Grasshopper Meadow (Szöcske-rét)	Millennium Space (Millenniumi tér)
Vida Hill (Vida-domb)	National Flag (Országzászló)
	Rákoskeresztúr City Centre
	Rákoskert Monument (Rákoskert Emlékmű)
	Sculptures

Table 3. Natural and cultural assets of outstanding importance in the project area as identified by interviewees

Source: Stakeholder Engagement, 2020

The Merzse Marsh was mentioned by all interviewees; because of its developed pathways, it is considered by all public education institutions as an important natural asset to be shared with children, regardless of the distance between the marsh and the preschool/school.

While these natural attractions can be presented in an exciting manner to children of all ages, the cultural assets of the area are of interest mainly to children in middle and upper preschool classes or older.

THE IMPORTANCE OF ENVIRONMENTAL EDUCATION

Environmental education has a strong tradition and a decades-long history in all the public education establishments included in the research. In all cases, the idea of becoming a green institution has been raised by a colleague committed to environmental education, and was subsequently embraced and supported by school management. Environmental education, the protection,

conservation and promotion of the natural environment and cultural heritage play an important role in green preschools and eco-schools, and also constitute the basis of their educational programmes. According to one interviewee, "schools today are doing everything they can to help children learn more about their environment, but it would be good to make environmental protection more fashionable in the media" (Kőrösi).

RELATIONSHIP WITH THE (LOCAL) COMMUNITY

As regards the local community, several groups of stakeholders can be identified:

- Children often take home what they learn in preschool or primary school and tell their parents, grandparents and extended family about it. According to the interviewees, parental communities are easily mobilised; parents often take part in school leisure activities, which are often organised with their participation. However, for secondary school students, mobilising parents is more of a problem.
- Almost all teachers mentioned professionals who work in the local community and are able to impart the kind of knowledge to the children that teachers are less equipped with. Working with them is seen by educators as a way of broadening their own competence with respect to the teaching material.
- Several of the interviewees have close links with NGOs with a local interest in environmental protection and education.

ATTITUDES TOWARDS THE LEISURE AND TOURISM RELATED USES OF THE AREA

The proposed leisure and tourism related uses of the area were welcomed by all interviewees. As far as they are aware, the stream bank and existing parts of the cycle path are currently used by many people who go on walks, or go cycling or scooter riding. This means the area is often crowded during weekends. However, they are not bothered by the "crowds", as weekdays remain relatively quiet. The interviewees also agree that different target groups can co-exist and they are, in fact, happy for others to use the area.

USE OF CYCLING INFRASTRUCTURE

The existing cycling infrastructure is used by institutions, mainly schools, located in close proximity to cycle routes or in areas with low traffic density.

The development of cycle paths was unanimously welcomed by respondents. Given the fact that preschool children are likely not very adept at cycling yet, the most appropriate option for them would be to use the cycle path on foot or to participate in programmes that also involve parents. Preschool teachers will also be able to utilise the cycle path indirectly: they can also build on the possibility that children will be able to use the cycle path as part of their leisure time with their families.

EXPECTATIONS WITH REGARDS TO THE DEVELOPMENT OF AREAS ALONG THE RÁKOS STREAM

Educators with varying degrees of familiarity with the stream area have made a number of suggestions for improvements in connection to the development of the Rákos Stream.

With reference to infrastructure:

- the cycle path should be wide and safe for cycling with small children as young as 4-6 years old;
- the cycle path should be utilisable in both directions, with signage indicating the direction of travel, and should be suitable for the needs of as many target groups as possible;
- the cycle path should have stations with drinking fountains, benches and rest areas;
- hand-washing facilities and toilets should be placed along the cycle route, which are also necessary in the interest of protecting the natural environment;
- at rest areas, pumps and a few parts for fitting bicycles should be provided;
- opinions varied with regards to the provision of waste bins along the cycle paths: most thought that – preferably selective – waste bins should be provided, which are emptied at appropriate intervals, while others felt that visitors should take their own waste with them;
- ecologically friendly snack bars selling healthy food and refreshments should be set up along the cycle paths;
- an exhibition on the features and attractions of the Rákos Stream should be presented to visitors, with interactive games and the possibility of carrying out physics-chemistry experiments using stream water;
- along the cycle paths, there should be rain shelters, playgrounds, adult exercise facilities, educational traffic parks with road signs for children.

Regarding the “software”:

- all interviewees emphasised the importance of compiling a database with information on the natural and cultural assets of the area and a platform for its interpretation;
- the area should be presented to visitors with the help educational trails and signposts providing information and indicating points of interest;
- cycle paths should provide children with the opportunity to learn the rules of behaviour appropriate for visiting nature reserves and other natural environments;
- the area should be suitable for teaching the rules and skills of traffic and road safety.

Suggestions in connection with interpretation:

- children are always interested in the present, so it is important that they receive information in a digestible form, where and when they need it;
- with regards to attractions for children, these should be as interactive as possible and engaging several senses at the same time (e.g. listening game: close your eyes, what do you hear?);
- gamification should play a significant role (card games and colouring were mentioned as concrete ideas).

Suggestions related to the functions of the cycle path to be constructed along the stream:

- blocks of outdoor physical education classes;
- outdoor classes – a classroom setting with sheltering overhead, in a shed-like building;
- day camps.

Further suggestions for improving the stream bank:

- the Rákos Stream itself could have its own community; it could be of interest to create for teachers, preschool children, schoolchildren such titles/positions as, for example, “ambassador”, “dedicated fan”;
- organising competitions, quizzes, and games centred around such themes as local patriotism and knowledge of the city;
- in case of public educational institutions located further away from the stream, arranging transport for children to the stream bank is very important;
- disseminating information on events and programmes organised by Budapest, its districts, or NGOs, to institutions of public education;
- utilising the experience of senior citizens: there is currently a renaissance of old ways of growing plants and using them for various purposes; there is also new interest in what the area used to be like.

4.2 RESULTS OF INTERVIEWS WITH OTHER STAKEHOLDERS

Interviews with other stakeholders were carried out from November 2019 to March 2020. The numbers of people and organisations contacted were as follows:

- 81 persons and organisations contacted;
- 95 in-person meetings with stakeholders;
- 22 individual interviews;
- 18 group interviews or conversations (from 2 to 13 persons).

Of the people contacted, 8 were entrepreneurs, 30 were members of NGOs, 37 were officials of national governmental organisations or local governments, and 20 were civilians.

The following organisations and individuals were interviewed during the stakeholder engagement process:

Stakeholder	Stakeholder category	Number of stakeholder voices
Mayor of the 10th District (at a cycling forum in Kőbánya)	I	1
13th District Public Service Company, Public Space Division (XIII. Kerületi Közszolgáltató Zrt. Közterületi divízió)	I	3
Deputy mayor of the 14th District	I	1
16th District Public Service Company (XVI. Kerületi Közszolgáltató Zrt.)	I	1
Municipality of Budapest (Fővárosi Önkormányzat)	I	3
Chief architect of the Municipality of Gödöllő	I	1
Chief architect of the Municipality of Pécel	I	1
Mayor of Pécel and a member of the communication staff of the Municipality of Pécel	I	2
László Várnai, representing the CivilZugló Association (also local governmental representative of the 14th District)	I and VI	1
Representatives of the Municipal Government of Szada (Szada Nagyközség Önkormányzata) and local activists	I and VII	4
National Infrastructure Development Company (Nemzeti Infrastruktúra Fejlesztő Zrt.)	II	2
Regional development and land use planning officer of Pest County Local Government Office (Pest Megye Önkormányzat, területfejlesztési és területrendezési referens)	II	1
The Centre for Development of Active and Ecotourism (Aktív és Ökoturisztikai Fejlesztési Központ) - associated project partner	III	2
Urban Development Department of the Municipality of Budapest (Budapest Főváros Városépítési Tervező Kft.)	III	3
Budapest Sewage Works Pte Ltd. (Fővárosi Csatornázási Művek Zrt.)	III	1
Pilis Forest Park Company (Pilisi Parkerdő Zrt.)	III	5
Bicycle repair worker, Pécel	IV	1
Entrepreneur operating cycle shop, Gödöllő and Szada	IV	1
Nyuszi grocery shop, 13th District	IV	1
Fast food restaurant in Rákoscsaba	IV	2
Pastry shop in Rákoscsaba	IV	1
FAUNA Foundation for Animal Protection and Nature Conservation (FAUNA Állat- és Természetvédelmi Alapítvány)	VI	1
Hungarian Cyclists' Club (Magyar Kerékpárosklub)	VI	2

Stakeholder	Stakeholder category	Number of stakeholder voices
Member of Pécel's Running Club (Péceli futóklub)	VI	2
ZÖLD XVII Association for Environmental, Nature Protection and Urban Development (ZÖLD XVII Környezetvédelmi, Természetvédelmi és Városfejlesztési Egyesület)	VI	13
Leader of the For Blaha Association (Blaháért Társaság)	VII	1
Elfs of Gödöllő (Gödöllői Manók)	VII	1
Members of Kőbánya Cyclists Facebook group (Kőbányai bringások)	VII	10
Members of the Rákos Stream Runners Facebook group (Rákos-patak parti futók)	VII	5
Managerial staff of the Gödöllő Nursing Home of the Municipality of Budapest (Fővárosi Önkormányzat Gödöllői Idősek Otthona)	VIII	9
Two wheelchair users (man and woman) residing in the Gödöllő Nursing Home of the Municipality of Budapest (Fővárosi Önkormányzat Gödöllői Idősek Otthona)	VIII	2
Three female friends with their children, from the 13th and 14th Districts (runners, walkers)	IX	3
Members of Natural Treasures of Isaszeg Facebook group (Isaszeg természeti értékei)	IX	1
Fisherman from Gödöllő	IX	1
Residents of Gödöllő along the stream	IX	2
Young passersby from Gödöllő	IX	2
Older passersby from Gödöllő	IX	2

Table 4. Interviewees were contacted during the stakeholder engagement process

Source: Stakeholder Engagement, 2020

CYCLING INFRASTRUCTURE AND SERVICE DEVELOPMENT

During the interview process, we first contacted the organisations responsible for the preparation of the regional strategy and its implementation. As a next step, we contacted the organisations managing the stream. Then, the representatives of the local governments that can be considered stakeholders gave their opinions on the Rákos Stream cycle path as infrastructure. Finally, we collected information on how local governments, non-governmental organisations, entrepreneurs and private individuals viewed the matter at hand.

Urban Development Department of the Municipality of Budapest (Budapest Főváros Városépítési Tervező Kft, influence: 3, impact: 2, attachment/interest: 3) prepared the revitalisation programme for the Budapest section of the Rákos Stream on behalf of the Municipality of Budapest. The most important aspects of this project were the reconstruction of the stream for nature conservation, the application of RENO mattress in bank stabilisation and the ensuring of water balance in Felsőrákos Meadows (Felsőrákosi-rétek). They envisaged a divided streambed with a footpath and cycle path along the embankment. In their view, the construction of the cycle path alone would not make the revitalisation

of the streambed impossible, although it would make it considerably more difficult, as the development of the cycle path would require a redesign.

The **Centre for Budapest Transport** (BKK Budapesti Közlekedési Központ, influence: 5, impact: 5, attachment/interest: 5) is planning the cycle path in Budapest, and is working in close collaboration with Hungarian State Railways (MÁV Magyar Államvasutak Zrt.) and the Hungarian Cyclists' Club (Magyar Kerékpárosklub) to design the route. BKK representatives expect the cycle path along the Rákos Stream to be of mixed use (by tourists and local residents), but its local character will prevail.

BKK considers it important to have a coherent urban design and a network-based approach, i.e. to link cycle paths and create perpendicular (feeder) cycle paths. Rail and possibly other public transport solutions for bicycle transport are also a priority. Environmental and nature conservation aspects will be taken into account as well.

According to interviewees, the planned cycle route along the Rákos Stream will be popular, as it will be the only green corridor to the Danube from streamside settlements and from the suburban districts in the vicinity of the stream. The actual use (character, intensity) of the planned cycle route and its integration into the EuroVelo network may raise new questions for them. "If the potentially increased cycling traffic cannot be accommodated by the cycle path along the Rákos Stream, then traffic will have to be diverted."

National Infrastructure Development Company (Nemzeti Infrastruktúra Fejlesztő Zrt., influence: 5, impact: 3, attachment/interest: 4) was responsible for investing in 900 km of cycle paths at the time of the interview (November 2019), including the section from the city boundary of Budapest to Gödöllő (the Budapest section is planned by BKK). The backbone of the Pest County cycle route belongs under their authority; they are in charge of designating the route based on consultations (e.g. inviting and taking into account the opinion of national parks' management). Feeder cycle routes are implemented through local investments with local government or grant funding. A decision analytic study was completed by the end of August 2020 with the proposed trails; at the time of the interview, there were still sections where several alternatives existed.

A **Hungarian Cyclists' Club or HCC** (Magyar Kerékpárosklub, influence: 4, impact: 4, attachment/interest: 4) acted as a consultative partner in the design of the cy-

cle paths, making traffic engineering suggestions (not all of which were accepted) and giving the cycling community a voice in the planning process. The HCC made suggestions mainly from a commuting perspective (commuting to work, to institutes of education). For them, too, building the cycle path together with a complex rehabilitation of the stream would be the optimal solution. They consider it important that the stream bank is accessible by bicycle and that cyclists are given priority at intersections. Two types of use were suggested; it would take a 5 metre wide way to accommodate pedestrians/runners and cycling traffic side by side.

Budapest Sewage Works Pte Ltd. (Fővárosi Csatornázási Művek Zrt, influence: 3, impact: 4, attachment/interest: 4) has a low influence outside the stream basin and high influence in terms of stream basin revitalisation. This green-minded organisation supports revitalisation and considers the terraces and green islands built by private investment in the Zugló section to be good examples to follow. The interviewee stressed that heavy traffic along the stream sometimes forces road users and those responsible for the maintenance of the streambed to adapt to one another's presence, and that cyclists, runners and walkers are required to avoid the stream when maintenance is required.

Regional development and land-use planning officer of Pest County Local Government Office (Pest Megye Önkormányzatának területfejlesztési és területrendezési referense, influence: 3, impact: 5, attachment/interest: 5) pointed out that, although they had a strong professional influence on the *Regional Development Concept and Strategy of the Rákos Stream Valley – Pest County Section* (Rákos-patak Völgye - Pest Megyei Szakaszcso Térésfejlesztési Konceptió és Stratégiai Program), they had less influence on its implementation. Local governments at the county level, which are responsible for regional development and land-use planning, do not have the same revenue resources and apparatus as municipalities within the capital, and therefore also face a lack of financial and human resources.

While the development project of the Rákos Stream extends beyond the cycle path, that is the element the Pest County Local Government Office has been able to obtain funding for. According to their vision, cycling tourism is not the ultimate goal: they want a broader "tourist line", in the process of which they see the cycle path as something that "sets things in motion and paves the way for further development."

During our meeting, **representatives of the Municipal Government of Szada** (Szada Nagyközség Önkormányzat) along with **local activists** (influence: 3, impact: 4, attachment/interest: 5) stressed that the members of the Municipal Council and the mayor (also members of the local NGO) are open to new ideas and developments. They consider the municipality's attractions to have great appeal and see efforts to improve and market these to become even more important. The planned cycling development could attract cyclists to the cycle path and increase the number of local cyclists, which is not large at present.

Due to the territorial characteristics of Pest County, large-scale, cross-municipal infrastructure development (and resources) is (also) dependent on external factors. **Chief architect of the Municipality of Gödöllő** (influence: 4, impact: 3, attachment/interest: 5) stated that, although a joint project had been planned initially, the metropolitan phase of the complete ecological development along the Rákos Stream split away from the Pest County phase during the planning process. The reason behind this change is the more advantageous funding: according to the chief architect, Pest County is losing on a lot of regional development funds because "Budapest is pulling up the average", so it can apply for compensation. The development of the Rákos Stream has become one of Pest County's programme elements in this tender. In the preparation phase, however, our interviewee experienced inadequacies in the flow of information: the company planning the EuroVelo route was not aware of the *Regional Development Concept and Strategy of the Rákos Stream Valley – Pest County Section*.

When interviewing **the mayor of Pécel and a member of the communication staff of the Municipality of Pécel** (Pécel Város Önkormányzata, influence: 2, impact: no data, attachment/interest: 2), our questions were met with some anger. The interviewees did not feel it was timely to reach out to the people we had included in our proposal or to discuss the project in general. The mayor and the communications officer were sceptical about whether the project would be implemented at all.

Officials from the **Municipality of Budapest** (Fővárosi Önkormányzat, influence: 4, impact: 4, attachment/interest: 5) showed openness to the planned developments during the interview and considered the alignment and harmonisation of stakeholder interests to be essential in the stream/capital city context. In their view, the district network of sports and tourism officers could be utilised

to coordinate development.

The **mayor of the 10th District** (influence: 5, impact: 4, attachment/interest: 5) shared with us his opinion at a cycling forum in Kőbánya, where he reported on concrete development plans and cooperation with cycling NGOs. Planning of the Budapest section of the Rákos Stream cycling route has been completed, and the results of the network development with the Centre for Budapest Transport (BKK), connecting new and existing cycle routes, can be visible in autumn 2021. The implementation period is significantly extended by the expropriations.

The **deputy mayor of the 14th District** (influence: 5, impact: 4, attachment/interest: 5), during the interview, summarised the planned actions for the Rákos Stream: benches, bins, bottle fillers; waste collection solutions, installation of toilets. Thanks to the urban rehabilitation project of TÉR-KÖZ, a section of the streambed will be restored to its natural state and the banks will be flatter. The revitalisation of the streambed will be followed by planting new trees.

Representatives of the **Public Space Division of the 13th District Public Service Company** (XIII. Kerületi Közszolgáltató Zrt. Közterületi divízió, influence: 5, impact: 4, involvement/interest: 5) are strongly committed to green and active leisure developments, and take into account cycle transport considerations in real estate and land development.

This district treats the Rákos Stream valley as a prioritised ecological corridor: it is considered a green space for recreation, cycling, running/jogging, walking and dog walking, and it is also addressed in the district strategy (*Angyalzöld 3.0*).

16th District Public Service Company (XVI. Kerületi Közszolgáltató Zrt., influence: 5, impact: 3, attachment/interest: 3) is making great efforts to create links with the cycle path under construction. In this district, which encompasses only a short section of the stream, there are currently two places where the Rákos Stream is easily accessible by bicycle, while the other parts having large difference in levels and cycle traffic is impeded by busy roads.

While the majority of stakeholders we contacted welcomed the ongoing and future cycling improvements, we also encountered contrary opinions during the stakeholder engagement process. Members of the **Natural Treasures of Isaszeg Facebook group** (Isaszeg természeti értékei, influence: no data, impact: 5, at-

tachment/interest: no data) said “we don’t need to take possession of every single area.” The development of the stream bank constitutes a considerable problem in inland areas; the relative untouched intactness of the stream could only be preserved along the stretch from Pécel to Gödöllő. In their view, any development would only worsen the current situation.

The Mayor’s Office in Isaszeg did not respond to our repeated requests for contact. We did manage to speak on the phone to the former chief architect of the municipality, who, according to several stakeholders, also cares about the fate of the Rákos Stream and its surroundings, but subsequent attempts to call him back for a personal meeting were unsuccessful.

There were also interviewees who mentioned both the pros and cons of the newly built cycle path. According to a **bicycle mechanic from Pécel** (influence: 1, impact: 3, attachment/interest: 4), locals would be happy about the development; they are already happy to cycle to Isaszeg on a “quieter” road in pleasant surroundings (in the direction of Budapest). A good number of local residents also cycle to work – some of them even cover a distance of 15–20 km per day.

Members of the **ZÖLD XVII Association for Environmental, Nature Protection and Urban Development** (ZÖLD XVII Környezetvédelmi, Természetvédelmi és Városfejlesztési Egyesület, influence: 4, impact: 3, attachment/interest: 5) shared similar views: they consider the cycle path to be a community space but, at the same time, also a factor that increases traffic.

The runners and walkers (influence: 3, impact: 4, attachment/interest: 5) from **Gödöllő and Pécel**, as well as the **13th, 14th and 17th Districts** (influence: 3, impact: 4, attachment/interest: 5), reported several problems: the running paths do not meet, the running tracks are missing in several places, there is too much dog waste on the grass, and runners’ path of access to the Danube bank should be created.

The **leader of Pécel’s Running Club** (influence: 3, impact: 4, attachment/interest: 4) also mentioned difficulties. While the banks of the stream would be an ideal and popular running route, their poor condition forces runners to choose a more dangerous and less enjoyable route.

An entrepreneur we contacted who operates a bike shop in Gödöllő and Szada (influence: 3, impact: 5, attachment/interest: 5) also drew attention to several weaknesses from a cycling perspective. According to him, there is no ramp in the underpass at the Gödöllő

train station leading to the trains, so you have to take your bike up the stairs. Furthermore, the recently built BMX track (ed.: Gödöllő Skatepark) lacks a suitable environment (no covered area and no built toilet).

DEVELOPMENT OF TOURISM INFRASTRUCTURE AND SUPERSTRUCTURE

In tourism development, building infrastructure is not sufficient in itself: services and attractions need to be created.

The **Centre for Development of Active and Ecotourism** (Aktív- és Ökoturisztikai Fejlesztési Központ, influence: 5, impact: 2, attachment/interest: 3) offers its expertise in helping local governments with their plans for development. They also put together tourism packages and identify good practices. They are new to the subject of our project: active tourism development in a partly urban environment. In their opinion, the Rákos stream is “not an easy place from a tourism standpoint: realistically speaking, people on a few-hour leisure excursion or one-day ‘sandwich tourists’ constitute the only possible target groups”. Potential attractions are considered to include a traffic practice park for children, a roller skating rink, a Rekortan-covered running track, an outdoor fitness park, educational nature trails and themed playgrounds.

While Gödöllő is the most visited municipality in the Pest County section, according to the city’s chief architect “the point is not tourism, but that Gödöllő is a liveable city, where people enjoy spending time, where there is community – and then the tourists will come as well. „Thus, in Gödöllő, tourism appears as a part of general, overall development. In our interviewee’s view “the Royal Palace of Gödöllő is a tourist destination that is worth cycling to and then you can add further attractions in other towns. In this form, a competitive tourist package is a possibility.”

The garden operated by the **FAUNA Foundation for Animal Protection and Nature Conservation** in Zugló (FAUNA Állat- és Természetvédelmi Alapítvány, influence: 4, impact: 4, attachment/interest: 5) could be an important attraction for cycling tourists, adding colour to everything the streamside has to offer, and providing a model of eco-management for those interested.

According to the **chief architect of the Municipality of Pécel** (influence: 2, impact: 4, attachment/interest: 2), Pécel “has no attractions, only natural value. There are tourist routes, but, because of the built environment, there is no tourism.”

Our interviewee speaking on behalf of the **CivilZugló Association** (CivilZugló Egyesület, influence: 3, impact: 3, attachment/interest: 5) is also a local governmental representative of the 14th District (where he is in a position to take initiative), i.e. he is a stakeholder representative in two respects/roles. He expressed scepticism about the project: there are many plans with reference to this subject area that have been drawn up, but not yet implemented. What remains unresolved, on the other hand, is the maintenance of the cycle path, the revitalization of the streambed and the surrounding area, and the facilitation of a peaceful coexistence between cyclists, runners, dog walkers, and parents with strollers.

The **Hungarian Cyclists' Club** (Magyar Kerékpárosklub) sees the route along the stream as being intended for professional cyclists, with less emphasis on tourism. In their view, the Rákos Stream could also be considered as an active urban leisure destination. For this reason, community spaces are seen as important (but the banks should not be crowded), along with programmes (they are happy to organise a "bike-in" tour), dining facilities and toilets, as well as "fostering a sense of escape, and picking a good name".

NATURE AND ENVIRONMENTAL PROTECTION, SUSTAINABILITY

Considerations on nature conservation, environmental protection and sustainability were only mentioned by the **Pilis Forest Park Company** (Pilisi Parkerdő Zrt, influence: 3, impact: 3, attachment/interest: 4). According to employees, the Pilis Forest Park Company has limited influence because, in practice, it can only enforce the balance between humans and nature in its own areas. Company staff has to reconcile economic and ecological considerations. In Budapest, forests and green spaces, as well as ecosystem services, are increasingly valued as contributing factors towards creating a more liveable city.

COOPERATION BETWEEN STAKEHOLDERS, INVOLVING LOCAL RESIDENTS AND NGOS

A strong commitment and attachment to the Rákos Stream from local residents was evident in all cases. "We were born here, we are used to it and we cannot imagine our lives without the stream. We've been coming here since we were little, now I come with my granddaughter. She says: Grandma, there is a river! I tell her: no, that's not a river, that's the Rákos Stream. Then we come again and she says: Grandma, look, it's the Rákos

Stream. She is 4 years old. [...] All children love the Rákos Stream; they have been brought here since they were tiny." (**Older passersby in Gödöllő** [influence: no data, impact: no data, attachment/interest: 5])

The **runners and walkers** we interviewed from **Gödöllő, Pécel, and the 13th, 14th and 17th Districts** also reported a strong attachment, vivid stream-related images and memories from the past, the important role the stream plays in their everyday lives and their strong connection to nature. For many respondents, water is important, for "in the middle of the concrete jungle, it brings you back to nature and gives you freedom". Families with children see the stream as an opportunity for engaging in various activities ("let's see if we meet any ducks today").

Nature is often at the core of one's involvement and attachment: the animals, the open space, and the streamside activities nearby. However, their awareness of the relevant developments is incomplete; they only know what they have personally seen (**wheelchair users residing in Gödöllő Nursing Home**).

According to the **leader of Pécel's Running Club**, no effort is made to involve them in decision making: "I don't really feel I have a say. We are not really asked for our opinion. For example, they have brought a running race here without asking the 150 runners of Pécel what we want and how we want it."

In contrast, the management of the **Gödöllő Nursing Home of the Municipality of Budapest** (Fővárosi Önkormányzat Gödöllői Idősek Otthona, influence: 3, impact: 3, attachment/interest: 2) was approached by the local government as a stakeholder in the planning process, i.e. as an institution they had some influence over the development of the cycle path. However, this influence seems to have been minor ("they asked us what we would like, to what extent the development would disturb the residents of our institution").

EDUCATION AND RAISING AWARENESS

Several interviewees stressed the importance of raising awareness. According to the contacted representative of the **Urban Development Department of the Municipality of Budapest** (Budapest Főváros Városépítési Tervező Kft.), the stream should be on people's mental map, for which environmental education would serve as a good tool. A similar opinion was expressed by members of the **ZÖLD XVII Association for Environmental, Nature Protection and Urban Development** (ZÖLD XVII Környezetvédelmi, Természetvédelmi és Városfejlesztési

Egyesület), who drew our attention to the importance of natural values and the active role the stream plays in changing attitudes – the latter being a major focus of their programmes.

Cycling organisations are a mainstay of awareness-raising. Contacted members of the **Kőbánya Cyclists Facebook group** (Kőbányai bringások, influence: 4, impact: 5, attachment/interest: 5) also mentioned this as their chief objective: building community (bicycle tours, games testing local knowl-

edge), mediating between authorities and civilians, reaching out to children, young adults and parents. In the future, they also plan to tour cycle routes.

MARKETING COMMUNICATION

Marketing communication is the most disadvantaged area in the planning; we have received no direct suggestions or opinions in this regard.

As a summary of the interviews, our findings are shown in the figure below:



Figure 5. Summary of stakeholder interviews

Source: Stakeholder Engagement, 2020

4.3 RESULTS OF THE QUESTIONNAIRE SURVEY TARGETING LOCAL RESIDENTS

The Rákos Stream environment is rich in natural and cultural values. Respondents were asked – within the framework of an open question – to specify which of these are important to them. Of the 601 responses from 852 respondents, 557 were found to be suitable for analysis, with 1,143 instances of coded content.

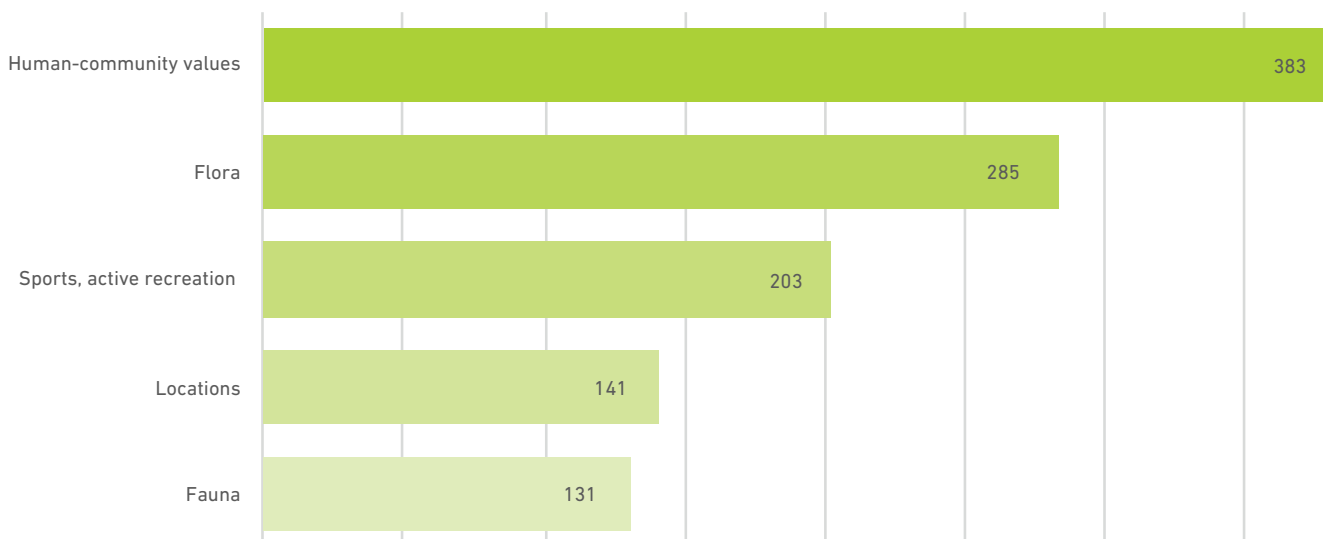


Figure 6. Frequency of natural and cultural values along the Rákos Stream, as mentioned by respondents

Source: Stakeholder Engagement, 2020

Respondents most frequently (383 mentions) spoke of the **feelings and values associated with the stream bank and its surroundings**, the factors important for the condition and usability of the Rákos Stream (clean air, tidiness [cleanliness], quiet, tranquillity, beauty), but also of the proximity of the stream and nature in general. An important component of this category is the relationship between people/social communities and nature.

The high number (285) of mentions regarding the values of the **flora** points to the perceived importance of the green environment (trees and forests).

Mentions of **human activity** (203) were not only related to sports (running, cycling, physical exercise); respondents also attach importance to spending leisure time actively, even in the form of a walk. This

category also included elements of activity-related infrastructure such as cycle paths or playgrounds.

In connection to specific **places and locations** (141 mentions), respondents mentioned certain institutions and recreational areas (e.g. Ráday Castle, László Kubala Park), but they also spoke in more general terms (lakes, marshes, bogs).

Among the values of the **fauna** (131 mentions), “ducks” and “birds” stand out.

Further development will be needed to harness the area’s potential for tourism and leisure. Out of 216 responses by 852 respondents, 196 relevant development proposals were evaluated, with 311 instances of coded content. The figure below shows the types of development proposed by respondents along the Rákos Stream and the factors they consider important for development.

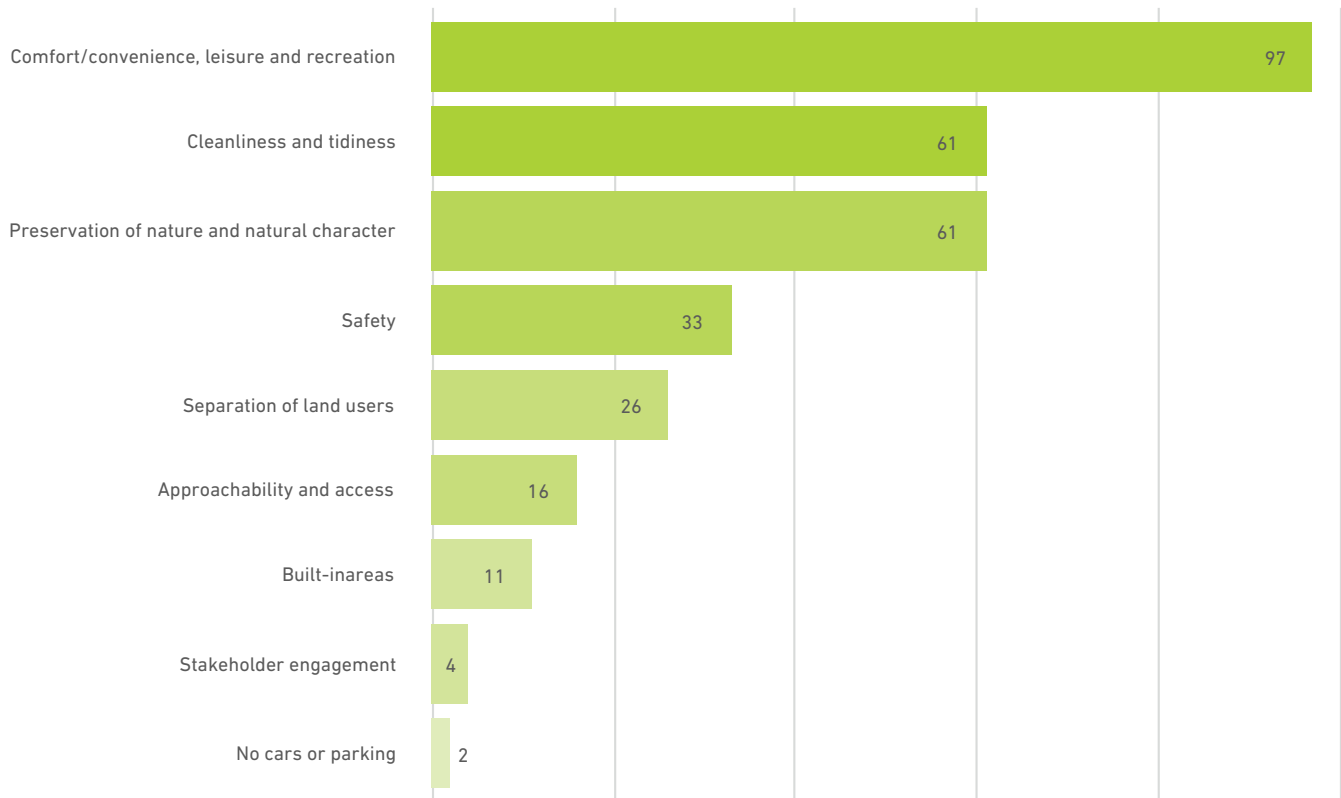


Figure 7: Frequency of improvements proposed by respondents in different areas along the Rákos Stream

Source: Stakeholder Engagement, 2020

The majority of respondents (97 mentions) highlighted the need for **improvements with respect to convenience, comfortable leisure time and meaningful recreation**, with the installment of drinking fountains and benches, and the creation of playgrounds and spaces suitable for “dog walking” being the most commonly suggested.

The respondents’ need for **cleanliness and tidiness** (61 mentions) could be met mainly by installing litter bins and toilets.

Developments linked to the preservation of nature (developments to preserve natural values, biodiversity, the pristine integrity of the streamside; to enhance the sense of “naturalness”; to increase green spaces; and to protect wildlife) were seen as equally important (61 mentions).

In addition to the necessity (33 mentions) of ensuring **safety** (primarily in the form of street lighting), the **need to separate people who are using the area for different purposes** (26 mentions) was also raised by respondents. This latter point was also brought up during the interviews; the resolution of this potential source of conflict will certainly need to be taken into account in future developments.

Access to the stream (16 mentions) is not always easy and safe; improvements to access roads/paths and facilities for safe crossing (pedestrian crossings, overpasses, underpasses) are definitely warranted.

The issue of **built-in areas** (11 mentions) divided the respondents: while some (7 mentions) called for a ban (no building, no housing estates, no concrete embankments), others stressed the importance of constructions in terms of regional development.

Some respondents (4 mentions) also stressed the importance of **consultation and cooperation with stakeholders**, which we consider essential in preparing the strategy (transparent development plans, reaching out to local residents, cooperation between the districts concerned, a genuine public forum).

Two respondents saw the **absence of cars and parking** as key in preserving the tranquillity of the area.

In order to preserve and increase the attractiveness of the Rákos Stream and its surroundings, respondents were asked what currently makes the area attractive to them. Out of the 656 responses from 852 respondents, 649 were found to be relevant, with 1,441 instances of coded content occurring.

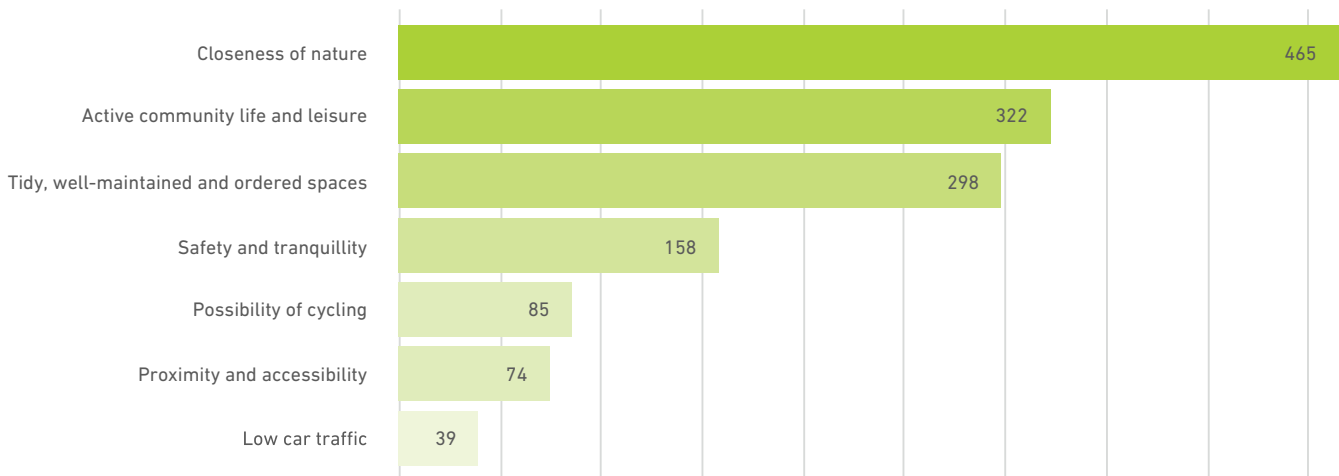


Figure 8. Frequency of mention of elements along the Rákos Stream that respondents find attractive

Source: Stakeholder Engagement, 2020

The majority of respondents (465 mentions) like the Rákos Stream because of the **closeness of nature** (green spaces, presence of animals), with a strong aversion to excessive development.

The area around the stream is seen as a place for **recreation, active community life and leisure** (322 mentions), offering respondents a quality experience.

Such elements of **tidy, well-maintained and ordered spaces** (298 mentions) as, for instance, freshness and cleanliness, are perceived to be associated with beauty and scenery.

Safety and tranquillity (158 mentions) are increasingly valued in tourism and leisure. The stakeholders surveyed first and foremost appreciate the quiet peacefulness and the safe, uncrowded, suburban character of the area along the Rákos Stream.

The importance of building a cycle path is demonstrated by the fact that respondents (85 mentions) highlighted the **possibility of cycling** and their desire for this leisure activity. Although accessibility was also listed as an area for improvement in the previous question, a number of respondents (74 mentions) reacted positively to **access to the area**, particularly to the proximity of the stream bank.

In addition, 39 respondents rated positively the **absence of cars in the area and its distance from motorized traffic**.

After naming the positive aspects, respondents were asked to list any factors along the Rákos Stream that they found difficult to deal with. Out of 614 responses from 852 respondents, 564 relevant responses were assessed, with 923 instances of coded content occurring.

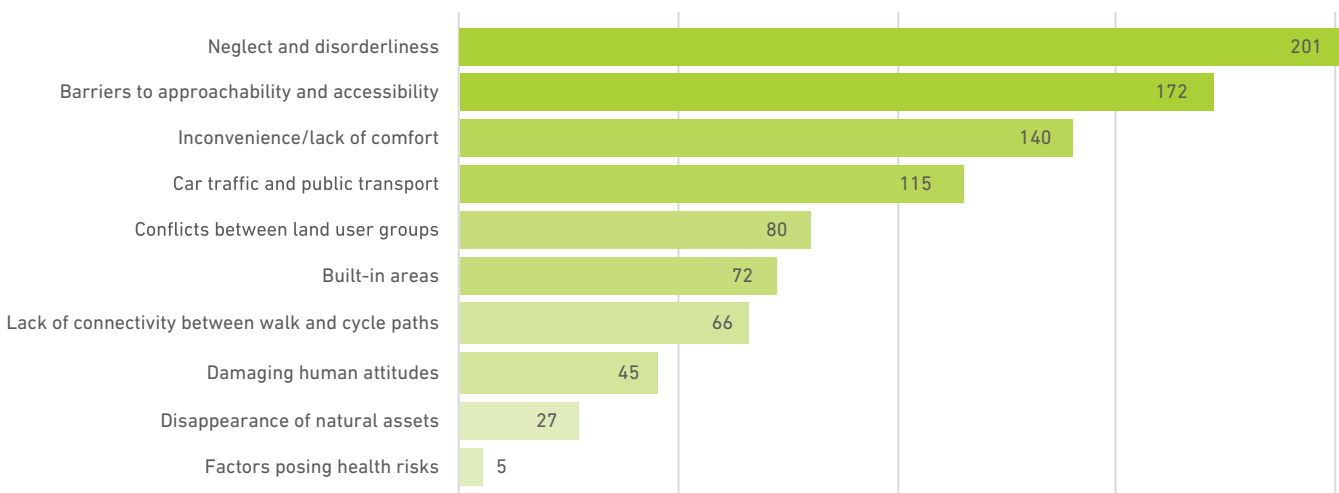


Figure 9. Frequency of mentioned elements of difficulty along the Rákos Stream

Source: Stakeholder Engagement, 2020

According to respondents, **neglect and disorderliness** (201 mentions) were the most significant problems along the Rákos Stream, specifically mentioning unkemptness, neglect, stench, weeds, and difficulties involving littering, dirt and dog waste.

Barriers to approachability and accessibility (172 mentions) included difficulties with crossing over (crossing the M3; crossing by bicycle; crossing train tracks, tram tracks, carriageways; crossing from one side of the stream to the other, lack of pedestrian crossings, lack of footpaths), access (accessing the Kóbánya section; accessing the stream; the inaccessibility of the rural sections on foot; obstructions; old, diseased trees blocking the path during storms; closed areas; difficult to cross pedestrian bridge; level crossings of major roads; difficulty with pushing a stroller on the gravel, sidewalk should be lowered for the physically disabled) and lack of lighting. Under the heading of **inconvenience/lack of comfort** (140 mentions), respondents cited amenity-related aspects such as the importance of quiet, the need for benches, the need for food and water, and the lack of toilets.

Difficulties with car traffic and public transport (115 mentions) also constituted a recurring element, with respondents citing parking and the dominance of cars (not stopping at pedestrian crossings), and car traffic passing through the area.

The issue of **conflicts between the various groups using the area** (80 mentions) had emerged as a perceived problem while we were analysing the answers to another question. Conflicts between groups using the streamside for leisure, which has resulted in overcrowding, have been triggered by the varying needs of these users and the differences in – possible clashes between – the way they use the area (e.g. conflicts between dog walkers and runners).

Built-in areas (72 mentions) was also seen as a recurrent difficulty, mostly related to paving and the construction of housing, and, in some cases, also to the location of electrical power structures.

Lack of connectivity between walk and cycle paths (66 mentions) was also perceived as a problem by respondents, who cited the lack of continuity of walking or cycling routes or of individual sections.

In the category of **damaging human attitudes** (45 mentions), we have listed comments regarding the absence of human awareness and attention, and negative attitudes (lacking sense of responsibility in the case of dog walkers, lack of cooperation from decision makers, lack of cooperation in the interest of keeping the environment clean). However, respondents also mentioned groups (homeless people, vandals) with whom they had problems in the past.

On the issue of the **disappearance of natural assets** (27 mentions), the difficulties mentioned by respondents were related to the loss of green spaces and their “elements” (greenery, trees, vegetation), but some respondents were also concerned about the disappearance of the natural factors necessary for the frogs to breed.

Factors posing health risks (5 mentions) included an animal (tick) that negatively affects the health of hikers/excursionists and an illness (allergy) whose occurrence increased at the location.

Tourism and recreational use of the Rákos Stream also poses natural and environmental challenges, which are discussed below. Of the 492 responses from 852 respondents, 435 relevant responses were assessed, with 749 instances of coded content. The response option “no challenges” was selected by 15 respondents.

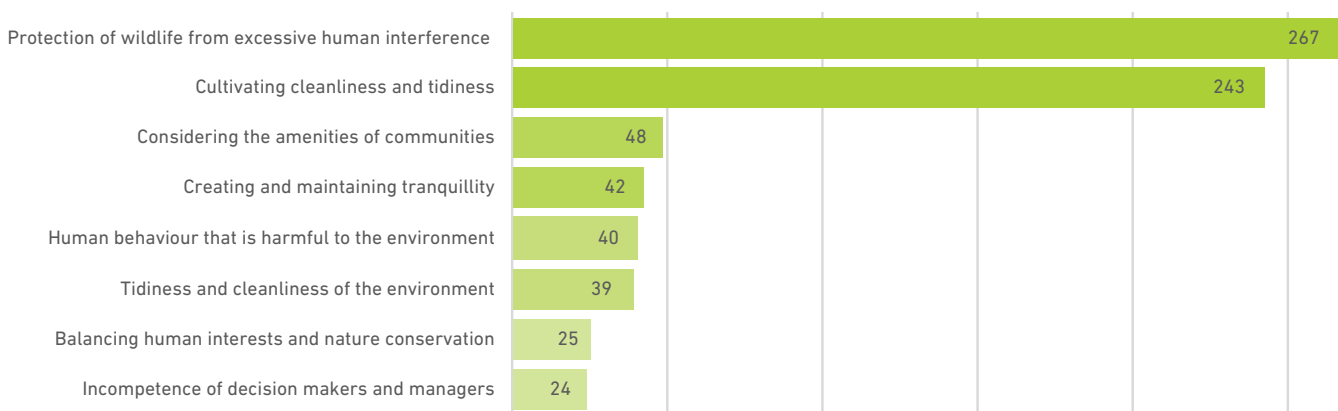


Figure 10. Prevalence of nature and environmental protection-related challenges as indicated by respondents with respect to tourism and recreational use of the Rákos Stream area

Source: Stakeholder Engagement, 2020

According to respondents, the **protection of wildlife along the Rákos Stream from excessive human interference** (267 mentions) is the greatest challenge. Human activity can result in damaging flora, fauna and ecosystems.

With respect to **cultivating cleanliness and tidiness** (243 mentions), respondents see the increase in waste production and the disposal of waste as the main problem, which they believe can be addressed mainly by the placement of litter bins and by efficient waste removal.

Under the heading of **considering the amenities of local communities** (48 mentions), the objectives that are important to local residents (the provision of adequate infrastructure and the eradication of rats and mosquitoes) were listed.

In the case of **creating and maintaining tranquillity** (42 mentions), according to respondents, the tranquillity of local residents and hikers is threatened mainly by increased traffic and noise pollution.

In terms of **human behaviour that is harmful to the environment** (40 mentions), the perceived challenge is to change people's inappropriate behaviour, which can be addressed partly by public authority intervention and the enforcement of rules, and partly by environmental education.

Under the heading **tidiness and cleanliness of the environment** (39 mentions), attention is drawn to the need for active human intervention in maintaining the environment. This category also includes responses that suggest the creation of near-natural conditions by artificial means (planting trees, creating parks).

In the context of **balancing human interests and nature conservation** (25 mentions), respondents called for these interests to be pursued jointly.

With respect to **incompetence of decision makers and managers** (24 mentions), respondents highlighted problems related to the lack of professionalism, poor objectives and incompetence displayed by political leaders and renovation managers. In this context, respondents identified the self-serving objectives (profit-seeking, corruption) of decision makers (political leaders, public authorities) and a lack of expertise and resources (mainly financial) as the source of the problems.

In creating our vision of cycling tourism along the Rákos Stream, we also counted on the opinions of local residents. Respondents were asked to describe how they would like to see the Rákos Stream area in 5 years' time. In answering this open-ended question, 583 respondents shared their views, with 1,836 instances of coded responses.

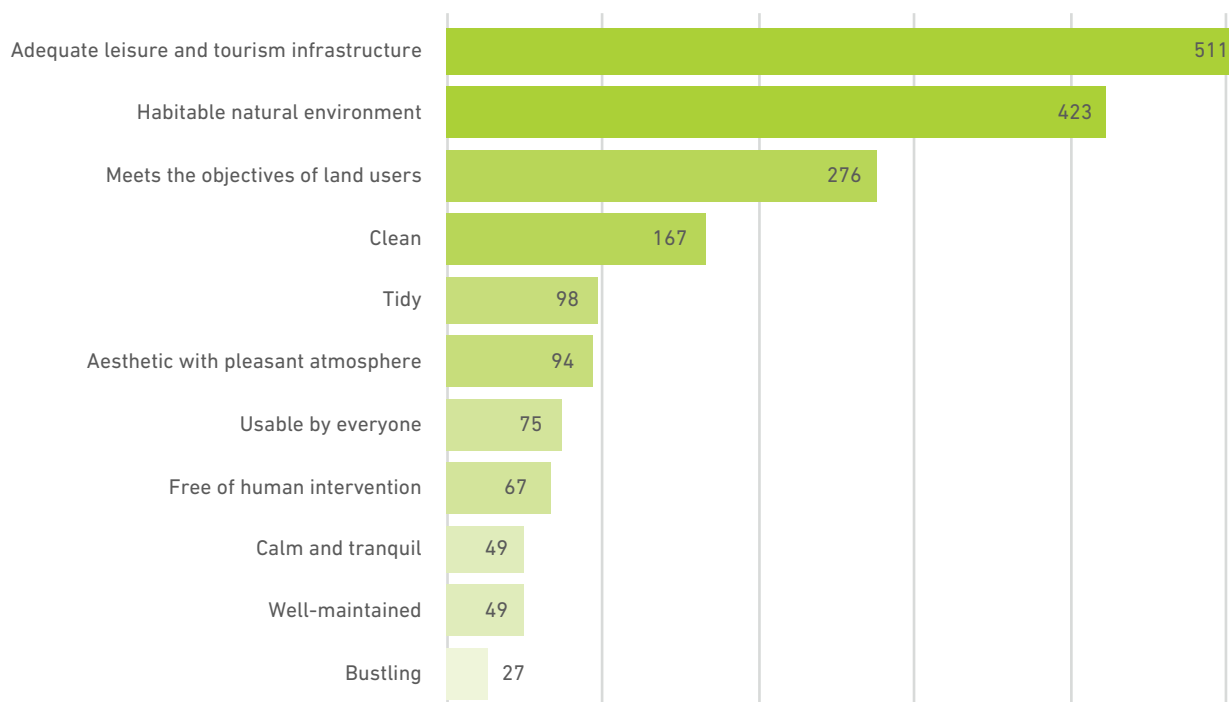


Figure 11. Vision of the Rákos Stream from the perspective of respondents

Source: Stakeholder Engagement, 2020

The majority of respondents (511 mentions) envisioned an **area with adequate leisure and tourism infrastructure**. They would like to see – within the framework of constructive/creative human intervention – various landmarks, built surfaces and facilities (catering facilities, benches, tables, playgrounds, toilets, fountains, information boards, car parks, bridges) in the vicinity of the stream, adapted to the purpose of their use (cycling, walking, excursion, dog walking, running, etc.). Cyclists also envision a cycle path along the full length of the stream.

In their descriptions of **creating a habitable natural environment** (423 mentions) – i.e. creating and maintaining a sustainable balance and harmonious relationship between humans and nature (parks, trees, green spaces, grass, shade, woodland, home for animals) – respondents emphasised the closeness to nature. In connection to this, the revitalisation of the stream and the streambed were key themes among respondents (27 mentions). The three typical responses to revitalization in the questionnaire were: (1) “A revitalized, living, meandering streambed. The stream is accessible on foot. Cycle and walking paths developed all the way through.” (2) “About 30 years ago, there was talk of revitalizing the stream, which would have eliminated the concrete lining of the stream and made it more meandering. That is what I would like to see.” (3) “A revitalized streambed, ensuring water supply to ex lege areas with sluice control, expansion of nature conservation areas with buffer strips, stronger populations of protected species, appearance or return of protected species.”

To create an **area that meets the objectives of land users** (276 mentions), it is important that everyone can feel at home there, that the Rákos Stream bank is family-friendly, child-friendly, a home for runners, cyclists, walkers, dog walkers, anglers, and water sports enthusiasts. Community and recreational spaces should be created along the stream with programs and an environment for recreation and picnicking.

Respondents said the stream and its surroundings should be **clean** (167 mentions); there should be waste bins, and the area should not be a dumping ground for dog waste.

Through a desire for a **tidy area** (98 mentions), ideas regarding the methods and results of human intervention are articulated; respondents want a user-friendly, thoughtfully created, green natural and built environment.

The desire for an **aesthetic stream bank with a pleasant atmosphere** (94 mentions) also manifested in respondents' descriptions of subjective feelings and specific places that could serve as an example. “The valley should be beautiful and friendly, with a pleasant atmosphere. It should be how it used to be. It should be like many other urban stream environments in Hungary and abroad.”

Respondents envision a **Rákos Stream that is usable by everyone** (75 mentions), where everyone would be safe, and there would be separate places for a variety of uses, for multiple generations. Different groups could coexist in a peaceful manner.

In articulating their vision of a **Rákos Stream free from human intervention** (67 mentions), respondents expressed what they *do not* want to see; they argued against car traffic, the development and paving over of the area.

In the case of a **calm and tranquil Rákos Stream** (49 mentions), respondents expressed their desire for a quiet, serene area, expecting few visitors and low traffic.

In their vision of a **well-maintained** (49 mentions) streamside, respondents imagined a well-kept area with someone responsible for taking care of it (nature and infrastructure). Responses addressed the need for care and attention, with local communities seeing the area as their own.

In the category of a **bustling Rákos Stream** (27 mentions), we included the visions of respondents who imagine the area as a busy place full of people and cyclists.

The cycle path along the Rákos Stream will be part of a European network of cycle paths (EuroVelo14). Out of 542 responses from 852 respondents, 492 responses (corresponding to the question) were evaluated, with 685 instances of coded content. A total of 16 respondents were of the opinion that a new cycle path would not bring any benefits to the area.

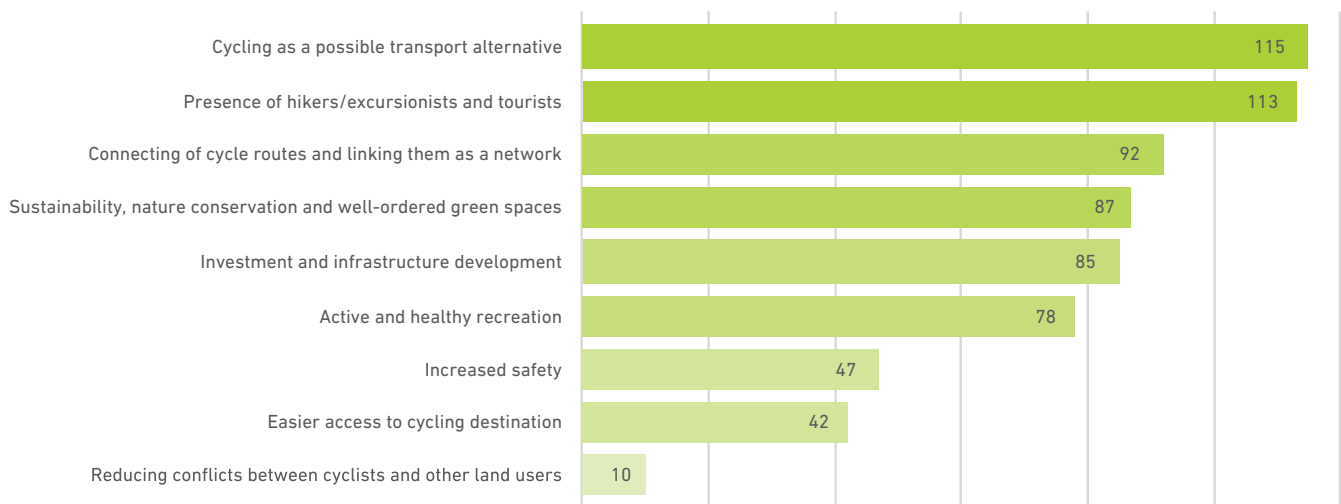


Figure 12. Benefits of the EuroVelo 14 cycling route along the Rákos Stream according to respondents

Source: Stakeholder Engagement, 2020

115 respondents consider cycling as an attractive **transport alternative**; they expect more people to use bicycles in place of car transport, for example to commute to work.

113 respondents felt that the development would **increase the number of hikers/excursionists and tourists in the area**, raise awareness of the Rákos Stream and boost local commercial businesses.

The **connecting of cycle routes and linking them to a network** will have its advantages, according to 92 respondents, as it will solve a problem outlined in an earlier question: the EuroVelo section will allow for longer, continuous cycling.

87 respondents identified **sustainability, nature conservation and well-ordered green spaces** as benefits; these factors were linked along the lines of the need for quality. Respondents in this category most often indicated a need for a well-maintained, tidy, cultivated, better quality green space, which includes improvements to provide cycling facilities. In relation to development, respondents highlighted the need for maintenance and upkeep, as well as the preservation of nature.

Investment and infrastructure development was seen as beneficial by 85 respondents, as it brings resources to the area that will help the growth and prosperity of streamside communities. As such, the respondents' articulation of the benefits of infrastructure development also implies a need for the development of public spaces, parks, and outdoor activity facilities along the stream.

The planned bicycle trail, according to 78 respondents, will promote **active and healthy recreation**, supporting sports, physical exercise and family activities. This category emphasises the benefits of improvements to health and quality of life, linked to opportunities for excursions/hiking, physical activity and sport.

The bicycle paths planned to be built will provide **increased safety** and protection (47 mentions) from car traffic, providing a form of protection for cyclists ("There will be no need to ride between cars").

The planned investment will allow for **easier access to cycling destinations** (42 mentions), thus ultimately serving the promotion of cycling. At the same time, accessibility also means overcoming certain "obstacles": "(...) the problem of crossing the railway tracks and the M3 access road will be solved." It will be possible to get to more places, to reach more remote destinations and to use the bicycle more often to get to work.

The issue of **conflicts between users of the area** was raised again by 10 respondents. In their opinion, the cycle path will help to achieve a spatial separation of cyclists, which will lead to the elimination of existing conflicts.

As already apparent from the answers to the previous questions, respondents expect the planned EuroVelo14 route also to have certain disadvantages, which are presented in the following figure. Out of 496 responses from 852 respondents, 429 answers corresponding to the question were evaluated, with 567 instances of coded content. 84 respondents chose the option "None, or no (perceived) disadvantages".

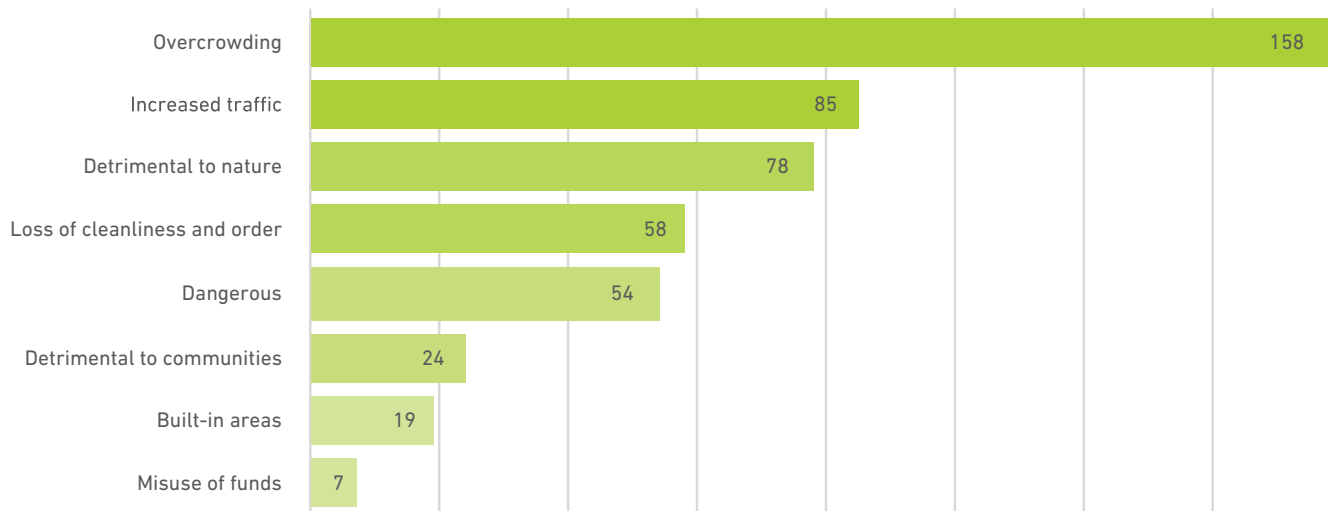


Figure 13. Disadvantages of the EuroVelo 14 cycling route along the Rákos Stream according to respondents

Source: Stakeholder Engagement, 2020

The greatest concern raised by respondents was that the planned project would lead to **overcrowding** (158 mentions), and that tourists (“strangers”) would disturb their peace and quiet, allowing less space for locals along the stream.

Increased traffic (85 mentions) is also expected to disrupt the lives of locals. Increased traffic refers not only to motorists, but to cyclists and tourists as well. The risk of increased traffic is seen by respondents as potentially sparking conflicts and adding further pressures on nature and natural habitats.

78 respondents view development as **detrimental to the natural** environment because human presence threatens the tranquillity of wildlife. In addition to the loss of green space as a result of the interventions, the damage to the environment, the felling of trees and the reduction of wildlife habitats are also perceived as disadvantages.

Respondents also expect the project to result in a loss of **cleanliness and order** (58 mentions), with respondents worrying about the area becoming untidy, littered, and left without proper maintenance.

The construction of the cycle path is seen as a **source of future danger** by 54 respondents, as it is expected to cause accidents and conflicts. Respondents

anticipate these conflicts to stem, on one hand, from the different uses of the area (“cyclists will not take into account pedestrians”) and, on the other hand, from potential accidents.

24 interviewees believe that the construction of the planned route will be **detrimental for communities** because of a lack of consultation with local stakeholders prior to the project, and therefore a lack of specific considerations (e.g. young children). They also fear that “lack of maintenance will also result in blowback on local residents.”

Built-in areas (19 mentions) and **misuse of funds** (7 mentions) (“funds used improperly, not what they’re supposed to be used for”) were fears that had also been expressed in connection to previous questions.

The planned cycle route along the Rákos Stream will, in our opinion, create a number of opportunities for the area. Assessing how locals perceive this question was one of the objectives of our empirical research. Out of 408 responses from 852 respondents, 374 responses matching the question were assessed, with 446 instances of coded content. 14 respondents did not see any opportunities potentially arising from development.

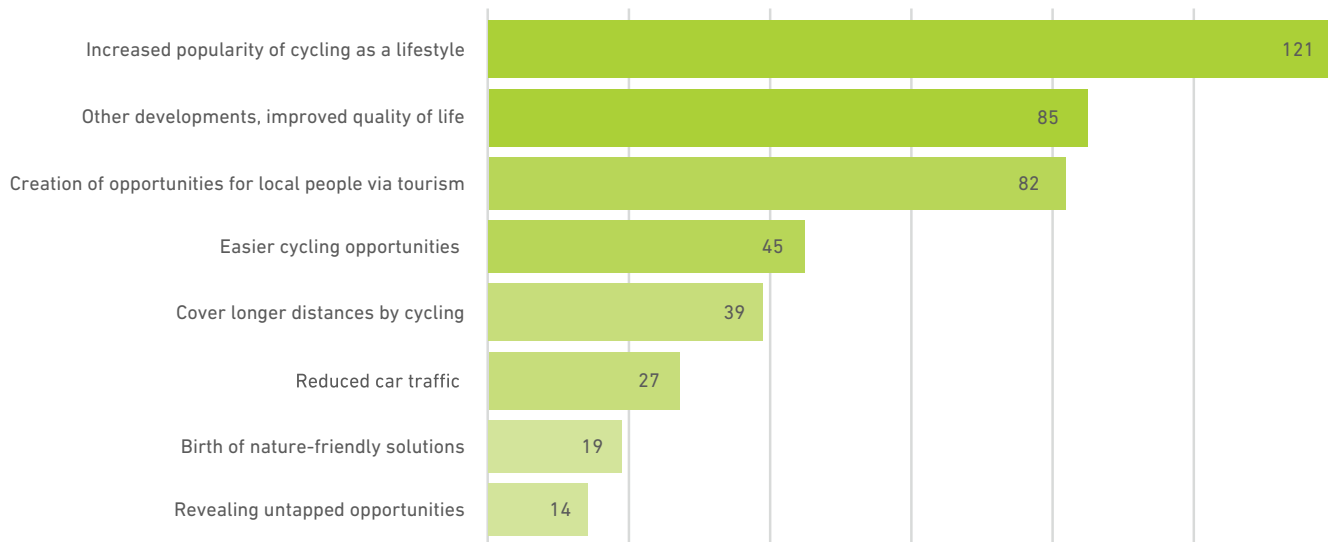


Figure 14. Potential opportunities provided by the EuroVelo 14 cycle route along the Rákos Stream according to respondents' views

Source: Stakeholder Engagement, 2020

The majority of respondents (121 mentions) predicted that **cycling would become more popular as a lifestyle**, with the cycle path providing an incentive for people to choose cycling for leisure or transport. It would also provide new opportunities for people who do not habitually use a bicycle to reach their destination. Responses in this category focused on the personal benefits of cycling and spending time in a natural environment.

Respondents envision the planned cycle route creating opportunities in other areas as well, as it will lead to **other developments** and an overall **improvement in the quality of life** (85 mentions). Based on the responses received, the local population sees potential in the development, as it is not limited exclusively to the cycle route, but also extends to its surroundings. The maintenance of the cycle path will be obligatory, and therefore the surrounding area will also be regularly maintained; the increased popularity of the area will raise awareness of the need for further development.

Respondents also expect **tourism to create opportunities for locals** (82 mentions); the cycle path will boost tourism and the economy in the long run, with local investors and restaurants also benefiting economically.

Facilitating the ease of cycling (45 mentions) was highlighted by respondents who had previously preferred this mode of transport. Responses in this category emphasised the advantages of cycling on a proper cycle path rather than the road. Along the lines of better road quality and more comfortable use, responses highlighted safety and the avoidance of traffic.

The construction of a cycle path will allow cyclists to **cover longer distances** (39 respondents) and to reach more remote places, thus reducing isolation. The length of the cycle route and its connection to the cycle network were seen by respondents as carrying the most potential for new opportunities. In addition to the fact that longer, continuous cycle routes provide access to more distant destinations, lengthier excursions and hikes, respondents also highlighted the possibility of discovering new places (towns, villages, natural beauty).

Reduced car traffic was also perceived as an opportunity (27 mentions). The hope expressed by respondents was that improvement in cycling opportunities would lead to more people opting for cycling rather than driving as a means of transport, which in turn would lead to reduced car traffic and, in the long term, to improved air quality.

A portion of respondents consider the construction of cycle route as a **nature-friendly solution** (19 mentions), in contrast to other development options (e.g. housing estates, concrete surfaces): "it promotes and creates opportunities for environmentally friendly transport"; "since, in today's Budapest, it is 'fashionable' to turn every patch of green into a housing estate, this might mean the stream will be spared..."; "it would be quite easy to get around on a bicycle if there were trees instead of all concrete, like along the Danube bank." 14 respondents said that the area has **untapped opportunities** pointing to its advantageous features and the fact that it has been underutilised. The streamside is seen as an "attractive environment" and a "magical place" with many advantageous features, offer-

ing a myriad of possibilities: “it provides many unrealised opportunities: adult ‘gym parks’, playgrounds for children, undulating, hilly bicycle and skateboard parks, picnic tables, benches with artificial shading or under trees that provide natural shade, litter bins placed and emptied regularly, artesian drinking water wells every 500 metres.”

The construction of the EuroVelo 14 cycle path could also pose risks for the area, which we addressed in the last question of our survey. Out of the 387 responses of 852 respondents, 474 contained coded content, with 43 respondents selecting the “negligible risk” option.

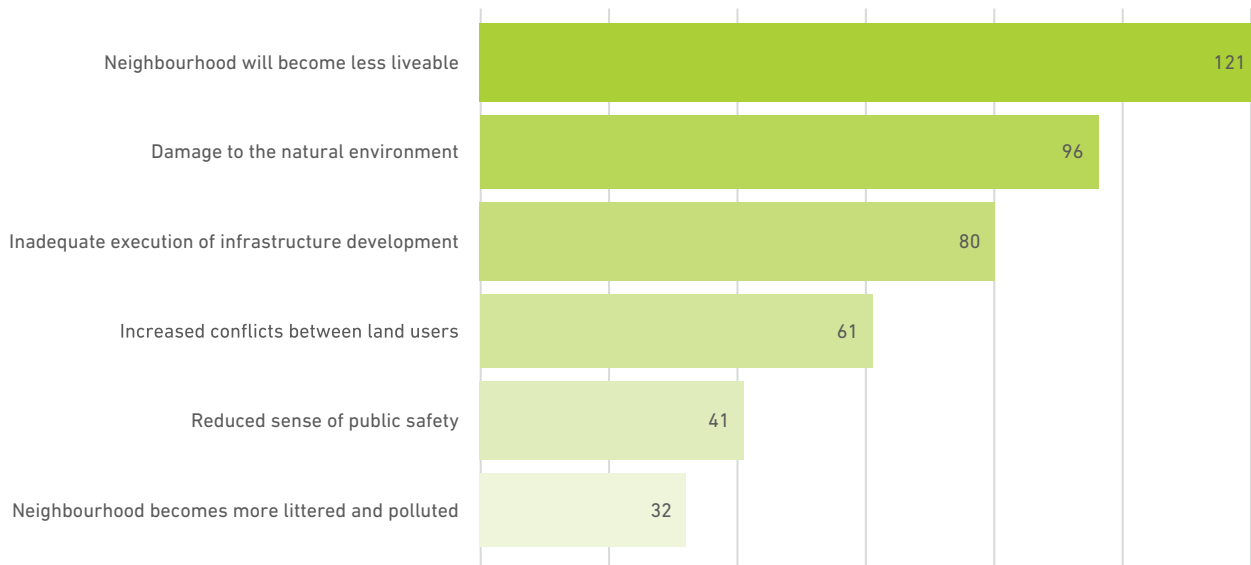


Figure 15. Dangers posed by the Rákos Stream section of the EuroVelo 14 cycle route as perceived by respondents

Source: Stakeholder Engagement, 2020

What respondents fear the most is that the **neighbourhood will become less liveable** (121 mentions). Responses foreseeing a negative change (area would lose its quiet, peaceful, tranquil atmosphere, traffic and noise would increase) from the current situation (which is generally perceived as quiet, peaceful), and the appearance of crowds (overcrowding, too many people using the area, visitors, tourists) predict a negative trend.

With respect to **damage to the natural environment** (96 mentions), respondents cited processes that threaten the environment (destruction of the lake’s natural value, damaging interventions, destruction of the environment and green areas, disturbance and destruction of wildlife, damage to the stream and stream bank).

Concerns regarding **inadequate execution of infrastructure development** (80 mentions) had already been raised in connection to other questions. Respondents worry that investments will be implemented inadequately (excessively or not at all, not realised as planned, no consideration for related infrastructure or needs [e.g. parking lots], community involvement will be lacking, corruption will be significant, maintenance will be neglected).

Problems arising from different modes of land use

also constitute a recurrent theme, with respondents citing increased conflicts between users of the area as a potential threat (61 mentions). Possible disputes between cyclists, motorists, pedestrians, families with young children, dog walkers and other users may be aggravated by inappropriate and irregular utilisation of the area, as a result of not considering one another.

The **sense of public safety may also be reduced**, according to 41 respondents, due to accidents resulting from the use of the area, or the endangering of some users. Respondents believe that the likelihood of crime may increase (“in an uncontrolled environment, crime increases due to a lack of adequate police presence”). At the same time, some responses also articulate fears linked to particular social groups (“inappropriate use may worsen public safety, attracting people who do not belong there”; “young people who are prone to unruly behaviour will begin to frequent the area”).

32 respondents raised concerns that the **area would become more littered and polluted**, that waste would not be removed, that the area would become a dumping ground, and that air quality would deteriorate.

4.4 ASSESSMENT OF ECOSYSTEM SERVICES

According to point 2.3 of the *Guidelines for ESS-based Ecotourism Strategy* (hereinafter referred to as the *Guide*), a natural inventory of ecosystem services serves as the starting point for tourism development strategies that are based on the concept of ecosystem services. This is explained in detail in section 2.4 of this strategy document. This summary covering the complete stretch of the Rákos Stream makes it clear that, from a natural science standpoint, the Rákos Stream has outstanding conservation values, both in terms of habitat and species diversity. Translated into the language of ecosystem services, this means that the so-called supporting and regulating services play a prominent role. The Rákos Stream is a significant habitat and ecological corridor in terms of nature conservation (supporting service): it provides habitat and migration routes for a rich diversity of wildlife. The Rákos Stream is a central element of the water system of the areas it connects (regulating service): it shapes the water management of marshes, swamps, coppices, groves and gallery forests, as well as artificial lake systems. This diverse habitat system and its wildlife are clearly attractive from a recreational point of view to people living nearby and visiting the Rákos Stream (cultural service). Within the cultural services provided by the Rákos Stream, in addition to its use for physical health maintenance (running, jogging, cycling, walking), its environmental education function is also highlighted. Furthermore, there are a number of historical-cultural assets associated with the Rákos Stream, which have additional recreational and – even identity-building – function, thereby adding to the cultural service value of the stream. In contrast, the value of the Rákos Stream in terms of so-called provisioning services is not significant: its role in human water use and agricultural use (food production, livestock) is negligible. These uses have declined over time and the value of provisioning services has decreased, while the value of cultural, regulatory and support services has increased.

The *Guide* also proposes the evaluation of ecosystem services from a social scientific standpoint, in the interest of which it is worth surveying the habits and value-attribution of the local population (residents and users) in relation to the Rákos Stream. To this end, an online questionnaire was prepared and completed by 497 people between January and mid-April 2021. The online questionnaire was disseminated to social media groups and forums in which people associated with the Rákos Stream participate. The

sampling logic of the questionnaire survey was therefore not aimed at being representative; instead it sought to reach those who are to some extent familiar with the ecosystem of the Rákos Stream and avail themselves to the services it provides. In terms of directions for potential tourism development along the Rákos Stream, the opinion of those who currently (as a result of frequent use) have knowledge about, and intensive preferences regarding, the stream are justifiably of paramount importance. A sufficiently large sample size will allow meaningful conclusions to be drawn regarding the value of the services provided by the Rákos Stream ecosystem in terms of user preferences and attitudes. The following section describes in detail how questionnaire respondents relate to the Rákos Stream, unequivocally showing that nature conservation values – i.e. the regulatory, support and cultural services – are considered of key importance by the users themselves, which is in line with the natural science assessment.

Respondents to the questionnaire on the social value of Rákos Stream ecosystem services visited the stream on an average of 137 days per year (496 responses, 137.31 days, standard deviation 111.94). This means that, on average, respondents visit the stream every two and a half days, with the average time spent there on each occasion lasting one and a half hours (496 responses, 96.79 minutes, standard deviation: 165.28). In view of the respondents' average values, we can therefore speak of an intensive use of Rákos Stream facilities.

In terms of their reasons for visiting the Rákos Stream, respondents listed recreation (on a scale of 1 to 5, based on 494 responses, the average importance is 4.56, standard deviation: 0.81) and walking (average: 4.46, standard deviation: 0.96) as the dominant form of use. It is important to emphasise that these gentler, more leisurely pleasures are clearly preferred by respondents over active forms of recreation. In the case of the Rákos Stream, visits for cycling (495 responses, mean: 3.89, standard deviation: 1.40), hiking and excursions (494 responses, mean: 3.76, standard deviation: 1.35), exercise and sports (492 responses, mean: 3.59, standard deviation: 1.46) generally lag behind cultural ecosystem services that provide the pleasures of recreation and walking. These latter two options were also rated as important or very important (scores 4-5 on the scale) by nearly 90% of respondents. At the same time, it should not be overlooked that nearly two thirds of respondents con-

sidered the cultural services provided by the Rákos Stream for active recreation (cycling, hiking, sports) to be important or very important. Intensive uses such as transport (492 responses, mean: 2.56, standard deviation: 1.42), work (493 responses, mean: 1.48, standard deviation: 1.05) and tourism (494 responses, mean: 2.60, standard deviation: 1.52) were not valued by the vast majority of respondents.

In the questionnaire, we examined different aspects of attachment to the Rákos Stream, such as local identity, attachment to nature, place dependence, attachment to family and friends. From these, the dimension of attachment to nature stands out, as more than 60% of respondents (495 answers) consider it very important and another 20% important to preserve the flora and fauna of the Rákos Stream in its present richness in order to maintain their own strong sense of attachment. In terms of their attachment to natural environment of the Rákos Stream, nearly 50% of respondents (495 responses) consider it very important and 30% regard it as important. In their relationship to the

Rákos Stream, approximately 80% of respondents stressed the presence of the natural environment and its rich flora and fauna. In terms of place identity, the nostalgic appeal of the Rákos Stream as a place of memories was emphasised by respondents (70% of 496 respondents mentioned it as important or very important). Almost two-thirds of respondents considered the stream the most suitable place to carry out their favourite activities (of 496 respondents 36% important, 26% very important). In addition to this dimension of place dependence, 45% of respondents also agreed that they would not like to engage in their preferred activities elsewhere. In the dimension of friends and family ties, the latter was rated more strongly by respondents in relation to the Rákos Stream. For more than 70% (495 responses), the importance of spending time at the Rákos Stream is related to the proximity of family (nearby residence).

Questions relating to ecosystem services were asked in a list where respondents could indicate the importance of each ecosystem service (on a scale of 1 to 5).

Ecosystem service	Very important (%)	Very important and important (%)	I don't know (%)	Total number of respondents
Fresh air	77	92	2	495
Recreation, leisure	70	89	2	495
Habitat for species	70	89	3	495
Quiet, tranquillity	68	89	2	494
Biodiversity	66	88	2	495
Landscape conservation	63	85	5	495
Ecological corridor	62	84	5	495
Opportunities for sports activities	59	82	2	494
Aesthetic experience	56	86	2	494
Place of excursions	54	82	2	494
People's common heritage	54	73	5	495
Microclimate regulation	52	72	12	494
Water drainage	46	67	16	496
Flood protection	42	65	12	494
Environmental education	40	73	5	494
Meeting place	39	67	2	494
Adapting to climate change	38	63	15	494
Cultural and historical values	30	51	7	494
Tourism	21	40	6	494
Spiritual experience	17	38	8	494
Employment opportunities	7	18	16	494
Fishing	6	12	12	494

Table 6. Importance of ecosystem services according to respondents

Source: Own research, 2021

Out of the ecosystem services provided by the Rákos Stream, respondents highlighted the importance of regulating (fresh air; microclimate), supporting (species habitat; biodiversity, landscape conservation; ecological corridor) and cultural services (recreation; quiet, tranquility; opportunities for sports; aesthetic experience; place of excursions). Provisioning services (employment opportunities, fishing) were ranked at the bottom of the order of preference. It is worth noting that tourism as a cultural ecosystem service was relatively low in preference for respondents. The preference ranking obtained from respondents clearly indicates that the natural environment of the Rákos Stream and its associated gentle (non-destructive) uses are given priority in the context of ecosystem services. This is in line with the responses to the above discussed questions: those addressing the more important purposes for visiting the Rákos Stream, as well as the priority given to the stream's natural environment.

In order to gain further understanding of their attitude towards the Rákos Stream, respondents were subjected to an additional task and a related ranking question. All respondents were invited to watch a short film online, produced by us, in which an environmental conservation expert from the area presented the landscapes of the Rákos Stream. This included four stream views: inner city section; suburban section; near-natural section; streamhead area. The film included a description of the ecological characteristics associated with each of these four landscapes, supported not only by images and audible narration by the expert, but also by animations (e.g. to show species diversity). After viewing the film, the questionnaire asked respondents to rank the four streamscapes, and to explain their choice of most and least preferred stream image.

Streamscape	1. (%)	2. (%)	3. (%)	4. (%)	Number of respondents
Streamhead area (natural streambed)	47	26	17	10	493
Near-natural section	28	54	12	5	492
Inner city section	13	2	4	81	493
Suburban section	11	17	67	5	493

Table 7. Preferred streamscapes of the Rákos Stream

Source: Own research, 2021

The image of a natural Rákos Stream was ranked by most respondents (47%) as the most attractive streamscape. Second in the order of preference was the near-natural section. The suburban section was ranked third place in the order of respondents' preference. The majority of respondents saw the inner city segment finishing last – as the least desirable streamscape – in their order of preference.

Respondents were also asked to explain their first and last ranking choice. An analysis of these indicates that respondents contrasted the categories of "natural" and "artificial" in their ranking of stream views. Of these, "natural" received a positive rating, while negative ratings were given to streamscapes that respondents

associated with the "artificial" category. Thus, based on their explanation, the image of a natural streambed was chosen to reflect the most preferred state of the Rákos Stream by most respondents; these respondents preferred "naturalness" and considered this stream view as the most natural. In contrast, the overwhelming majority of respondents identified the city centre section of the Rákos Stream as their least preferred choice on account of its "artificial" character. Indeed, the four streamscapes can be placed on a continuum of ecological "naturalness", ranging from the drastic human alteration of nature (city centre section) to stream images with gradually lessening human interference (where the image of a natural streambed is found at the other end

of the spectrum). Thus, on the continuum characterising images of the Rákos Stream, the majority of respondents prefer images of a more “near-natural” stream to streamscapes that show greater human alteration.

Overall, a relatively consistent picture of the ecosystem services of the Rákos Stream emerged from the online questionnaire survey, indicating that respondents clearly favour a near-natural character and ecological condition over a human-controlled stream environment. This is also consistent with the dominant reasons for visiting the Rákos Stream, which include a higher proportion of quiet and serenity in the natural environment of the stream, a rich variety of the animal and plant species that can be seen by visitors, and the gentle, contemplative use and enjoyment of nature. These uses come before more active recreational uses. Among the ecosystem services provided by the Rákos Stream, respondents expressed their preference for those regulatory and support services that are related to a near-natural condition, and those cultural services that are associated with either more contemplative (e.g. walking) or more active (e.g. sports) enjoyment. The questions pertaining to respondents' attachment to the Rákos Stream as a place also indicate a strong

attachment to nature, rather than to the various activities linked to the Rákos Stream. In other words, natural environment also plays a prominent role in attachment to place for the majority of respondents. Based on these findings, it is probable that it will be those developments and alterations in the Rákos Stream area that preserve/enhance the near-natural character of the stream and favour gentle and leisurely uses that can be most synergistically linked to the well-being of local residents as well as visitors. Based on the responses to the questionnaire, nature conservation appears to be a priority for respondents. It is unlikely that the preferences of local residents and regular visitors will be met by any development or change which supports forms of transportation and tourism features that diminish the “naturalness” of the Rákos Stream, weakening the services of the regulating and supporting ecosystem. We see as developable those cultural ecosystem services that favour gentle, slow-paced forms of transport and tourism, thereby not diminishing the Rákos Stream's capacity for providing a quiet, tranquil, contemplative environment, its functions as a natural habitat, and its rich fauna and flora. These are the types of changes that can be expected to gain wider acceptance.

5. Strategic framework

5.1 SWOT ANALYSIS

The SWOT analysis is one of the longest-established and most widely used methods of strategic planning, suitable for structuring complex ideas and providing an evaluative summary. It can be used to identify strategic directions, projects and logical relationships between individual fac-

tors. It comprises four areas: strengths and weaknesses are internal factors over which we have/can have direct influence, while opportunities and threats are external factors over which we have no influence and are considered as attributes of the environment (Kresalek-Blumné, 2011).

STRENGTHS

- Good geographical location (along the EuroVelo route)
- Places worthy visiting within a short distance of each other
- Small difference in levels on the cycle path
- Beautiful natural surroundings, wild-romantic rows of trees, good air quality
- Area for retreat, recreation, learning
- Valuable flora and fauna, rich cultural values
- Unspoilt and undeveloped along several stretches of the stream, a sense of freedom, the Budapest section: a bright spot in the middle of the city
- Areas ideal for walking, running, sports, free play, and for children to run around
- The emergence of liveability and quality of life as key factors determining development (elimination of looped bus routes, development of new town centres, promotion of alternative modes of transport)
- Stream revitalisation programme "on the agenda"
- Strong civil sphere in the area
- Important site for education and awareness-raising in schools
- Integration of transport (cycling) culture in school education

WEAKNESSES

- Area less known
- Lack of ecotourism and cycling tourism services
- Absence of cycling-friendly accommodation and catering facilities that meet ecotourism criteria
- Absence of signposting, information boards and maps for cycling tourists
- Absence of adult playgrounds, fitness parks, cycle parks
- Absence of cycling visitor centre/information points
- Low number of cycling events, no cycling event calendar
- Conflicts between land users
- Lack of cooperation between the municipalities along the Rákos Stream, weak cooperation between other stakeholders to harness the potential for tourism that takes into account nature conservation
- Concrete-lined stream bed in certain sections of the stream
- Abundance of litter in certain areas
- Abandoned industrial sites
- Areas contaminated with hazardous waste
- Most of the measures to improve the stream will result in further damage to natural assets

OPPORTUNITIES

Growing interest in a healthy lifestyle
Growing interest in outdoor recreation in a natural setting for a healthier lifestyle
Increasing interest in unexplored areas among national and international cycling tourists and ecotourists
Increasing consumer demand for sustainability
(Partial) funding of tourism projects from national and EU sources
Making public transport more cyclist-friendly, introducing cycling-friendly rules
Connecting to further cycling networks

THREATS

Strong competitors in some neighbouring countries (e.g. Slovenia, Austria) and in Hungary (e.g. Lake Balaton), where the potential of cycle tourism has been recognised and harnessed in time
The area is losing its naturalness and unspoilt character due to excessive construction and infrastructure development
Loss of biodiversity
Neglect of environmental considerations during investment planning
The number of tourists exceeding the capacity of the destination
Insufficient public safety (theft of bicycles)
Climate change (global warming)
Deterioration of the epidemiological situation, closure of borders
Prolonged revitalisation of tourism following the COVID-19 epidemic
Destruction

Table 8. SWOT analysis of the Rákos Stream area

Forrás: Stakeholder Engagement, 2020

5.2 VISION AND MISSION STATEMENT

VISION AND MISSION STATEMENT

Based on the project area's characteristics and environmental trends, our strategy aims to provide a vision for the future, in which the project area is known, recognised and visited by cycling tourists, and which will facilitate not only significant economic growth and the development of the area's leisure and tourism industry into a driving sector, but also the preservation and improvement of the area's natural assets and the ecosystem services they provide, thereby supporting the well-being of its stakeholders.

To this end, we have formulated the following vision of the future:

In 2030, the Rákos Stream will be a regionally significant, innovative, competitive, local-interest oriented tourist destination, which – while also preserving

its natural and manmade assets – offers visitors safe and, above all, sustainable ecotourism and cycling attractions and services of outstanding quality along the stream, guaranteeing memorable experiences and genuine hospitality.

In formulating our mission, we have focused on creating value for society, preserving (where possible, improving) the natural environment and, whenever possible, meeting the expectations of our stakeholders.

Our mission is to restore and preserve, through the touristic development of the revitalized Rákos Stream, the ecosystem services the stream provides, thereby contributing to the well-being and welfare of local residents and offer unique experiences to visitors interested in ecotourism.

6. Action plan

The proposals articulated in this chapter are based on empirical research on the following topics:

- development of cycling and ecotourism infrastructure and services;
- tourism infrastructure and superstructure¹ development;
- nature and environment conservation, and sustainability;
- cooperation between stakeholders, involvement of local residents and NGOs;
- awareness raising and education;
- marketing communication.

The elements of the action plan were developed with the participation of students from the Tourism and Catering Programme of the Corvinus University of Budapest, within the framework of the course Tourism Planning and Regional Development, held in the spring semester of the academic year 2019/2020.

6.1 DEVELOPMENT OF CYCLING AND ECOTOURISM INFRASTRUCTURE AND SERVICES

This subchapter presents actions which are related to cycling infrastructure – constituting the basis of cycling tourism in the area – and which serve to achieve strategic objectives.

Project	Justification, description	Project promoter	Time-frame	Source	Monitoring/ indicators
Development of the cycle network	Creation of a safe and coherent network of cycle routes, improvement of the quantity and quality of cycle routes, related service improvements, adequate quality signage, updating and coordination of existing cycle network development plans.	Affected Budapest districts and Pest County municipalities along the Rákos Stream	2022-2030	Budgets of district local governments and municipalities, tenders	Construction of a cycle path network along the Rákos Stream

¹ Tourism infrastructure refers to natural and manmade attractions, while superstructure refers to the accommodation and catering services offered by the given destination, as well as those services that enhance tourists' stay (Michalkó, 2016).

Project	Justification, description	Project promoter	Time-frame	Source	Monitoring/ indicators
Creation of rest areas	Establishment of rest areas every 5 kilometres along the Rákos stream, which are shaded, clean, sheltered against rain, , equipped with waste bins, tables, benches, adequate signage (maps and information), lighting and telephone charging facilities.	Affected Budapest districts and Pest County municipalities along the Rákos Stream	2024-2025	Budgets of district local governments and municipalities, national and EU funding (tenders)	Rest areas along the Rákos Stream every 5 km
Development and creation of educational nature trails for walkers and cyclers	Developing and creating educational nature trails for independent nature observation. Organising cycling, walking and scooter tours with a professional guide, where visitors can discover the environment without disturbing nature.	Affected Budapest districts and Pest County municipalities along the Rákos Stream, nature conservation associations	2024-2030	Budgets of district local governments and municipalities, association budgets, national and EU funding (tenders)	Creation of at least two educational nature trails
Creation of cycling attractions	Adult cycle parks and a children's cycle playground, providing visitors with a children's traffic practice park-like experience, a place where children can playfully learn about road safety.	Affected Budapest districts and Pest County municipalities along the Rákos Stream	2024-2030	Budgets of district local governments and municipalities, national and EU funding (tenders)	Creation of two adult cycle parks, a children's traffic practice park and a cycle playground
Development and creation of natural demonstration sites	Improving already existing demonstration areas, where visitors can have experiences in a playful form, guided by a touristic animator if required. In the long term, creating interactive "edutainment" sites to communicate the values of the area.	Affected Budapest districts and Pest County municipalities along the Rákos Stream, nature conservation associations	2024-2030	Budgets of district local governments and municipalities, association budgets, national and EU funding (tenders)	Two demonstration sites in the area
Creation and development of cultural attractions	Improvements to the quality of existing cultural attractions (e.g. infrastructure and infocommunication development) or the creation of new attractions.	Affected Budapest districts and Pest County municipalities along the Rákos Stream; private businesses; owners of current cultural attractions	2024-2030	Budgets of district local governments and municipalities; own contribution of private businesses; budget of owners of current cultural attractions	Improve at least one cultural attraction and create one new attraction

Table 9. Projects to develop cycling infrastructure

Source: own editing, 2021

The strategic objective is to develop a signposted, coherent, safe and accessible cycling network within easy to reach tourist attractions by 2030. Compared to motorised modes of transport, cycling is environmentally friendly, that is to say it fits in with the objective of this strategy to develop the area in a way that is not – or least – damaging to the natural environment. An important goal is to ensure that public transport vehicles leading to cycle routes are suitable for transporting bicycles, which requires transport development.

In the construction of cycle paths, from a nature conservation standpoint, the greatest attention should be paid to the protection of natural habitats and wildlife migration routes.

The results of the empirical field research and the strategies examined show that there are serious problems with transport safety in the project area. The crossings and overpasses need to be reviewed, followed by a thorough planning process to address the existing problems. Improvements to enhance driver and cyclist cooperation are also essential, with careful planning of cycle lanes, parking lanes and traffic lanes.

A number of strategic plans have been drawn up to develop the area's cycling network. The updating and coordination of these plans are essential for further development.

The development of the cycling network requires continuous measurement of cycling data by optical counters. These will be installed on busy routes with high tourist traffic, but it is also worthwhile to empirically measure the volume and composition of demand for tourist attractions.

Shaded, clean rest areas (rain shelters) with tables, benches, tools and adequate signage should be provided every 5 km along the Rákos Stream. A QR code on the signs should inform visitors of the location of tourist and cycling attractions, and where services and other rest areas are located in the area.

Bicycle storage and lock points are also an essential part of development. The safe storage of bicycles should be ensured not only on the premises of tourist service providers, but also on sites suitable for hiking and excursions.

As, following the construction of the EuroVelo route, cycling tourists are expected to be concentrated in a relatively small area, there is a need for spatial and temporal diversification. To this end, the first step is to measure tourism carrying capacity based on environmental carrying capacity in the interest of sustainability. In order to reduce concentration, the next task should be to improve existing attractions or create new attractions some distance (2-5 km) from the cycle route. Our concept is to create an "axis of experience" along which children and adults can find attractions that will generate enjoyable experiences.

The proposed cycling attraction for children is a traffic practice park. The miniature representation of traffic situations in the area is fun in itself, but by installing traffic signs and providing different traffic scenarios, children can playfully learn the basics of road safety at an early age.

For adult visitors, we recommend the creation of cycling adventure parks, which offer terrains with different levels of difficulty suitable for individuals with varying levels of skill.

Nature walks along the stream are not included in the tourism plans, however, improvements are required to the associated infrastructure and also the creation of additional educational nature trails that accommodate individual nature observation. The walking and cycling trails offer an excellent combination of learning and entertainment, providing visitors an interactive way to learn more about wildlife along the Rákos Stream. Additionally, it is also worth organising shorter (2-10 km) guided walks for ecotourists, where participants can learn and explore without disturbing the wildlife.

6.2 INFRASTRUCTURE AND SUPERSTRUCTURE DEVELOPMENT

A prerequisite for the creation of a tourist destination is that tourism should be included as a tool for regional development in the area development policy of the region; relevant district-level and municipal decision makers should give tourism a greater role than it has at present.

There is a need to reconcile the economic and social interests of nature conservation and tourism, giving priority to preserving the landscape and the environment. Tourism currently does not play a significant role in the economy of the project area, due to lack of attractions

and poor tourist services. The only exception is Gödöllő, which is mainly a one-day tourist destination, but which operates as an “island”, i.e. it does not involve its immediate surroundings to any significant extent.

In order to create the competitive and experience rich tourism unit along the Rákos Stream that is outlined in the vision, it is essential to develop tourism infrastructure and superstructure, which help increase the length of stay and the willingness to spend money. The projects needed to achieve this are presented in Table 10.

Project	Justification, description	Project promoter	Time-frame	Source	Monitoring /indicators
Creation, renovation and expansion of accommodation	There is a lack of good value for money, cyclist-friendly accommodation and eco-accommodation hostels near the cycle route. A local rating system for these needs to be developed.	Private businesses	2024-2030	Own contribution; development of accommodation facilities from national and EU funding (tenders)	By 2030, increase current accommodation capacity by 50%
Creation and conversion of catering facilities	Cycle tourism can be combined well with gastro-tourism; there is a need for cyclist-friendly, good value for money catering facilities along or near the cycle routes.	Private businesses	2024-2030	Own contribution	By 2030, double the number of catering outlets in the area
Creation of a tourist visitor centre	The planned visitor centre – which will tie together tourism in the area, and which will also function as a cycling centre – will be built within the framework of a brownfield project in order to minimise environmental impact and reduce costs.	Affected Budapest districts and Pest County municipalities along the Rákos Stream	2024-2025	Budgets of district local governments and municipalities, national and EU funding (tenders)	Opening a visitor centre, 10,000 visitors per year after two years of operation
Provision of bicycle rental, repair and transport services	There are no facilities for renting bicycles or repairing/transporting bicycles.	Private businesses	Continuously as of 2024	Own contribution	Operating at least one bicycle rental, one repair shop and one transport business in the area

Table 10. Tourism infrastructure and superstructure development projects along the Rákos Stream

Source: own editing, 2021

Traditional tourism infrastructure and superstructure are also needed for cycling tourists, but they need to be executed, renovated or expanded in a cyclist-friendly way. The inclusion

of bicycles in the facilities would signify uniqueness in case of individual accommodation and catering establishments, while, at area-level, it would constitute a common, shared element.

In order to ensure a high, uniformly observed standard, it is also worth developing a system of local certification criteria (trademark system) in order to guarantee a high standard of tourist services. Given the elevated proportion of day-trippers and cyclists expected along the Rákos Stream, it is particularly worthwhile to expand and create catering facilities and attractions within the ecological carrying capacity of the area.

A key role in the area will be played by the visitor centre, which will also function as an experience generating cycling centre and exhibition space. The Bogáti-Hajdú Mansion (Bogáti-Hajdú Kúria), a property owned by the local government, will serve as the site for this purpose. It is currently in a dilapidated state, but could be put to good use in the future as a visitor centre. The main activities and services of the visitor centre are as follows:

- informing visitors and measuring their satisfaction;
- sale of publications, maps, local products in the gift shop;
- rental and servicing (if necessary, also replacement) of bicycles and hiking equipment;
- provision of charging facilities for electric bicycles;
- transfer and baggage transport;
- provision of a cloakroom, safe deposit boxes and lockers;
- provision of (partly accessible) showers and toilets for visitors;
- ensuring physical accessibility: lifts, ramps, easy access, voice guidance, Braille signage;
- family-friendly facilities (baby-mum room, playground, indoor play area);
- creation of interactive exhibitions, guided tours (flora and fauna of the area; bicycles and clothing invoking past times), interesting educational lectures in the auditorium;
- creating activity booklets for children on bicycles, which they can use to tour the area and receive a gift after completing the activities;
- workshops, lectures and film screenings in the education room;
- creating educational programmes and organising events to mark environment-related holidays/celebrations;
- initiating and promoting guided cycling theme tours with tourist and cycling associations;
- providing a “VR (WeAre) the Rákos-patak” service aided by VR glasses and an animation, where the user can ride a stationary bike along a virtual track;
- organising cycling shows;
- organising treasure hunts and puzzle solving tours, where families/groups can solve puzzles related to the natural and cultural values of the area, with the necessary starter kit (map, tools) available at the visitor centre for a nominal fee;
- compilation and maintenance of a tourism database, refining and completing the list of attractions, assessing the capacity and quality of attractions, accommodation, catering facilities, and transport;
- preparation of a calendar of events;
- marketing communication of the area in the spirit of experiential tourism;
- identifying tourism development needs, generating ideas in the area, evaluating previous development projects;
- developing an effective visitor management system in the area;
- collecting and adapting good practices at the national and international level;
- developing thematic programme packages for the area and encouraging local tourism service providers to develop their own packages;
- promoting networking among tourism service providers in the area, with the long-term objective of setting up a TDM (Tourism Destination Management) organisation;
- operating a café with a viewing terrace under contract with an external service provider;
- providing first aid on demand

One of the main tasks of the visitor centre will be to develop thematic programmes for the area, tailored to the needs of specific interests (e.g. ecotourists). In addition, a “mixed” tourism package should be developed for a segment with a wider range of interests and a desire to spend their leisure time in a diverse manner, which could also help to educate them in environmental awareness.

The development of tourism packages constitutes the first step towards networking, which, by actively linking the involved service providers, will also be developed in other areas (e.g. offering discount coupons through a site-specific mobile app or combined ticketing; organising joint programmes at the same time but in different locations).

An adventure park will be created around the visitor centre, offering quality recreation for all ages: a barefoot trail, a labyrinth of native vegetation, a mock-up of wetlands, a themed playground to showcase wildlife, and a water playground to demonstrate the power of water.

6.3 NATURE AND ENVIRONMENT PROTECTION, SUSTAINABILITY

The majority of the examined regional development documents deal with environmental, economic and social sustainability issues, and these aspects were also taken into account during the preparation of the sustainability related projects. This chapter reviews the relevant recommen-

dations of these sustainability related projects. Empirical research has also been carried out in order to assess the ecosystem services of the area under study, the results of which have been used to formulate recommendations for the conservation of the area's natural environment.

Project	Justification, description	Project promoter	Time-frame	Source	Monitoring/indicators
Environmental sustainability in development projects	Preserving and improving the near-natural condition of the Rákos Stream are of fundamental value to stakeholder groups and are important from the perspective of securing the ecosystem services provided by the area. They also contribute significantly to the well-being of stakeholders.	Project promoters	Continuously from 2021	Budget of organisations active in the area; national and EU funding opportunities (tenders)	Examination of environmental pressures, noise, light pollution, and changes in the natural environment, as well as littering, vandalism and visual pollution, based on predetermined criteria
Social and economic sustainability in development projects	Local residents, entrepreneurs, NGOs, municipalities/ local governments, public education institutions and others affected should be consulted as direct stakeholders during the development process. Development should be geared towards increasing social and economic welfare and well-being.	Project promoters	Continuously from 2021	Budget of organisations active in the area; national and EU funding opportunities (tenders)	Measurement of stakeholder satisfaction and the extent of their involvement
Ensuring that the necessary regulations are in place and measures are implemented to preserve the support, regulating and cultural services provided by the Rákos Stream.	The maintenance and improvement of the services provided by the stream are essential to sustaining human well-being.	Affected Budapest districts and Pest County municipalities along the Rákos Stream, nature conservation bodies	Continuously from 2021	Budget of local governments and the Municipality of Budapest; national and EU funding opportunities (tenders)	Examination of environmental pressures based on predetermined criteria, ecosystem service assessment and regular monitoring of changes in services

Project	Justification, description	Project promoter	Time-frame	Source	Monitoring/indicators
Creating the necessary regulation and implementing measures to strengthen the Rákos Stream's provision of services.	The maintenance and improvement of the services provided by the stream are essential to sustaining human well-being.	Affected Budapest districts and Pest County municipalities along the Rákos Stream, nature conservation bodies	Continuously from 2021	Budget of local governments and the Municipality of Budapest; national and EU funding opportunities (tenders)	Examination of environmental pressures based on predetermined criteria, ecosystem service assessment and regular monitoring of changes in services

Table 11. Projects on nature and environmental protection the Rákos Stream

Source: own editing, 2021

The *Balázs Mór Plan (Balázs Mór Terv, BMT, 2019)* addresses the issue of environmental sustainability in a broad sense. In several places in the plan the authors emphasise their aim to use transport development to contribute to creating a sustainable, liveable, attractive and healthy urban environment in Budapest.

The *Budapest 2020 Integrated Urban Development Strategy (Budapest 2020 Integrált Településfejlesztési Stratégia)* identifies the revitalisation of the Rákos Stream as a medium-term project in an effort to increase the amount of green spaces for recreation. Preserving and enhancing the natural beauty of the landscape is another reason why an expeditious revitalisation of the Rákos streambed is of great importance. The method through which this goal can be achieved will have to be based on a joint decision between ecologists and tourism experts.

Another important objective of the BMT is to achieve social sustainability, in other words, to ensure the well-being and welfare of local people; its authors consider it important to involve stakeholders in the development process. In connection to this, the authors of the *Rákos Stream Cycle Route – Cycle Network Plan (Rákos-patak menti kerékpáros útvonal kerékpárforgalmi hálózati terv, 2017)* aim to reduce smog and noise pollution by increasing cycling and reducing car traffic, which can indirectly improve local residents' quality of life and well-being.

The third pillar of sustainability is founded on economic aspects. The alignment of the BMT with the economic objectives of the *National Transport Infrastructure Development Strategy 2014–2020 (Nemzeti Közlekedési Infrastruktúra-fejlesztési Stratégia 2014–2020)*,

along with the identification of economic constraints and the formulation of solutions to these constraints (use of renewable energy, energy saving, low energy transport), serves economic sustainability.

In order to assess ecosystem services from a social science perspective, an online questionnaire survey was carried out to assess the habits, preferences and attitudes of the affected population (local residents and users, 497 people) towards the Rákos Stream. The research included an analysis of different aspects of attachment to the Rákos Stream, such as place identity, attachment to nature, place dependence, and attachment to family and friends. Attachment to nature is the most significant factor in maintaining one's own attachment, as about 80% of the respondents highlighted the presence of the natural environment and the rich fauna and flora in their relationship with the Rákos Stream. With respect to place identity, nostalgic attachment and the significance of the Rákos Stream as a place of important memories dominated, while in the dimension of friendship and family attachment, for more than 70% of respondents the importance of time spent at the Rákos Stream was related to the proximity of family (nearby residence).

In case of the question examining the importance of the ecosystem services provided by the Rákos Stream, respondents highlighted the importance of regulating (fresh air; microclimate), supporting (species habitat; biodiversity, landscape protection; ecological corridor) and cultural services (recreation; quiet, tranquillity; sporting opportunities; aesthetic experience; excursion site). Provisioning services (employment opportunities,

fishing), on the other hand, were considered less important. Tourism as a cultural ecosystem service was less preferred by respondents. The results clearly indicate the direction of development: the local population supports a gentle use of the area – it is this type of use that needs to be strengthened.

A ranking of four stream images – and providing justification for the most and least preferred streamscape – constituted the other element of the empirical

research. For respondents, the most desirable stream view was that of a natural Rákös Stream, while the least desirable streamscape showed a city centre setting. The textual justification provided by respondents to explain their choice revealed that the local population views the natural streamscape as valuable. In planning the revitalisation of the stream, this is important information for experts: the local residents prefer a near-natural stream view and ecologically sound conditions.

6.4 COLLABORATION BETWEEN STAKEHOLDERS, INVOLVING LOCAL RESIDENTS AND NGOS

This subsection explores the possibilities for stakeholder cooperation. Building partnerships with service providers is an important task in order to increase length of stay and willingness to spend money. NGOs operating in the area have so far focused exclusively on local residents, and this will remain their main focus. Under the present strategy, however, they will also play a future role in organising tourism activities.

Involving local residents is of particular importance for three reasons: bringing the stream to life will also improve their quality of life; it is necessary for them to strengthen the internal image; they will be the future hosts of tourists cycling through the area. This requires them to be welcoming and prepared (able to offer attractions or programmes).

Project	Justification, description	Project promoter	Timeframe	Source	Monitoring/ indicators
Organisation of guided thematic cycling tours and walks	The organised programs guarantee that the tourist area will offer visitors a positive experience, participating in them also strengthens local residents' sense of attachment. The volunteer-guided tours would be advertised on the associations' websites and/or Facebook pages, at no cost.	Historical, environmental, tourism and cycling associations active in the area; affected Budapest districts and Pest County municipalities; businesses, individuals	Continuously from 2022	Budget of associations active in the area; national and EU funding opportunities (tenders)	12 tours per year, with a maximum of 25 people
Organisation of programmes to support the exchange of experience and operation of an online contact platform	Activities to support the exchange of knowledge and experience, along with professional meetings, are essential to ensure smooth coordination and improvement of quality.	Historical, environmental, tourism and cycling associations active in the area; affected Budapest districts and Pest County municipalities; tourism businesses	Continuously from 2022	No costs are incurred, the visitor centre provides the site, organises the meetings and runs the online platform	At least four times a year, face-to-face or online meetings by representatives of the organisations working in the area

Table 12. Cooperation projects along the Rákös Stream

Source: own editing, 2021

The most obvious opportunities for cooperation can be identified in the context of organising events. Unique events are needed that also shape the image of the area. Certain spatially distant programmes that have their unique points but linked to a common theme, and a stamp collecting game connected with them, are especially popular with both young adults and families. Along the stream, rest and experience points can also be created, which can be toured, with a reward for participants at the visitor centre as the last stop.

Modelled on the Bike & Breakfast program series, a programme titled Bike & Birds is proposed, which would combine cycle tourism with ecotourism. The event, which would include bird ringing, would be organised by the Hungarian Ornithological and Nature Conservation Society (Magyar Madártani és Természeti Védelmi Egyesület) and the local government of the 10th District. It would be held during the roaming/nesting period (from October to mid-March) and at migration time, when breeding has already taken place (from mid-August to October). During intermittent periods, visitors could engage in botanical and faunistic observations, and learn about meadow wildlife.

Cycle tourism is also worth combining with cultural tourism, ecotourism and active/gastro tourism, with guaranteed tours along three themes ("Tracing the Past", "Natural Treasures" and "Experiences along the Rákos Stream"). A guide would speak about the area's historical curiosities and natural attractions, and, at the stops included in the programme, visitors could sample traditional Hungarian cuisine and drinks.

Thematic walks that are presently so popular in Budapest could also be adapted to the Rákos Stream, using special local stories (e.g. the historical significance of Rákosmező), thereby creating another unique service in the area.

The cycle path along the Rákos Stream would be suitable for cycling recreation all year round. In the spirit of this, as a special feature of the December Bike Santa programme along the Rákos Stream, participants would cycle the length of the route wearing a Santa hat (optionally a Santa suit).

Another important task is to facilitate cooperation between service providers and representatives of the local governments/municipalities. The development and operation of a successful tourism area requires the creation of a supportive environment for tourism, including an organisational framework (the creation of a Tourism Destination Management Organisation or TDM is a long-term goal, with the visitor centre taking over part of the tasks for the time being) and partnership. At the quarterly meetings committed tourism entrepreneurs, association members and local government/municipality representatives come together, where planned developments, problems encountered, as well as the content and timing of events would be presented and discussed. An exchange of experiences would also constitute an important part of the discussion. At the time of the finalisation of this strategy, workshops organised within the framework of the EcoVeloTour project offer the only opportunity for stakeholders to meet; in the future, organising and moderating such meetings will be the responsibility of the visitor centre.

6.5 EDUCATION AND RAISING AWARENESS

In the interest of environmental sustainability, the greatest – albeit not immediate – impact can be achieved through education and raising the awareness of children.

In addition, awareness-raising among the local population and service providers, as well as the education of tourism professionals, is also considered essential.

Project	Justification, description	Project promoter	Time-frame	Source	Monitoring/ indicators
Awareness-raising for preschool groups and school classes		Visitor centre	Continuously from 2022	National and EU funding (tenders), entrance fee for certain events	Organising and running programmes on request
Awareness-raising for families with children		Visitor centre	Continuously from 2022	National and EU funding (tenders), entrance fee for certain events	Organisation of one event per month
Training for tourism entrepreneurs in the region	The courses will introduce the natural and cultural values of the area and the basics of environmentally friendly operation. As learning in a face-to-face classroom setting is not attractive enough for tourism entrepreneurs and professionals, primarily study tours will be organised.	Visitor centre	Continuously from 2022	National and EU funding (tenders)	Organisation of two study tours per year
Awareness-raising for the local population	The natural and cultural values of the close surroundings are presented in an interactive manner.	Visitor centre	Continuously from 2022	National and EU funding (tenders), budget of visitor centre	Organisation of two awareness-raising events per year

Table 13. Awareness-raising and education projects along the Rákos Stream

Source: own editing, 2021

The visitor centre of the Rákos Stream area plays a key role in raising awareness; it will regularly organise guaranteed programmes for the general public, as well as preschool and school groups. If there is demand, it will also organise and run individual and private programmes for school trips, summer preschool or school camps.

The programmes will be delivered by a child-centred, well-trained staff with experience in environmental education, tailoring the themes to the interests and knowledge-level of visitors. The focus is on “learning while

having fun”, and the environmental programme can make a full day at the visitor centre a rewarding experience. The professional programmes aimed to familiarise visitors with the surrounding wildlife are complemented by craft activities, partly using materials collected from the stream’s natural environment.

Within the framework of lessons, afterschool activities, workshops and faculties, participants can observe birds in their natural habitat through binoculars. This requires the building of bird watching posts in the area.

During environmental education class, lower grade primary school students can take water samples from the stream and analyse them using equipment provided by the visitor centre.

In addition to learning about local environmental values, the cultural values of the area should also be brought into focus to strengthen children's personal and emotional attachment to the place where they live. While natural values can be presented in an exciting manner to children of any age, cultural values are of interest from the middle to upper grade of preschool.

As children tell their families at home about what they have learned in preschool and school, the impact is wide-ranging. Parents' communities are already active in the area, and families can be easily mobilised for recreational or eco-school activities.

Cooperation with external experts and NGOs was also seen by teachers during the interviews as an opportunity to broaden their own competence with respect to the teaching material; it would be worth inviting them on a regular basis to increase knowledge and enhance the experiential aspect of learning.

Following the construction of the new cycle path, cycling should be given even more emphasis in excursions, summer camps and leisure activities. This will require school bicycle fleets and the provision of storage facilities for private bicycles at the relevant institutions.

In order to respect the environment, this strategy also approaches the local population and the staff of tourism businesses. One of the possible topics for the previously proposed stakeholder dialogue is launching of awareness-raising programmes for local residents (acting as "hosts" for tourists) and advertising of courses for tourism professionals to educate them about the natural and cultural assets of the area.

It would also be useful to organise professional courses for employees on how to take ecological aspects into account in planning and management, while maintaining visitor satisfaction and economic interests. Study tours are the best way for tourism operators in the region to acquire and deepen their knowledge of environmental and sustainability issues.

6.6 MARKETING COMMUNICATION

The main target group for cycle tourism is considered to be hikers/excursionists, short-distance cyclists and day-trippers. For the time being, various sections of the Rákos Stream are frequented by cyclists on a daytrip, with demand coming from visitors to the area who are interested in nature and looking for a half or one-day programme. The target group can be extended to include tourists planning a multi-day trip and those arriving from more remote locations, with the medium-term aim of attracting tourists coming for short stays (from 1 to 2 nights). Our long-term objective is to attract tourists planning a longer cycling holiday, touring or stargazing for more than 2 nights. To do this, we need to create the conditions for a "slow journey", i.e. to expand our services to encourage visitors to stay longer, to discover the local gastronomy and the cultural and natural values of the area.

Non-tourist users of the area include local residents cycling for leisure or transport, the former for recreation and the latter on their way either to

work, or to the shops, or to run errands. Our goal is to convince as many non-cyclists as possible to switch to two wheels, and to encourage non-tourist cyclists to use their bicycles for recreational purposes.

We can also segment cycling tourists by sending area. Based on this, the primary target groups are currently those living along the Rákos Stream and those living 20-30 km from the stream. As a secondary target group, we aim to win over people living in the Central Hungarian Region in the medium term, while we expect a large number of foreign tourists only in the long term. Tourists who come to Hungary for recreational purposes and choose cycling as a leisure activity are mainly visitors to Budapest. Since, for them, the Rákos Stream and all it offers are not the main attraction, the range of available experiences should be widened. For longer-distance cyclists arriving on the EuroVelo route, we expect to receive visitors from traditional European sending countries (Germany, Austria and the Netherlands).

In terms of lifestyle, young adults, families with children, and middle-aged people are considered to be the key target groups. While they are likely to share in common a love of nature and

excursions, an interest in the flora and fauna, they typically seek different experiences depending on their age. Senior citizens constitute the secondary target group.

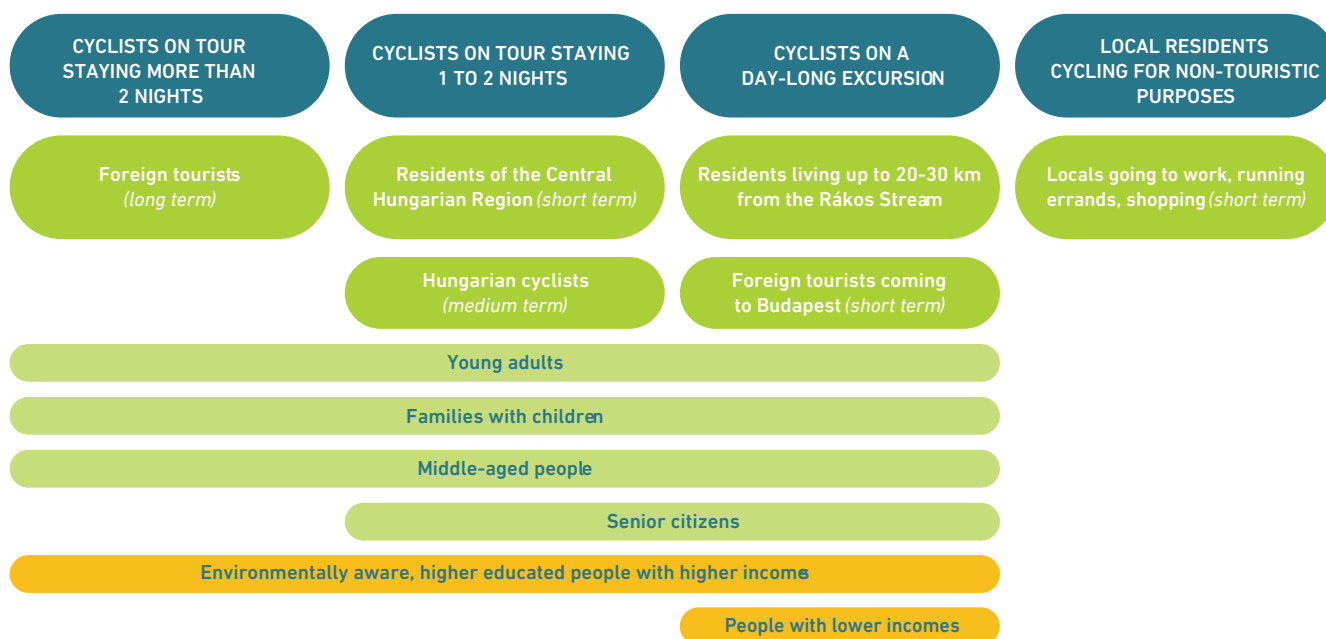


Figure 16. Target groups for cycling tourism along the Rákos Stream in the short, medium and long term

Source: own editing, 2020

Based on segmentation by income and education, the primary target group is made up of environmentally conscious people with a higher education and better financial circumstances, while the secondary target group consists of people with lower incomes, who predominantly strengthen the camp of one-day excursionists.

Another target group outside the cyclist tourist sphere that nonetheless represents a significant potential in terms of ecotourism, consists of

groups of preschoolers and schoolchildren who seek out the visitor centre and its attractions for educational purposes.

Credible communication and dissemination of information is needed before the visitor centre is built and during the construction of the cycle paths. The present marketing communication plan has been developed with a destination approach, with the objective of linking and promoting regional and thematic products.

Communication channels/tasks	Implementation	Target groups
Image	Preparation of an image manual for the Rákos Stream area; development of a complex logo and slogan system (one main slogan, with different buzzwords for each municipality).	All target groups
Publications, thematic maps, tables	Within a cross-promotional framework, inclusion of other destinations and attractions. Proposed joint online and paper-based publications and the display of banners and signs at the locations.	All generations, especially Generation X and baby boomers
Public relations (PR)	Inviting environmentalists to morning talk shows on television who will highlight the assets of the Rákos Stream area. Workshops, forums and open days held for the local community and tourism service providers to explore interests and possible grievances, and also outline possible solutions to problems.	Generations Y, X and baby boomers, primarily women
Stand rental at tourism exhibitions and fairs (annually from 2026 onwards)	Participation in tourism exhibitions, promotion of the natural and cultural assets and programmes of the area.	Professional community
Participation in sustainability events, professional meetings, conferences (from 2026 onwards)	Demonstration of the process of developing the area into a tourism product as good practice. Continued marketing and presence of logoed products at thematic events.	Professional community
Study tours for journalists (from 2026 onwards)	Inviting journalists and organising cycling and ecotourism programmes for them to harness the multiplier effect.	Journalists (Turista Magazin, Földgömb, Természetjáró)
Press conference on the occasion of opening the visitor centre	Inviting journalists, professional partners, associations, NGOs and the area's tourism service providers to a press conference to be held at the opening.	Professional community, journalists
Sales promotion	Providing frequent visitor discounts for returning guests and groups. Development of a destination card as a long-term objective.	All generations, pre-school and school groups
Official website for the Rákos Stream area	Creation and updating of a website for the Rákos Stream area, search engine optimisation.	All target groups
Facebook page	Create an official Facebook page with the primary goal of community building.	Generations Z, Y and X

Communication channels/tasks	Implementation	Target groups
Instagram page	Sharing of photos of the Rákos Stream area to arouse interest.	Generations Z and Y
YouTube	Running an official YouTube channel, uploading videos on a bi-weekly basis.	Generations Z, Y and X
AdWords campaign	People searching for the area on the Internet will be reacquainted with the offered services in the form of pop-up advertisements.	All generations
Newsletter	Quarterly electronic newsletter, publicising developments and programmes in the area.	All generations
Presence on professional online portals and in social media groups	On online professional portals and social media groups dedicated to tourism, nature and cycling, articles and news about the attractions of the area, organised programmes, and interviews with event organisers.	All generations
Direct marketing	Sending e-mails on thematic programmes to preschools, primary schools and secondary schools. Creation of a database of visitor centre groups; notifying them by e-mail about new programmes.	Preschool and school groups; individual visitors
Influencer marketing	Collaboration with influencers active in the promotion of domestic tourism, and with public figures who are credible for their stance on environmental issues.	Generations Z and Y
Word of mouth	Excursionists and visitors touring the area and participating in the programmes tell others about their experiences.	All generations
Mobile application	Development of a user-friendly, attractive-looking mobile app with a range of extra features (e.g. site ratings, experience sharing, trip planning), which is constantly updated and accessible from all mobile devices.	Generations Z, Y and X
Merchandising products	Creating a few products with a common format and image/visual design.	All generations

Table 14. Marketing communication plan

Source: own editing, 2021

In addition to sales support, our communication activities will focus on building a brand of the Rákos Stream area. The aim of branding is to differentiate our services from those of our competitors by integrating into our brand communication aspects related to the safeguarding of protected and natural values, and to social sustainability.

Mostly online communication channels will be used for reasons of efficiency and target group preferences. Marketing will take place directly, targeting tourists, hiking and cycling associations. Marketing communication will be in Hungarian and English, coordinated and financed by the area's cycling visitor centre.

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STRATEGY FOR

**DEVELOPING CYCLING TOURISM AND ECOTOURISM
ALONG THE RÁKOS-STREAM, CONSIDERING APPLIED
ECOSYSTEM SERVICES**