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Greenway planning: Recreational corridors within Ljubljana urban region

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Introduction and background

Regular physical activity is an important element of healthy lifestyle, which has proven positive impacts on human health (Bedimo-Rung et al., 2005, Telama et al., 2005). Due to the increasing number of sedentary jobs and increased reliance on motorized transport, leisure time physical activity is becoming more and more important in fulfilling recommended physical activity levels (Bedimo-Rung et al., 2005: 159).

Accessible green open spaces encourage physical activity. Several studies have shown that people of all age and social groups, who have access to green open space, are physically more active and consequently, healthier (Abraham et al., 2010, Ward Thompson and Travlou, 2007, Bedimo-Rung et al., 2005). Abraham et al. (2007) emphasize the importance of accessible green environments for mental, physical and social well-being of people. These environments have restorative effect on people, proper facilities promote physical activity, and, last but not least, they enhance social integration.

The question, which arises at this point is: which areas could be classified among “healthy green environments”? The category is by all means very diverse, from neighbourhood park and village green, to regional greenway systems.

In the project, presented in this paper we were in the first place focusing on the development of the vision and the strategy of sport and recreational activities within Ljubljana urban region - LUR (Slovenia). Secondly, goals and objectives set in the vision were further developed through several projects, aiming towards establishing regionally important sport and recreational facilities, suitable and available to all age and social groups. Two of the proposed projects, which will be presented in this paper, focus specifically on the development of recreational facilities as a part of regional green infrastructure/greenway system.

The importance of greenway planning was stressed by many projects and theoretical discussions (Ahern, 1995, Gobster, 1995, Fabos, 2004, Turner, 2006). From Olmstead’s Emerald Necklace in Boston, planned in the late 19th

century, the concept of greenway planning has undergone many changes, but the main idea – connecting naturally preserved areas to provide a restorative environment for the well-being of people, has remained the same. Greenway planning is more than park planning, it's an overall planning concept. As such the planning of greenways is explicitly multifunctional. Fabos summarizes the contemporary literature review and classifies greenways within three main categories: (1) greenways of ecologically significant corridors and natural systems, (2) recreational greenways, often near water, trails and scenery, and (3) greenways with historic heritage and cultural values. At the same time he emphasizes that these three categories are increasingly overlapping (Fabos, 2004: 332).

Good Practice Guide, published by European Greenway Association emphasizes the importance of greenways as backbones for recreation and for undertaking necessarily daily utility trips (e.g. to work, school, shopping). As such they are exclusive of motorised traffic and adjusted to diverse users – from pedestrians, cyclists, people with limited mobility, roller skaters, etc. (Turner, 2006: 242).

This presentation focuses on the greenways as recreation as well as daily commuting infrastructure. Furthermore, it looks at whether the green areas and their interconnections could be used to revitalize degraded (sub)urban areas.

Goals and objectives

The goals of the project were: (1) to set a vision and a strategy for the development of sport and recreational facilities within Ljubljana urban region (LUR), and (2) to develop a selection of projects, which would lead to the implementation of the vision.

LUR with the capital city of Ljubljana is located in the central part of Slovenia and connects 26 municipalities with approximately 500 000 inhabitants. With 210 inhabitants per square kilometre it is the most densely populated region in Slovenia. LUR has a vision of “a green driver of development and a metropolitan bioregion of knowledge” (LUR vision). At present, its inhabitants cannot fully explore the potentials of its well-preserved natural environment with forests and riverine corridors for daily recreation and commuting. One of the main problems of the wider Ljubljana region is pollution and congestions due to heavy commuting within LUR (Civitas, 2010).

Method(s)

The project was developed in the Planning studio with the students of the 1st year of Masters Programme in Landscape architecture at the University of Ljubljana. Besides the regular, weekly consultations with their supervisors, students had an opportunity to cooperate with the students of the Faculty of sports and their supervisor. After setting the objectives of the vision, the analytical part was conducted as follows:

(1) Inventory and mapping of regionally important recreational facilities within LUR.

(2) Developing the typology of users according to their age, social group and physical abilities. The needs of these types vary according to the distribution of the recreation time (daily, on weekends or on holidays) and type of access to the recreational facilities (by car, public transport or on foot/bike). Users were classified into six groups: (1) families with children, (2) children aged 8-15, (3) youths aged 15-25, (4) adults aged 25-65, (5) people with limited physical abilities, and (6) elderly aged over 65 (Table 1).

(3) Developing the typology of recreational sites, based on the level of their “naturalness”: (1) environments with distinctive natural characteristics and no recreational facilities (e.g. mountains, lakes, hills), (2) natural environments with some recreational facilities (e.g. ski slopes, cycling paths), (3) recreational sites in (and dependent upon) the landscape (e.g. golf courses, hippodrome, sports park, airport), (4) recreational facilities as a part of urban infrastructure (e.g. parks, playgrounds, skate parks, cycling paths), (5) multifunctional outdoor sport facilities (e.g. stadium), (6) indoor multifunctional sport facilities (sport halls) (Table 1).

Both typologies were joined in a matrix, where the use of different recreational facility types by different user groups was determined (Table 1). In combination with the inventory of existing facilities we could find out which user group (and in which part of the LUR) is presently underserved.

(4) A list of projects, which would help to fulfil the vision, was prepared. Selection of the projects and their sites was based on two main criteria: (1) the existing potential of the natural environment (e.g. mountains, naturally preserved river corridors) and (2) potential to revitalize degraded area by introducing recreational land use and/or connecting it into the greenway system.

Table 1. The typology of users (columns), sport facilities (rows) and the frequency of use

frequency	1 families		2 children		3 youths		4 adults		5 limit. mobility		6 elderly	
	R	O	R	O	R	O	R	O	R	O	R	O
1 nat. environ.	X			X		X		X		X	X	
2 some facilities		X		X		X		X		X	X	
3 landscape sites		X		X		X		X		X		X
4 urban sites	X		X		X		X		X		X	
5 built outdoor	X		X		X			X		X		X
6 built indoor		X	X		X			X		X		X

R – regular use, O – occasional use

Results

The main objectives of the vision and the strategy as developed within this project were: (1) recreation becomes a lifestyle for LUR inhabitants, (2) development of a network of sport and recreational facilities for different types of users, accessible with public transport and/or bicycle.

Eight different projects were developed, each of them was trying to achieve some key objectives, presented in the vision.

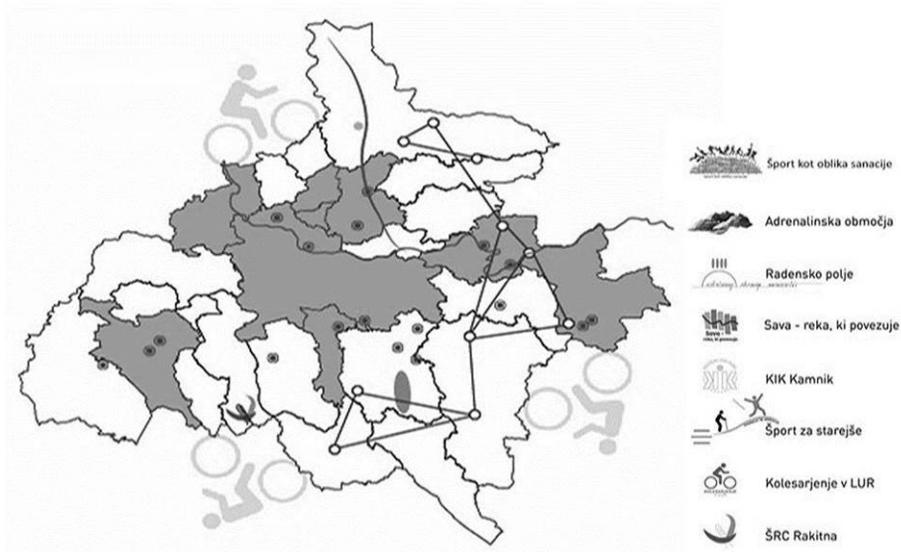


Figure 1: Eight projects of LUR Sport strategy

The first presented project developed a network of cycling paths for LUR. Its starting point was the objective of reducing the amount of motorized traffic by promoting cycling for everyday commuting, while at the same time providing recreational and tourist infrastructure. Three types of users were identified: (1) everyday “utility” cyclists, (2) recreational cyclists, and (3) tourist cyclists. Each groups of users has specific needs, so three types of paths were developed:

(1) Fast cycling routes which connect regional, sub-regional and municipal centres. These routes are used for everyday commuting to work, school, shopping, etc., and are attached to public transport and P+R parking scheme. Hubs with additional facilities like showers, locker rooms and bicycle services are proposed in the key points along these routes.

(2) Recreational cycling routes are used mostly for everyday and weekend recreation. They are equipped by resting places and coffee-shops. Although attached to the residential areas, these routes follow natural or rural landscape.

(3) Tourist routes partly overlap with both types, combining direct routes for long distance cycling with opportunities for digressions in more attractive landscape with facilities such as bike rentals, guest houses, and restaurants.

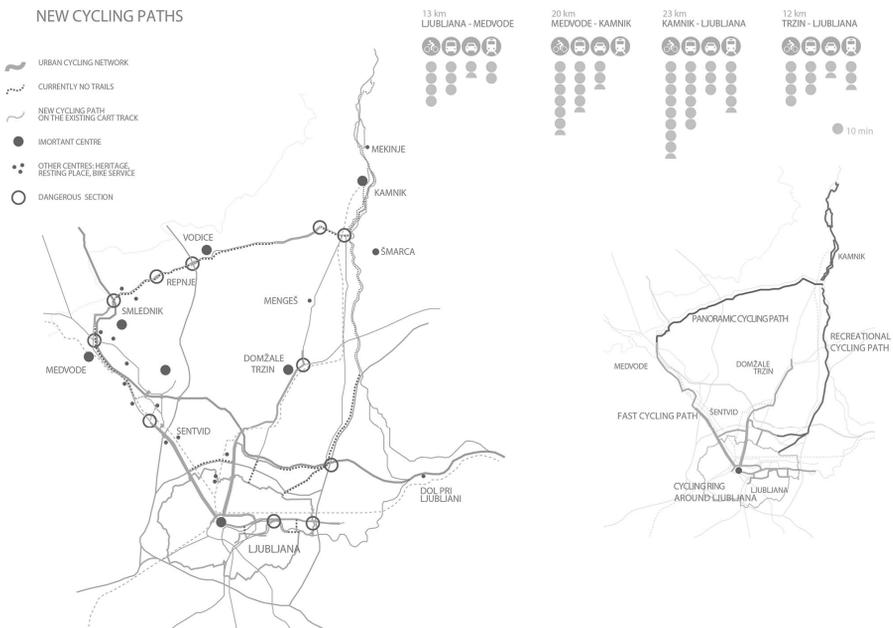


Figure 2. Proposed cycling network

All three types of routes create regional cycling network. The attractiveness and comfort for the users were provided by either their location along rivers or in the forest, or proposing accompanying vegetation to ensure pleasant microclimatic conditions for cyclist on the one hand and to create a part of the regional greenway system on the other.

The second presented project takes as its starting point the underused potential of the rivers as the greenway backbones. It is concerned by developing diverse recreational facilities along rivers Sava and Kamniška Bistrica. Although different in their characters, both rivers are naturally well preserved and relatively close to some of the biggest urban centres in LUR (Ljubljana, Domžale, Kamnik, Litija).

The project for Sava river proposes to further develop recreational facilities along the whole length of the river Sava within LUR and to develop an interregional recreational and greenway network. An inventory of existing paths and facilities (e.g. playgrounds, coffee-shops, restaurants, etc.) was prepared and the GIS evaluation model was used to identify areas with the potential for (and lack of) infrastructure. Additionally, a questionnaire for was prepared to find out about the preferences of local population. Based on this information, four hubs with different programme were proposed and connected by hiking and cycling paths along Sava river, which connect to the regional and inter-regional network.

The Kamniška Bistrica project was developed as another story – as a sequence of different environments, from urban on the outskirts of Ljubljana, to naturally preserved at the spring of Kamniška Bistrica, with the new recreational park proposed in the degraded area of former gunpowder factory in Kamnik. Cultural and technical heritage of the gunpowder factory was used to develop a post-industrial just along the river banks, aimed for the residents of Kamnik as well as other visitors, using the newly established green corridor along Kamniška Bistrica for hiking and/or biking access.

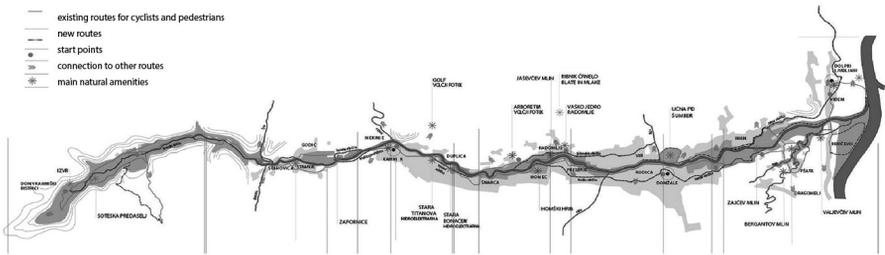


Figure 3. The proposed plan for Kamniška Bistrica

Discussion and conclusion

Slovenia, with almost 60% of forests and unpopulated alpine area offers many opportunities for recreation in natural environment, but the majority of these areas are remote and as such unavailable for everyday use by the majority of population, living and/or working in the cities. While the individual municipalities of LUR have done a lot for providing their inhabitants with infrastructure for recreation, these objects are not interconnected, not accessible without car and intended for specific, often supervised forms of recreation. Our projects aimed at filling this gap with focussing on networks and underserved groups of population and parts of LUR.

The implementation of such proposal however has some hurdles to overcome. The spatial planning competence in Slovenia is granted to the local communities and is highly decentralized, with only a few examples of successful coordination and cooperation. Lately, the EU financial instruments have shown some capacities for implementing regional projects. The results were presented to the LUR authorities, who generally supported the proposed projects, so there is also some hope for their implementation.

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