



ACCESS2MOUNTAIN

**Sustainable Mobility and Tourism in Sensitive Areas of the
Alps and the Carpathians:**

FINAL SYNTHESIS IN THE FIELD OF REGIONAL RAILWAYS IN TOURISM

Final Good Practice Collection

Work Package 4 | Act. 4.2.

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For the list of all Project Partners, please see on the last page of this report.

TABLE OF CONTENT

Summary.....	4
1 Introduction.....	5
2 Regional and narrow gauge railways: aspects of sustainable transport.....	7
2.1 Background of a project ACCESS2MOUNTAIN	8
2.2 Objectives and scopes	9
3 Best practises of regional and narrow gauge railways – conclusions from the analyses.....	12
3.1 The experience for the development of sustainable transport resulting from the analysis of good practices	16
4 Success Factors and Inspiration for pilot area activities	24
4.1 Mostviertel	25
4.2 Maramures	29
4.3 Northern Hungary and Kosice Region	35
4.4 Cross Border Area Poland/Slovakia	46
5. Conclusions.....	53
6. Index of figures.....	56
7. Bibliography.....	58
8. Annex.....	60
8.1 Questionnaire for partners.....	60
8.2 Questionnaire for experts	61

SUMMARY

The core purpose of the report is to present the achievements of the ACCESS2MOUNTAIN project within its particular segment – Work Package 4 entitled "Regional and narrow gauge railways". This part of the project is devoted to regional and narrow gauge railways and their role in a sustainable idea of tourism.

The introduction to the study provides general information about the undertaken research as well the adopted methodology. The actions performed by engaged project partners and results of these activities are also highlighted in that section.

Next part of the report handles the significance of narrow gauge railways for the idea of sustainable transport. Background of the ACCESS2MOUNTAIN project is the next issue described in that part of the study. Detailed profile of the project's objectives and scopes with particular focus on Work Package No. 4 figures here as a supplement for the entire consideration.

Third chapter focuses on study carried out by experts from the Federal Ministry for Transport, Innovation and Technology (Austria) entitled - "Regional and Narrow Gauge Railways - Good Practice and Recommendations." Based on the analysis of literature and online resources 18 examples of the use narrow gauge railways were identified and analysed. It shows examples of good practices in the use of regional and narrow gauge railways, mainly from Europe.

In the fourth section of this report the regions involved in the Work Package 4 are presented and their pilot activities are analysed. The pilot activities in the field of regional and narrow gauge railways are evaluated here. Each project partner describes his experiences gained during project implementation and challenges for the future.

The closing part of the study summarises conclusions resulting from an analysis of the activities carried out by the project partners in the framework of Work Package 4. The aim is to propose recommendations for long-term implementation on the regional, national, and transnational level. The great impact of the local and regional partnerships is indicated as a very important factor that brings together all relevant stakeholders. It can enable the expansion of transport systems based on the idea of sustainable development. Creating cross-border partnerships that connect the communication systems of different countries is not without significance here. There is also a need to implement effective marketing actions, especially including comprehensive use of the possibilities given by the Internet. One of the elements of such marketing actions should involve recognizing the needs of the potential users of the transport services. Transport systems must be based on the integration of different modes of transport (railway, bus, but also bike trails) in order to function effectively. Another recommendations resulted from the study consist of: small-scale investments in transport system, restoration of inactive or poorly utilized railway lines and exchange of good practices.

1 INTRODUCTION

The goal of the actions undertaken within Work Package 4 “Regional and narrow gauge railways” was to strengthen the development potential of the narrow gauge railways in the direction of their wider use. This goal was set in order to improve the tourist's availability of the mountainous regions of the Alps and the Carpathians in a manner that would be in line with the idea of sustainable development.

The work performed in order to complete the following report included analysis of materials generated during the project work (reports, analyses, proceedings), as well as the results and information gathered from questionnaires completed by the partners and experts working on the project. This allowed for a comprehensive analysis of the actions undertaken in the framework of WP4. The aim of this study was to assess and characterize the activities implemented within the framework of WP4. Individual chapters contain characteristics of the project objectives and also a summary of the analysis of good practices, as well as the activities undertaken as the next step in the pilot regions. The final chapter contains a set of recommendations for entities seeking to make greater use of the potential of narrow gauge railways in the context of transport accessibility development in the regions.

Measures implemented under WP4 were divided into two stages. In the first stage an analysis of good practice was performed. The main aim was to answer the question of how the regional railways are winning the battle for the customer on the tourist market. In order to answer this question a multi-faceted analysis of the railway operators' activities had to be performed. Including the exploration of companies' strategies for working with various kinds of stakeholders in the region and the marketing strategies they use.

In the second stage of the 4th work package a number of activities have been undertaken in the pilot regions aimed at strengthening the internal and external communication accessibility of the regions. These actions were based on the creation of a knowledge base, infrastructural investments, as well as building the foundations for local and regional partnerships for sustainable transport development. The scope of activities undertaken by various partners in the framework of WP4 was varied. In the case of the Maramures Region it consisted of installing bike handles on trains, that allowed the passengers using bikes to travel by rail. Apart from that, the bike rails have been equipped with information boards (among other elements). Similar activities have also been undertaken in other regions. In the Kosice Region, as part of the pilot action, an investment which included the adaptation of the wagons for the transport of bicycles, as well as placement of bicycle racks on two stations (Carmel and Alpinka) was completed. Miskolc Holding (North Hungary) as part of the WP4 realized investments in bicycle transportation – 26 pieces of bike carriers have been manufactured and installed in wagons in the narrow gauge railways. In addition to the installation of special bike handles, which help to safely transport bicycles, also special signs indicating the designation of the wagons for bicycle transport have been installed.

The other partners of the project focused mainly the analytical actions. Mostviertel Tourism Ltd. (Austria) conducted a review of the railway infrastructure within the 4.2 package, by conducting an analysis of the quality of routes, rail connections, groups of passengers (tourists, commuters, school children, students). The company also realized marketing activities and has partnered with other railways, in order to disseminate the benefits that result from the use of narrow gauge railways. In turn, in the cross-border region of Poland and Slovakia, the Regional Development Agency in Rzeszów (that was responsible for the implementation of the pilot activities) has completed the regional analysis of the narrow-gauge railway connections.

All of these actions result in a series of conclusions and recommendations that can and should form the basis for future efforts that will be made in order to improve the accessibility of the mountain regions. Conclusions resulted both from the analyzes of good practices and the pilot actions implemented in different regions within the WP4. They show without any doubt the great impact of the local and regional partnerships that have brought together the government representatives, railway management entities, public organizations and representatives of the tourism industry. Such activities allow for a wide impact on the expansion of transport systems based on the idea of sustainable development. Creating cross-border partnerships that connect the communication systems of different countries is not without significance here.

From the point of view of market activities it is important to implement effective marketing actions, especially including comprehensive use of the possibilities given by the Internet (websites, booking systems, social networking sites etc.). One of the elements of such marketing actions should involve recognizing the needs of the potential users of the transport services (tourists and members of the local communities). Transport systems must be based on the integration of different modes of transport (railway, bus, but also bike trails) in order to function effectively. Apart from that, all transport system should be invested in (which also includes small investments). It is also important to stop the process of closing inactive or poorly utilized railway lines, which can be restored and properly used in order to become an important element of the regional transport systems. Exchange of information on good practices in the use of regional and narrow gauge railways can undoubtedly help in this process.

2 REGIONAL AND NARROW GAUGE RAILWAYS: ASPECTS OF SUSTAINABLE TRANSPORT

Since the mid-seventies of the twentieth century certain changes in the strategies of the economic development of many countries in the world can be observed. Concepts based on economic growth are giving way to concepts of sustainable development.¹ One of the factors contributing to these changes is the increasing number of serious environmental threats.

Sustainable development (Eco development) is a socio-economic development compatible with the natural conditions. It is not destroying the ecological balance and is favourable for the survival of future generations. In practice, this is a way of managing environmental resources and values that avoids the risk of losing these assets in the future generations. This idea is applicable in various sectors of the economy, including tourism (sustainable tourism) and transport (sustainable transport).

The concept of sustainable development plays an increasingly important role in the modern world, especially in the protected areas. Sustainable development (Eco development) is understood as a strategy of satisfying the needs of the local inhabitants with the assumption of ensuring the feasibility of maintaining the same standard of life for the future generations. This idea is applicable at all levels of economic activity, including tourism and transport.

The concept of sustainable tourism is defined as any form of tourist activity or management that supports ecological, social and economic integrity of the land. One of the indicators of sustainable development in tourism is the so-called local mobility, including the introduction of additional means of transport for tourists, and connections for tourists and residents of the region, which makes those regions more accessible, competitive, and thus attractive to tourists. Appropriate management plans are introduced in the areas of high natural value. These plans include popularizing sustainable forms of transport. In fact, the basic damage inflicted in the environment (especially in protected areas) by tourist traffic are emissions caused by traveling to the tourist destinations and moving around in these destinations which cause changes in the microclimate of the region)².

Transportation used both in tourism and in everyday life, threatens the environment and deteriorates its quality. On the other hand, the need for a development of a transport infrastructure is very large and plays a fundamental role in the tourist exploration and the socio-economic life of the region. Therefore, it is essential to improve the quality of road infrastructure, which makes the threats for the environment less severe. However, it is equally important to develop infrastructure for alternative forms of transportation (bike paths, country walking routes, trails for cross-country ski tourism et al.).

It is worth noting that currently 61% of tourist arrivals in Europe happen through road transport, while only 15% by rail – the mode of transport that is regarded to be environmentally friendly. As a result of this type of practices, pollution is causing irreversible changes in the microclimate of the regions. One of the instruments of eco-politics in the European Union at a regional level is, therefore, the improvement of public communication by excluding motor transport and creating a green, more sustainable transport infrastructure³. Among the terrestrial means of transport it often is the rail transport that is the least

¹ Turystyka zrównoważona, 2010, red. A. Kowalczyk, PWN, Warszawa

² Bjorn Iuell, 2007, Dzika przyroda a komunikacja [w:] Oddziaływanie infrastruktury transportowej na przestrzeń przyrodniczą, red. B. Jackowiak, wyd. GDDKiA, Warszawa

³ Bjorn Iuell, 2007, Dzika przyroda a komunikacja [w:] Oddziaływanie infrastruktury transportowej na przestrzeń przyrodniczą, red. B. Jackowiak, wyd. GDDKiA, Warszawa

noticeable by nature and society. Therefore, more and more attention is devoted to the methods of promotion of these modes of transport in the program documents of the European Union (for example the White Paper developed by the EC entitled "Strategy for the Renewal of the Railway Community", which emphasizes the need to implement sustainable rail transport⁴).

It should be emphasized that for years one of the main arguments in favour of the development of a multimodal land transport were, and still are, the environmental concerns. On one hand, the reduction of emissions will contribute to the improvement of the living conditions of the inhabitants of the regions. It will also lead to the growth of interest among potential tourists. However, one should not forget about other benefits that result from the use of the existing regional and narrow gauge railway lines. Surely, these are economic considerations. Restoring to life companies offering transportation equals new job places and increased tax revenues. Both of these factors are particularly relevant to the economic development of the regions. The use of existing, often neglected and deteriorating, narrow gauge railways to transport people has also its cultural and historical dimension. The revival of the regional and narrow gauge railway, which have existed for decades, contributes to the restoration of the heritage of the area, while giving boost to the economy (narrow-gauge railways can operate as stand-alone tourist attractions, attracting visitors on their own). At the same time, it is worth mentioning that it was the cultural issues (not ecological) that formed the basis of the idea of sustainable transport. Development of the foundations and principles of the idea, which was later named the "sustainable mobility", began more than half a century ago and was built upon the objection to the destruction of the cultural (not the environmental) surroundings. Therefore, particular aspects of the development of transport with the use of regional and narrow gauge railways fits perfectly into the idea of the sustainable development, which is characterized by multidimensionality consisting of taking into account the economic, social and environmental interests.

It was the idea of developing sustainable transport that has served as a base for the concept of the "Acces2Mountain - Sustainable Mobility and Tourism in Sensitive Areas of the Alps and the Carpathians" and the work performed in the project answers the needs of this idea.

2.1 Background of a project ACCESS2MOUNTAIN

The Alpine Convention (in particular a protocol for executive transport and tourism) and the Carpathian Convention recognize the importance of sustainable transport program in the context of tourism development, while calling for transnational and interregional cooperation in the fields of conservation and sustainable development of the particularly valuable natural areas. The continuation of these initiatives was a whole series of projects aimed at developing recommendations and managing concepts aimed at improving the availability of the tourist regions while using the concept of sustainable development. The Alpine and Carpathian Conventions (and related studies) recognise tourism in sensitive mountain areas as a source for sustainable economic development and the need for environmentally friendly transport and call for cooperation on that.

Since January 2008, the Environment Agency Austria, supported by the Austrian Ministry of Agriculture, Forestry, Environment and Water Management and the Federal Ministry for Transport, Innovation and Technology, Fedecrail, the Permanent Secretariat of the Alpine Convention and the Interim Secretariat of the Carpathian Convention and external experts elaborated a concept. In spring 2008 search for

⁴ Gronowicz J., 2004, Ochrona środowiska w transporcie lądowym, ITE, Poznań-Radom

committed and representative partners started. In October 2008 as well as in September 2009 a partner meeting for joint project development was held.

The effect of their efforts is the project ACCESS2MOUNTAIN which was aimed to achieve durable, environmentally friendly tourism, as well as to ensure accessibility and connection to, between and in sensitive regions of the Alps and the Carpathians. With the long-term perspective of increasing sustainable tourist mobility, railway and multimodal connections will be improved and attractive offers created via pre-investment measures, pilot activities, and investments.

It was central to the project to transfer experiences made and knowledge gained in the Alps to the Southeastern European region. In this regard, the transnational cooperation in the field of sustainable regional development plays an important role. Touristic infrastructures are to be created or improved in a sustainable manner.

The ACCESS2MOUNTAIN project was therefore foreseen to respond to a number of problems located in the context of the sustainable development. Mountain areas covered by the Alpine and the Carpathian Conventions are a major topographic feature of the SEE programme area. With unique natural landscapes they are important (potential) recreation areas. These are the areas where the socio-economic development is largely associated with travel destinations; hence the inclusion of the idea of sustainable development (transport) becomes particularly important. These areas face the necessity of dealing with a number of problems that must be solved in order to maintain the development trends while, at the same time, respecting environmental values. The authors of the project's concept indicated, among other things, on such negative aspects:

- (tourism) development pressures and increasing motorised tourist traffic,
- weak sustainable transport capacities with gaps in transport connections and offers (and transport providers struggling for economic survival),
- neglected transport infrastructure (multimodal and small/narrow gauge railways rarely used or suitable for tourism),
- lack of awareness, knowledge and information on sustainable transport,
- deficiencies in legal frameworks, coordination, management, tourist information and cooperation on different levels.

2.2 Objectives and scopes

The overall objective of the project referred to the creation of broadly understood availability between and among the mountain regions, in accordance with the principles of sustainable development.

The ACCESS2MOUNTAIN project activities that were or still are carried out have been grouped into 7 Work Packages. All of the project work was preceded by a package of preparatory actions aimed on preparing the application, but also leading to a common understanding of the concept of transnational cooperation and project objectives.

The first work package of the project (**WP1 - Transnational project and financial management**) covers all necessary actions (e.g. control activities, evaluations) required to properly fulfil the project's objectives. The aim was to maintain the transnational cooperation at a level which allowed for the implementation of individual tasks. From the point of view of maintaining the continuity and effectiveness of the project

work the next Work Package (**WP2 - Communication activities**) seems to be very important. It is associated with the activity in the field of communication and information flow, including the dissemination of project results. Next WP (**WP3 - Analysis, traffic flow models and follow-up tool**) has been aimed on examining the access to project partner regions as well as traffic flows. This has supported the creation of models that help to understand traffic flows in the areas and to what extent road traffic can be shifted to other modes of transport by including the effects of the respective regional pilot activities.

The objective of next WP (**WP4 - Regional and narrow gauge railways**) was to strengthen an efficient railway net in the Alps and the Carpathians with specific focus on small and narrow gauge railways to better use existing infrastructure rather than building new (road) infrastructures and achieving a modal shift for sustainable tourism in regions with natural assets.

The activities included in the WP4 include:

Act. 4.1: Analysis on existing best-practises on railway operation - collection of best practice examples on organizational, economic and tourism issues for small and narrow gauge railways in mountain regions;

Act. 4.2: Pilot activities in region of Mostviertel (Austria), Maramures (Romania), Northern Hungary (Hungary), Kosice Region (Slovakia) and cross border area Poland/Slovakia – pilot activities have been carried out on the basis of earlier analyses of good practice. The project partners operating in particular regions have undertaken a number of ventures aimed at optimizing the use of regional and narrow gauge rail lines operating in the regions.

Measures taken by the various partners of the project:

20%PP1 - Rzeszow Regional Development Agency (Poland) – elaboration of the analysis of possibilities integration the small and narrow gauge railway, traditional railway connection and alternative ways of transport between Poland and Slovakia.

PP3 - Mostviertel Tourism Ltd. (Austria) – Optimizing the organisational structure of Mariazellerbahn railways, including co-operation with regional partners (e.g. the operator of the Mariazeller Bahn, the observing partner NÖVOG).

PP7 – County Center for Tourism Information MARAMURESINFOTOURISM (Romania) – Bike racks for Wassertalbahn.

PP8 – Agency for the Support of Regional Development Kosice (Slovakia) – Regional inventory of existing/operating and abandoned railways in the region, including Northern Hungary (Borsod-Abaúj-Zemplén county).

PP9 – Miskolc Holding, Plc (Hungary) – small scale investments for bike transport on narrow gauge railway trains and participatory setting up a cross-border/transnational EGTC, with the potential to ensure the further maintenance of the narrow-gauge railways.

Outputs and results of WP4:

- analysis on existing best practises on railway operation,
- tariff system,

- regions with improved railway capacities/offers (4),
- synthesis report,
- railway inventory,
- setting-up of cb-European Grouping of Territorial Cooperation⁵,
- synthesis report based on pilot-experience,
- contribution to mountain regional development objective (4),
- contribution to infrastructure/connection objective and possible pre-investment (4),
- contribution to transnational policy objective,
- contribution to knowledge objective (4).

Another one of the work packages within the project (**WP5 - Multimodal transport**) touches upon the issue of the multimodal transport, which is defined as the carriage of passengers with the use of combining different transport modes (including railways). Most common mode of transport to tourism areas in the mountains is individual motor car traffic, causing disturbances and damage. The regional and narrow-gauge railways still remain insufficiently used, hence it is important to raise awareness of their use in the context of the local and regional transport systems. Implementation of activities under WP5 has led to the development of a set of good practices in the field of multimodal transport, management concepts and the creation of offers, or management plans for the development of multimodal transport, including cross-border options.

Activities of next WP (**WP6 – Training, awareness raising, stakeholder integration, communication, follow-up**) focus on the integration of the various target groups to ensure the implementation and further work in sustainable mobility. The work performed within WP6 was to a large extent related to the marketing and promotion of the idea of sustainable transport. Lastly, the final work package (**WP7 - Policy development and cooperation**) refers to the problems of managing the development of sustainable transport at a transnational level. During this WP project results will be integrated into the work of the Alpine and Carpathian Conventions with regard to sustainable tourism and mobility.

⁵ Community level cooperation instrument with legal personality consisting of local or regional authorities.

3 BEST PRACTISES OF REGIONAL AND NARROW GAUGE RAILWAYS – CONCLUSIONS FROM THE ANALYSES

One of the elements of WP4 was to perform an analysis showing examples of good practice in the use of regional and narrow-gauge railways, mainly from Europe (act. 4.2). The Federal Ministry for Transport, Innovation and Technology (Austria) was the partner responsible for the implementation of this part of WP4. The task was carried out in the period from 01.06.201 to 31.03.2012. Also within activity 4.2 studies of good examples were created, showing the use of regional narrow gauge railways to meet the needs of tourism or everyday use.

A basic document created in WP4, which describes the good practices in the use of regional rail lines and narrow gauge rail lines, is a study carried out by experts from the Federal Ministry for Transport, Innovation and Technology (Austria) entitled - "Regional and Narrow Gauge Railways - Good Practice and Recommendations." Based on the analysis of literature and online resources 18 examples of the use narrow gauge railways were identified and analysed (including one from the U.S.).

A significant part of the study was associated with an attempt to answer the question concerning the type of actions that regional rail lines undertake in order to reach and gain their passengers. For this purpose, a questionnaire was prepared and used as a base of a study of the tourist activity of the railways. It also allowed obtaining statistical data and information concerning the actions taken to improve the offered services.

Thanks to the used methodology, a study based on the following sources of information was created:

- regional data (e.g. inhabitants, tourist data),
- transport data (e.g. schedules, connections, number of train passengers, user groups like tourists, commuters, school children or students),
- embedding in regional traffic plans with multimodal connections, incl. connection to long-distance trains and in some cases interregional buses (therefore a close cooperation with the WP 5, Intermodality is useful),
- costs for railway operating and investments (e.g. in tracks and rolling stock),
- financing, income structure (market revenues, support by public authorities),
- enterprise structure (focus on innovative/successful models, e.g. communities as owners),
- marketing and information-concepts (tariff systems, embedding in regional tourist marketing, cooperation with other touristic railways),
- possibilities to carry bikes and small boats in trains, bike renting (including electric powered bikes),
- overview to the freight sector.

Examples of regional or narrow gauge railway lines, which were subjected to case studies, were analysed in a full or simplified manner.

fig. 1 Overview of analysed examples of regional and narrow-gauge railways. (Source: Regional and narrow-gauge railways – good practice and recommendations)



Full analysis based on questionnaires:	Selected analysis:
Austria	
1. Pinzgauer Lokalbahn 2. Stern und Haferl 3. Zillertalbahn	
Germany	
5. Harzer Schmalspurbahnen 7. Ilztalbahn 9. Usedomer Baderbahn (UBB)	4. Bayerische Oberlandbahn 6. Hohenzollersche Landesbahn 8. Waldbahn
Czech Republic	
	10. JHMD narrow gauge railway
Switzerland	
11. Chemins de fer du Jura (CJ)	

12. Rhätische Bahn (RhB)	
Italy	
13. Vinschger Bahn	14. Ferrovia Trento-Male-Marilleva
Slovakia	
15. Tatranská Elektrická Železnica (TEŽ)	
Spain	
	16. Ferrocarril de Sóler SA
Great Britain	
	17. Ffestiniog and Welsh Highland Rail
USA/Canada	
	18. White Pass/Yukon Railway

The delivered analyses of the activity of selected regional and narrow gauge railways allow for a conclusion that gaining success in the use of such modes of transport in tourism is possible, but at the same time it is dependent on the effective use of a range of elements, such as:

- market-based approach in relation to the provided services and emphasis on high quality services,
- obtaining the support of appropriate partners (regional and local politicians, tourism organizations and the residents).

Market-based approach in relation to the provided services and emphasis on high quality services

Authors of the studies of good practice conclude, on the basis of their analyses, that the railway operators who have been successful on the market gain recognition and their clients (passengers, tourists) thanks to the professional way of presenting their services on the market. Thus, successful railway lines are attracting the attention of potential brand users and at the same time contribute to the creation of a positive image of the regions in which they operate. Alpine railways (Zillertal, Rhätische Bahn and Vinschgerbahn) and the German railways (Harzer Schmalspurbahnen, Usedomer Bäderbahn) are among the best examples of companies achieving significant successes on the market.

The authors of the report emphasize the fact that competition on the tourist market is a difficult challenge for the interested entities. The tourist market is in fact particularly dependent on consumer needs and expectations and it has to respect the current market trends. This imposes a need for railway managing entities to use a strategic approach to developing the market advantages of the railways that need to be represented as a largely available means of transport while offering a range of additional services allowing tourists to plan their vacation according to their needs and expectations. But in order to succeed on the tourist market, the offer of the regional and narrow gauge railways (understood as a train journey and additional services), should meet the following criteria:

- have a high recreational value and recreational benefits,
- address a broad target group, and should be especially suitable for families,
- offer good value for money („more for less“).

Only the railways which provide a high-quality and highly customized services, adapted to the market needs, can be recognized as a reliable partner - not only by tourists but also by the local residents of the regions. Of course, the market orientation of the tourist railways should also take into account the needs of the railway operators themselves, which is in fact the essence of the sustainable development concept. It is important to obtain financial support from agencies involved in stimulating regional development.

It is crucial for the market success of the tourist railway services to structure the supply chain of the tourist oriented services in a way which will satisfy all the needs of the passengers during their trips. It is important to notice that the trip itself is not all there is. The traveling is accompanied by various other needs, for example accommodation, meals, sightseeing, etc. These needs of the passengers should also be met. Presented below are photographs showing examples of certain services.

fig. 2 Harzer Schmalspurbahnen – Steam Shop (Photo: Otfried Knoll)



fig. 3 Rhätische Bahn – Bicycle transport wagon (Photo: Otfried Knoll)



fig. 4 Vinschgerbahn – sort ways between train and the bus (Photo: STA)



fig. 5 Zillertalbahn – buffet-car in a steam train (Photo: Otfried Knoll)



The offer of the railways should therefore be a part of a supply chain of travel products and services provided in the region. The best solution, contributing to the dissemination of positive information that has been passed through different channels about the quality and range of services in a particular place is to prepare an offer that will not only satisfy the needs of the clients, but even surpass them.

Obtaining the support of relevant partners (regional and local politicians, tourism organizations and residents)

Success of the tourist railway services requires the support of regional and municipal authorities, as well as tourist organizations and the residents. Local communities play a large role in the shaping of a successful offer of the regional and narrow-gauge railway lines by, for example:

- taking over the shaping and maintaining of station buildings (cleaning, snow removal),
- good integration of the railway stations in cycling and walking networks,
- supporting the railways by providing and maintaining bike stands and park and ride sites,
- offering ticket sales and mobility counselling at municipal offices,
- offering parking management and access restrictions for vehicles in congested centres of larger communities.

3.1 The experience for the development of sustainable transport resulting from the analysis of good practices

One of the purposes of analysing good practices, undertaken in the framework of WP4, was to provide experiences that could be used in the management and development of tourist railways in the regions covered by the project. The elaboration covers factors that might to a large extent bring success in the development of regional and narrow gauge railways.

Political support at all levels (local, regional, national)

The study showed that successful market railways are in many ways supported by local and regional authorities. The key issue is, of course, the financial support towards the integration of regional transport systems. Railway managing entities have no formal, organizational or financial capacity to affect the actions of other entities, which hold in their hands the possibility of influencing the success of sustainable transport in the area. In details, the support actions of the authorities may consist of:

- contributions to the construction and maintenance of railway stations,
- improve the accessibility for pedestrians and cyclists,
- information policy,
- mobility management activities to strengthen public transport,
- land-use planning targeted on short ways to the railway stops.

The photographs presented below serve as an example of the role of local authorities in the development of railway lines. Below you can see stations of the Vinschgerbahn in Alto Adige / Südtirol which were reconstructed with considerable contributions by the communities and moreover, they are maintained by the staff of the municipalities.

fig. 6 The stations of the Vinschgerbahn were renovated with considerable contributions of communities and also maintained by the communities. On the right photo former freight depots are frequently used as garages for bicycles to rent (Photo: Otfried Knoll)



One of the tasks of the authorities may be the necessity to integrate different communication systems, so that the railways will not operate in isolation from the local and regional transportation system. By coordinating schedules of different carriers (rail, local and regional bus operators) the communication accessibility of the region will be significantly increased and thus there will be an increase in the interest in regional and local rail lines.

fig. 7 Railways supported by regional- and local buses, network in Alto Adige / Südtirol. Source: Draft Paper of the sub working group Urban Mobility to the transport group of the Alpine Convention, Synthesis report on urban and interurban mobility in the Alps



Master plan

A master plan describes how an existing system must be changed to meet certain expectations. Such plan have to include objectives and measures, based on a vision developed by the region and the railway. The mater plan should both formulate the desired model and constitute a guide that would help to implement it. The objectives formulated in the document, as well as the operational program set to achieve them (including the projects and activities) should be defined for the next several years. Generally said, master plan is a program that determines with which methods a railway company is going to implement its business model in a competitive market.

At the beginning of work over the project “master plan regional railway” some determinations have to be taken in order to narrow down the vision (e.g. developement opportunities, developement priorities, developement options). Additionally, the chances and the risks should be defined. The following can be mentioned in the first group: the reputation of the region in the international tourist market, current trends in the tourist industry, well-developed infrastructure or the articulated intention of the owner / decision maker for the professionalization of the railway company and its environment. On the other hand, the risks may be varried and should not be considered as universal, but should be identified each time in relation to the analysed region. Among the examples of the identified risks are: the lack of tourist mindedness, competitiveness of rail transport with bus, boat and cars, question of the permanent financing of railway operations, geologically problematic track sections or political influences.

Elements of the master plan may include:

- environment (regional development priorities, communities, cooperation strategies...
- development of rail sites, guidelines for land development and utilization, ...
- technical part (track, buildings, conservation concept for vehicles, workshops, ...)
- operational part (management strategy, timetable, special operations, personnel, ...)
- commercial section (supply and service levels, pricing, sales strategy, ...)
- creativity part (design quality, promotional policies, information systems,...)
- communication Concept (make the market aware of USP, external and internal communications, partner communications, reporting, press).

Cooperation with the tourist industry

Regional and local railways can serve a dual function. On one hand, they give the opportunity to reach out to interesting tourist destinations in the region, on the other hand, the railways themselves are treated as tourist attractions and as a unique selling proposition of the region. The authors of the good practice analyses cite the example of Harzer Schmalspurbahnen (HSB), which activities are the source of a 37 million € in revenues in the region, of which only 6 million are HSB revenues, and the remaining amount is the result of actions of other entities of the tourism industry. These entities benefit from the fact, that tourists visit the region due to their interest in the railway. HSB business, which employs 230 workers, puts its hand to additional 900 jobs in the region, in the entities working in other types of services or products for the tourists visiting the region due to the operating HSB railway line.

It is important for the railway operators to be actively involved in creating networks of cooperation without waiting for the spontaneous emergence of interest from the tourism industry. Illustrative

examples of good practice in the field of railways are the Rhätian Railway and the Pinzgauer Lokalbahn. In the first case, the carrier operates a specialized web portal aimed at tour operators, which also contains an offer of tour packages for schools. On the other hand, the employees of Pinzgauer Lokalbahn visit hotel staff and inform personally about news of the regional railway – like improved timetables - or new tourist packages and distribute information material.

One of the most effective methods for integrating transport systems in the region are tourist cards which act as a ticket in the regional and local transport (including railways). The price of the card is usually included in the price of the stay, but its activation requires the cooperation of a number of entities (e.g. the local authorities). An example of such a solution is the KONUS guest card in the Black Forest (Germany). The implementation of the card was agreed upon by about 90% of the representatives of local authorities. Accommodation guests in KONUScommunities get a guest pass with an additional sheet (copy of the registration paper) which is valid for the whole public transport system (except ICE, IC and EC trains). The KONUS guest card is financed by a supplement to the price of overnight stays (actual 36 Cent, appr. 39 Cent with VAT for every night and every person). These 39 cents are available for using public transport, other offers are financed by the rest of the tourist taxes which are vary in the tourist communities in the Black Forest.⁶

fig. 8 Dampfbahn-Route (Source: Newsletter of Dampfbahnroute)



Another of the described forms of regional co-operation of railway lines with the tourism industry is Dampfbahnroute Sachsen in Saxony (Germany). In this case, the railways cooperate with other tourist attractions of the region (museums, monuments, historic buildings, recreational facilities). Also a tourist route has been established (Dampfbahn-Route), the partners on this route hold a joint office, and maintain integrated marketing actions. In effect they often reach a significantly higher level of interest for each of the sites.

⁶ http://www.schwarzwald-tourismus.info/service/konus/was_ist_konus/uebersichtskarte

Investment in infrastructure

fig. 9 New station of the reconstructed Vinschgerbahn (Photo: Otfried Knoll)



fig. 10 Voluntary work of club members on Ilztalbahn (Photo: www.ilztalbahn.net)



In this case, the range of possible amenities for implementation is very wide, ranging from the renovation of railway stations, increasing their availability and ending with costly investments in the rolling stock and the railway lines. In most of the analysed examples these activities were carried out with the support of the local and regional authorities, and the funds for this purpose came from the regional or national budgets. Special cases are infrastructure investments by private clubs, as on the Ilztalbahn in Bavaria and the Ffestiniog and Welsh Highland Railways.

Facilities for passengers

Successful acquisition of passengers for the rail lines imposes an obligation of implementing amenities, which will facilitate the possibility of traveling for different groups of people: the disabled, those traveling with bicycles, or with heavy luggage, etc... Introduction of these types of infrastructure solutions significantly increases the comfort of traveling and provides an incentive for potential passengers who might decide on the offer of the specific rail carrier. The range of amenities that should be implemented includes:

- easy accessibility for all passengers, also for handicapped people with wheel chairs,
- comfortable facilities to transport luggage and sports utilities (bicycles, skis)
- buffet and drinking cars on rails,
- good view on the landscape,
- enough capacities to meet peak demand.

fig. 11 A hydraulic lift for passengers with wheelchairs - the Bregenzerwaldbahn (Photo: Otfried Knoll)



fig. 12 Tatra Electric Railways with space for skis, luggage or bicycles (Photo: Otfried Knoll)



fig. 13 Multi-purpose space in the Vinschger Bahn
(Photo: Otfried Knoll)



fig. 14 Drinking offer in the wagons of the Harzer Schmalspurbahnen
(Photo: Otfried Knoll)



Marketing actions

Effective marketing should not only include promotional activities, but should also facilitate the access to tickets and a widely available information source about the offer of the specific railway line.

Reaching potential customers requires the railway lines managers to undertake a series of activities aimed at disseminating the information about the offer. These activities require the aforementioned co-operation with certain tourism stakeholders, establishing local partnerships, but also the communication with potential passengers through any possible channels of information, with the emphasis on the Internet. Managing useful and interesting websites is now indeed one of the most basic activities that has to be undertaken in order to effectively communicate with the market.

fig. 15 The shop of the Harzer Schmalspurbahnen, called “Dampfladen” (Photo: Otfried Knoll)



Apart from advertising the smoothly operating ticketing system also plays an important role. It allows the potential passengers to purchase tickets in different sections (tourist information, hotel reception, souvenir shops etc.). Ticket selling points can also play a number of other functions that contribute to increasing the revenues of the entities managing the narrow gauge railways. This idea covers the sale of souvenirs, train models, tickets to tourist attractions, souvenir t-shirts etc.

fig. 16 Information of the Vinschgerbahn to points of interest near the stops (Source: STA)



fig. 17 Information of Rhätische Bahn in Japanese (Photo: Otfried Knoll)



4 SUCCESS FACTORS AND INSPIRATION FOR PILOT AREA ACTIVITIES

The implementation of the activities foreseen under WP4 was foreseen to bring about an improved use of the potential of the existing narrow gauge railway lines. In order to serve this purpose all the benchmarking analysis (analysis of good practice) were performed. These analyses have presented interesting examples of the use of the narrow gauge railways in the regional transport systems. All the activities in the pilot regions that were based on that analysis and aimed at optimizing the use of existing railway lines were undertaken for the same purpose. The wider effect of these activities was also to look out for inspiration concerning the future (not project based) actions undertaken by project partners in their regions in the context of creating the communication availability that would be in line with the concept of sustainable transport.

Work Package 4 included activities focused on narrow gauge railways, as a specific form of transport, which is environment-friendly and provides an alternative to developing new road projects, while also being a component that can complement the transport infrastructure of the mentioned regions. Activities carried out by partners, who were established in the project, involved the creation of a set of good practices in the fields of: organization, economy and tourism in the context of railway operation in mountain areas and also the implementation of low-cost actions concerning bicycle transport.

Actions covering good practices in the railway operations were focused on the analysis of existing good practices in the field of narrow gauge railways. The collected information was to be used for the preparation of the concept and implementation of the pilot activities. The analysis was geared towards getting the information regarding:

- regional data concerning, among others, the residents and tourism,
- transport data - the connections, routes, schedules,
- the number and type of passenger trains,
- current costs of railway tracks, investments,
- structure of the railway management companies,
- informational/promotional and marketing actions (tariff systems and the embedding of the regional and narrow gauge railways on the regional tourist market),
- potential of the regional railways in everyday use and touristic traveling,
- importance of goods transporting for the functioning of the rail.

The prepared concept included, inter alia, the integration of regional plans and connections in the multimodal transport system, including also trains and buses serving long distances and allowing for the carriage of bicycles, small boats, as well as the implementation of common marketing and information strategies.

Activities under WP 4 were implemented by the following project partners:

- Mostviertel Tourism Ltd. (PP3)
- Agency for the Support of Regional Development Kosice (PP8)
- Miskolc Holding, Plc (PP9)
- County Center for Tourism Information MARAMURESINFOTOURISM (PP7)
- Rzeszow Regional Development Agency (20% PP1)

The result of the joint work of the regions, as well as the transferring of best practices is a synthetic report covering the experiences and solutions developed within Work Package 4 and proposing recommendations for further actions. It will be distributed as part of the project 6.4 activity.

4.1 Mostviertel

Background

Lower Austria, in which Mostviertel is one of the regions, is located in the northern part of Austria. From the north and east it borders with the Czech Republic and Slovakia, and from the west, south and south-east with other federal states of Austria, successively: Upper Austria, Styria and Burgenland. The capital city of Vienna constitutes an enclave within the territory of Lower Austria. The largest city and also the capital of the federal state is Sankt Pölten (until 1986 the capital of the Land was Vienna), covering slightly more than 108 km² and inhabited by 52 000 inhabitants (as of 1 January 2013)⁷.

The province of Lower Austria includes the oldest historical lands of the Austrian principality. It is situated on both sides of the Danube. In the north stands the wooded part of the Czech Massif - Waldviertel, on the east from it one can find the Weinviertel land, belonging to the Carpathian foothills. In the southern part, constituting the foot of the Limestone Alps, the Mostviertel and Industrieviertel (east of Mostviertel) are located⁸. Waldviertel and Mostviertel are mainly farming regions, Industrieviertel on the other hand constitutes of former industrial areas⁹.

fig. 18 The Lower Austria Land and the Mostviertel region (Source: elaboration based on http://pl.wikipedia.org/wiki/Plik:Austria_stmk.svg)



Mostviertel District is located in the south-western part of the Land of Lower Austria (see Figure 4). Mostviertel region is primarily an agricultural land. The region is known mostly for the horticulture, areas

⁷ <http://sdb.statistik.at>; <http://www.st-poelten.gv.at>; <http://www.noel.gv.at>

⁸ J. Warszńska, Austria, [w:] Geografia turystyczna świata cz. 1, red. J. Warszńska, Warszawa 2000, s. 169.

⁹ Kraje związkowe Austrii. Informator dla polskich przedsiębiorców, Wiedeń 2010, s. 17-20.

between the rivers Enns and Ybbs create especially good conditions for this kind of business. In particular, this region is known for the cultivation of pear and pear cider. This fact has been used as a tourist attraction. In Mostviertel one can also find a 200 km of grape must, leading to the most interesting places and cultural attractions of the region. Because of its alpine location Mostviertel is an important tourist region, which holds potential for the development of mountain hiking, skiing and pilgrimage. One of the most famous tourist attractions of the region is at the narrow-gauge railway - Mariazellerbahn. Currently, the line is administrated by NÖVOG, which is owned by the regional Management Board of the Lower Austria. Starting in Autumn 2003 variants of railway management were considered; one of them was to change the width of the track on the section from St. Pölten to Kirchberg over Pielach in order to adapt it to the needs of transporting the children to school and the commuters. The remaining section of the narrow gauge railway is to be covered by the prepared tourist concept. Mariazellerbahn remains a part of the traffic association of Lower Austria and Burgenland (Traffic Association "Verkehrsverbund Niederösterreich-Burgenland (VVNB)")¹⁰.

The route of the railway consists of two parts. The first is the section running from St. Pölten to Frankenfels that runs through the Traisen and Pielach valleys. It joins the line with the not electrified branches of the railway. The second part is the section running through the mountains, including 2-km-long tunnel (Gösingtunnel), which is the longest tunnel on this route. Here you can find the Wienerbruck-Josefsberg station, one of the famous places for mountain hiking¹¹. The railway line is used primarily for the transport of people, both in regular traffic and tourism. It also offers a chartering train, taking into account the specific needs of the interested clients. The operator has incorporated the local tourist offer in its activities¹².

Fig. 20. Narrow gauge railway Mariazellerbahn (Source: <http://www.mariazellerbahn.at>)



¹⁰ <http://www.mariazellerbahn.at/>

¹¹ <http://www.mariazellerbahn.at/>

¹² <http://www.mariazellerbahn.at/strecke.php>

The railway route runs through attractive tourist areas of the Lower Austria. The mentioned trails of must, as well as the foothills of the Limestone Alps serve as a base for the development of rail operations. In addition, the local and regional authorities undertake actions in order to support the development of regional tourism, which is an important element of Mariazellerbahn. The aim is to integrate the activities of the local community, business and tourism organizations around the support of tourism development in the region. Additional connection to the ski resorts was introduced, tourist information points were opened (Lackenhof, Gaming and Lunz) and finally the Mostviertel Tourism portal was developed, which (apart from its information function) acts as a booking system that enables the purchase of travel packages. It integrates the offer of the local tourist services, including the offer of Mariazellerbahn.

It is precisely the close connection with the development of tourism services that is a potentially attractive direction for the development of the Mariazellerbahn railway. The main area of interest in this case is the idea of sustainable tourism, which is a form of tourism management and activity, which supports the ecological, social and economic integrity of the land. The region creates such opportunities both in the context of the landscape value (non-urbanized areas) and the infrastructure. In the year 2015 the mountainous section of the Maraizellerbahn will be an integrated part of country exhibition of Niederösterreich (Lower Austria) . Maybe we could also add, that the Mariazellerbahn offers a booking tool in the internet to buy tickets and to make reservations. Moreover, the possibilities to carry bicycles in the new trains and the introduction of panorama wagons should be mentioned.

Pilot activities in the field of regional and narrow gauge railways

Mostviertel Tourism Ltd. conducted a review of the railway infrastructure within the 4.2 package, by conducting an analysis of the quality of routes, rail connections, groups of passengers (tourists, commuters, school children, students). The company also realized marketing activities and has partnered with other railways, in order to disseminate the benefits that result from the use of narrow gauge railways.

Workshops for regional companies were also organized within the WP4. The workshop covered topics such as:

- strategy for sustainable development of tourism in the region;
- opportunities for cooperation between the region and Mariazellerbahn;
- analysis of the railway users and adjustment of the tourist offers to different groups of users (ticket prices).

The added value of the activities implemented within the framework of WP4 is:

- improvement and maintaining of the quality levels of the narrow-gauge railway stations;
- better and more accessible information for domestic and international passengers;
- higher quality of service for passengers and luggage storage.

The tasks in the package WP4 been fully realized. Additional measures concerning the modernization of the railway lines and restoration of trains have been completed thanks to additional funding.

Problems that affect the implementation of tasks arise from the railroads' form of ownership (public domain). Adapting the carriers offer to the needs of the passengers is not perceived as a priority. In addition, there is limited opportunity to modify the timetable of the trains. Therefore, it is difficult to

introduce new offers - for example in the form of bicycle transport, because it requires additional time to load and unload the bicycles.

Fig. 20 Tourist travelling by bikes (Mostviertel Tourism Ltd.) (Source: Survey with partner PP3 Mostviertel Tourism Ltd.)



fig. 21 Tourists travelling by the narrow gauge railway (Mostviertel Tourism Ltd.) (Source: Survey with partner PP3 Mostviertel Tourism Ltd.)



Below are pictures that show examples of the effects of the project work (products). Photographs show people traveling by bikes and narrow-gauge railways, as well as tourists who taste the local specialties on the train.

fig. 22 Tastings of local specialties in the train (Mostviertel Tourism Ltd.) (Source: Survey with partner PP3 Mostviertel Tourism Ltd.)



Lessons learned

- The flow and exchange of knowledge between regions, concerning good practices regarding the use of narrow gauge railways in the transport system of regions is very important. Most of the narrow gauge railways face similar obstacles and thanks to the flow of information it is easier to introduce potential improvements.
- Interregional cooperation is very important in order to implement cross-border projects.
- It is important to constantly try to improve the services step by step instead of hoping for one big hit.

Furthermore, it is important to convince the political stakeholders as well as the local population. Only if at least one of the two named parties stands in for the railway, it can be a success. Ideally both: population and political stakeholders are in favour of a sustainable transport development.

4.2 Maramures

Background

Maramures is a geographical but also an ethno-cultural region located in northern Romania and southern Ukraine. Typically, it is treated as part of Transylvania. Its southern part belongs to Romania and the northern one is a part of the Ukraine since 1991. The boundary separating the geographical land between these countries is set by the river Tisza¹³.

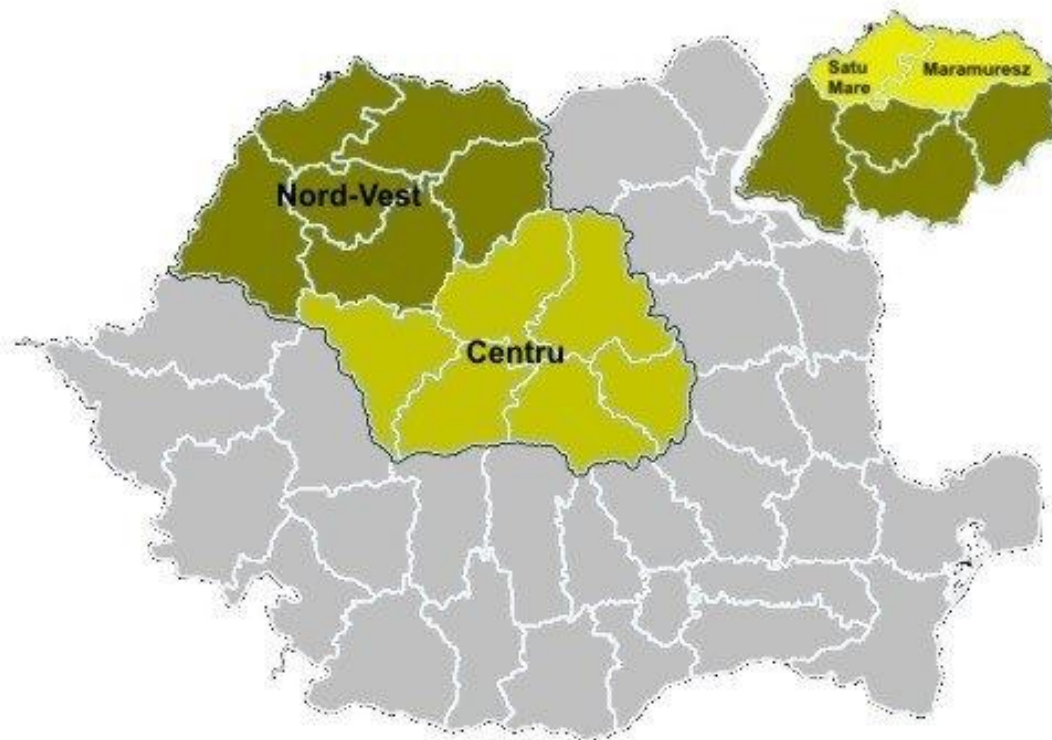
Maramures is part of the so-called Macroregion One, which consists of two developing regions, Northwest and the Center, whereas Maramures belongs to the Northwest area. Although Northwest (Northern Transylvania) does not have any administrative powers, it plays a major role concerning the coordination of regional development projects and management of the EU funds. In 2012 the territory of

¹³ J. Warszyńska, Rumunia, [w:] Geografia turystyczna świata cz. 1, red. J. Warszyńska, Warszawa 2000, s. 133-136.

the region was inhabited by 4.96 million people. Every year a population decline is noticeable. This is the most ethnically diverse region in Romania - about ¼ of the population are ethnic minorities, dominated by the Hungarians.¹⁴

The geographical region of Maramures in Romania mainly consists of two administrative units (prefectures): Satu Mare (western part) and Maramures (Eastern). Maramures is located in the so-called Eastern Carpathians, also the Rodna Mountains run across Maramures County with its highest peak - Pietro (2303 m). The employment structure of inhabitants of the region indicates the advantage of the first economic sector (agriculture, forestry, hunting), which at the same time provides a relatively small share of Maramures region GDP. Thanks to its location this region has a great tourist potential. Many areas have the development potential for climbing and winter sports as well as potential for creating mountain agri-tourism. Tourist offer also includes folk culture sightseeing (eg Borsa , Izvoarele , Mogos , villages in the valleys of the rivers Iza , Mara , Vișeu and Tisza), visiting the ruins of old cities (including Satu Mare, Ardud Medieșu Golden, Tămășeni) and sacral monuments.¹⁵

fig. 23 Macroregion 1 and the land of Maramures (Source: Elaboration based on: www.pl.wikipedia.org/wiki/Plik:Romania-districts_map.png)



The Vișeu de Sus narrow-gauge railway (Mocănița), also known as the Vaser Valley Railway is an important element of the tourist offer. It operates in the northern part of the country, near the border with Ukraine. The length of its route is 56.1 km and its maximum speed is 15 km/h. Its construction was

¹⁴ Region Overview; <http://www.nord-vest.ro/en/ABOUT-USThe-North-Westbr/-/RDA/NORTHERN-TRANSYLVANIA-REGION/Region-Overview.html>

¹⁵ Prezentarea județului Maramureș, <http://www.prefecturamaramures.ro>

completed in the early 1930s, it is owned by the Săgewerkes R.G. Holz Company S.R.L. since 2003. The company owns the depot area and the majority of engines and wagons. The state owns the rest of the railway infrastructure. In 2010 it was listed as a cultural heritage site and is now under protection. Steam and diesel locomotives are still in use. Viseu de Sus (Mocănița) is one of the last forest railways in Europe. The line uses a narrow track gauge with 760 mm spacing¹⁶.

fig. 24 Narrow gauge railway Viseu de Sus (Source: <http://www.cffviseu.ro/content/de/photo-tour>)



The railway route runs along the Vaser River, leading through several tunnels and the mountainous and forested areas of the Carpathians. Currently there are three stations: CFF Vișeu de Sus, Novăț, Paltin. From the first of May to the second of November, which is the season, it runs regularly. Additionally it runs during some special events, such as Easter, Christmas, New Year's Eve, New Year's Day, etc.. The railway also offers chartered courses.¹⁷

Mocănița line has a particularly touristic character. It runs seasonally and its schedule is bound by the festive periods or local events. Adaptation to the requirements of the tourism market resulted in adding many activities and services (available during the route) to the railway's offer. The railway also offers accommodation infrastructure, offering accommodation in Viseu de Sus, which has a restaurant and a car park for guests near the train station.¹⁸

The Viseu de Sus Narrow Gauge Railroad is located in an extremely attractive land of Maramures and has a great development potential. The multicultural character of these areas, a mix of nationalities and religious denominations creates the possibility of using the railway as a way of enhancing the tourist offer of the region. At the same time the growth of interest in the region's tourist offers can be an opportunity to ensure the stability of the project's position. It can assure its future development in the direction of

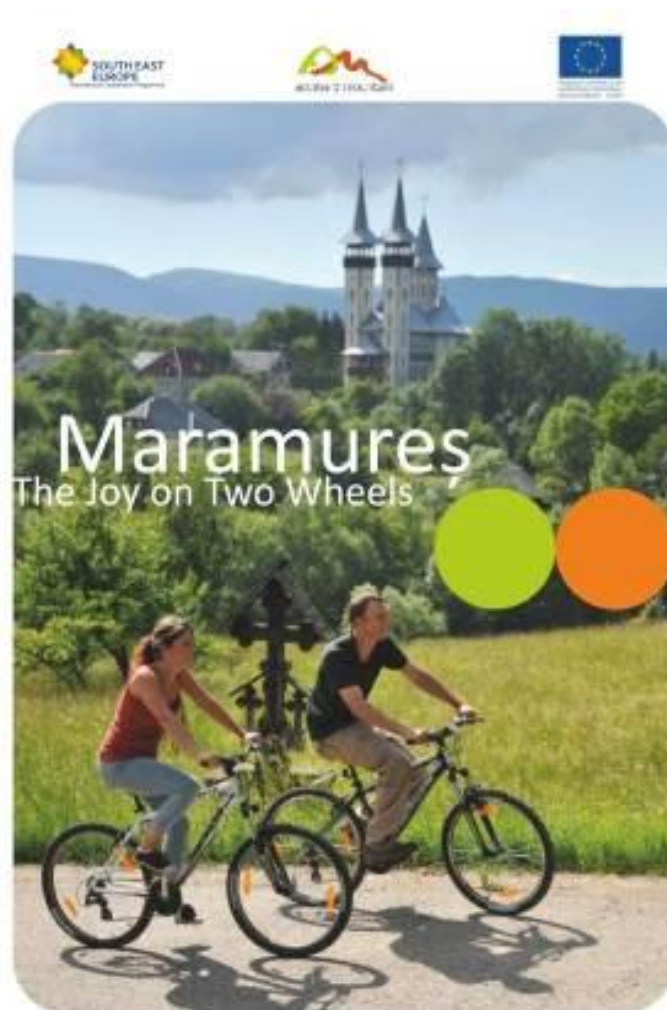
¹⁶ The Railway Age in the Carpathian Forests: A Study of Romania, «Geographica Pannonica» nr 7, s. 9-20; <http://www.cffviseu.ro/content/en/railway>; http://www.romania-tours.ro/oferte--36--Maramures-MOCANITA_-The_last_real_forestry_railway_in_Europe_.html

¹⁷ <http://www.cffviseu.ro/content/en/timetable>

¹⁸ <http://www.romania-tours.ro>; <http://www.cffviseu.ro/content/index.php>

widening the offer, as well a possibility of restoring the parts of the railway, which have fallen into disrepair after the economic transformation that has taken place in the 90'. The above formulated thesis can be also backed by the obvious landscape value of the region. Agrotouristics development potential of the Maramures is also related and somehow supportive for the Viseu de Sus narrow gauge railway enterprise. The nature of the region favours the development of mountain tourism, both walking and cycling, which can also be an advantage for the development of the Viseu de Sus railway offer. The route of the railway, which connects two prefectures in the region, also creates a possibility of using it as a regular means of transport for passengers. This would however require a modernization of the infrastructure, both in terms of the track, as well as the station's facilities.

fig. 25 Brochure “Maramures-The Joy on Two Wheels” (Source: WP5 – Synthesis report)



The development of the region with the use of the Viseu de Sus railway potential serves as a base for all actions undertaken by the local authorities. Particular attention is paid to the development of the region in terms of a cycling tourism offer. This is also the direction set for working with the potential of the narrow gauge railway. The goal is to integrate the trail of the railway with the tourist routes, as well as the development of a supporting infrastructure (eg, bike rental, information boards, and trail marking).

Promotional activities are also undertaken (published travel brochures - figure 6), for example - travel packages that integrate the regional tourist offer are being offered to the tourists.

Pilot activities in the field of regional and narrow gauge railways

In the region of Maramures the ongoing activities within WP4 consisted of the providing with bicycle racks in the narrow-gauge railway wagons. In May 2013 the narrow gauge railway Vaser Valley was equipped with 5 bicycle racks. The investment cost amounted to 1,180 Euro. The aim of the project was to enable tourists and other passengers to transport their own bikes or those that were rented at the railway stations. As part of the described work package (WP4) there were no problems which would affect the performance of the tasks. Consequently, the tasks have been completed correctly. The following photos (26 and 27) show the wagons equipped with bike racks.

Tourists who carry bikes (their own or rented at the station) can benefit from the modernized_cycling routes along the Vasser valley. Cycling routes that cover the distance of 20 km have been upgraded as a part of WP5 work package. Figure number 3 shows a map of the modernized cycling routes which were mapped, marked, peppered with infoboards and included in the general offer of cycling in Maramures.



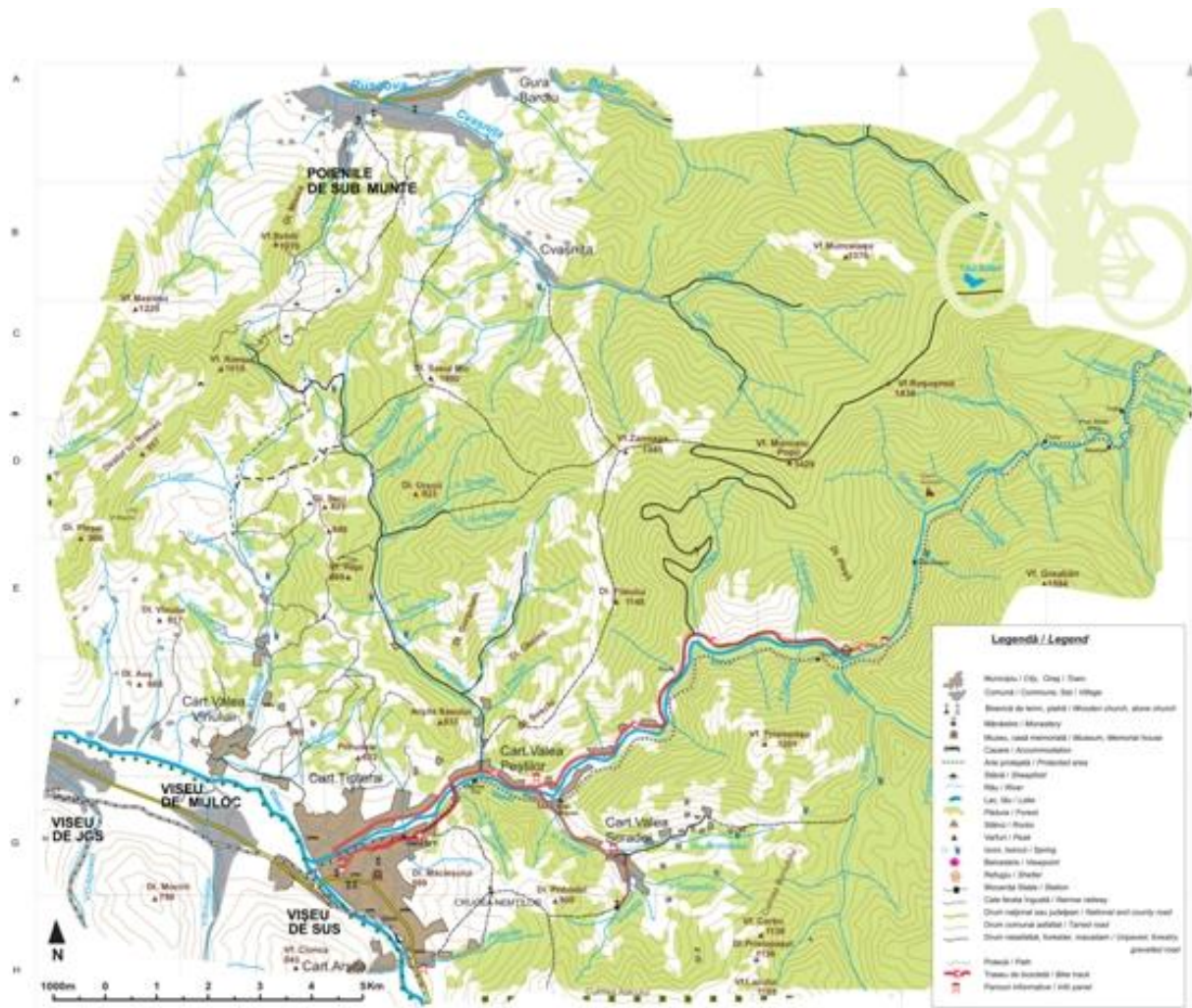
fig. 25 Wagons for the transportation of bikes - Region Maramures (Source: Activities-Report – date of last update: 30.09.2013)



fig. 26 Bike racks - Region Maramures (Source: Activities-Report – date of last update: 30.09.2013)

The implementation of the WP4 contributed to the creation of a new tourist offer. This offer allows for the exploration of the region in both by travelling with the use of narrow-gauge railway, as well as bicycles.

fig. 27 Map of the modernized bike routes (Source: Survey with partner PP7 CJIT Maramures)



Lessons learned

For the development of narrow gauge railways the small-scale investing, which enriches their offer, is very important.

4.3 Northern Hungary and Kosice Region

Background

Northern Hungary and Košice region are a trans boundary area, which lies on the border between Hungary and Slovakia. The first region is characterized by a high forest cover, varied topography, numerous streams and the presence of caves and mineral waters. Large amount of sunlight and shielding from the winds allow for a proper development of the region - the tourist season can last all year long around here¹⁹. Northern Hungary consists of three administrative units (counties): Borsod-Abaúj-Zemplén, Heves, Pest. The capital of the region is Miskolc. From the north lays the boundary with Slovakia.

Region of the Northern Hungary has a considerable ecological potential. About 13% of the territory is parks and national and local nature reserves. As a result, the region has great potential for tourism development. This is supported by accumulated cultural resources, ethnographic traditions, spas and thermal and mineral springs. Local wine regions also have great traditions: Tokaj, Bükkalja, Eger, Matra²⁰.

fig. 28 North Hungary Region (Source: Elaboration based on: www.budapest.infinity.waw.pl)



Košice Region is located in the south-eastern part of Slovakia. This region is characterized by the diversity of geographical landscapes, plains and mountain areas. The Košice Basin forms its centre, which is surrounded by a crown of mountain ranges. From the south it borders with Hungary (region of the Northern Hungary), on the east with Ukraine.

¹⁹ J. Warszyńska, Węgry, [w:] Geografia turystyczna świata cz. 1, red. J. Warszyńska, Warszawa 2000, s. 340-341

²⁰ http://cordis.europa.eu/northern-hungary/intro_en.html

fig. 29 Kosice Region (Source: Elaboration based on: www.budapest.infinity.waw.pl)



Košice are an industrial, even though agricultural land takes up half of the territories. It is the second most important region in Slovakia in terms of exports and GDP. Industry is concentrated mainly in the districts of Kosice, Michalovce and Spiska New Village. The industry is represented by all sectors, from food processing to metallurgy. The main sectors are: metallurgy (60% of industrial production of the region), electrical and electrotechnical industry. Agriculture is a key sector in the southern part of the region. The region has also deposits of various minerals of national significance (natural gas, coal). Two important railway lines run through the region: the east-west (Prague, Kosice-Czerna the blow) and north-south (Polish-Kosice-Hungary)²¹.

A number of narrow gauge railways, which are mainly used for tourism operate in the described cross-border area.

1. Narrow gauge railway Felsőtárkány (Hungary) – narrow-gauge forest railway Felsőtárkány was built in 1915. Since 1984, the route queue was limited to performing tourist services on the route from Felsőtárkány to Stimeczház. There are three stations: Felsotarkany-Fütőház, Egeresvölgy-Varróház and Stimeczház. Only 5 km of track are being used from the entire 40km route and the duration of the journey is approximately 25 minutes. The locations formerly operated by the railway are today marked by many bicycle trails and hiking trails. The railway operates to a limited extent (two connections per day) during the summer, from 1st May to the 30th of September it runs on Saturdays, Sundays and public holidays.

²¹ Košice Region, http://www.sario.sk/userfiles/file/Ensario/PZI/reg/kosice_region.pdf; Košice Region – A Place for Your Investment, wyd.: Agency for the Support of Regional Development Košice, n. O.

Passengers using this connection are most often carried by a train formed of a locomotive and wagons that do not have windows. The Felsőtárkány National Forest Railway is administered by the State Forest Railways²².

fig. 30 Narrow gauge railway Felsőtárkány (Source: <http://kolej.darlex.pl/1294>)



2. Narrow gauge railway in Szilvásvárad (Hungary) – The forest narrow gauge railway in Szilvásvárad (Szilvásvárad Erdei Vasút) was built in 1908 in order to facilitate the transport of wood from the surrounding forests. It operates on the route from Szilvásvárad to Fátyolvízesés on the steepest trails bordering the Beech Mountain National Park. The railway trail has 3.6 km and the one way travel time is approximately 15 minutes. Along the route there are four stations: Szalajkavölgy-Lovaspálya, Szalajka-Fatelep, Szalajka-Halastó and Szalajka-Fátyolvízesés Szilvásvárad.

²²<http://www.ovguide.com/felstarkany-national-forest-railway-9202a8c04000641f8000000009637176>

<http://www.narrowrail.net/old/hungary/>

<http://kolej.darlex.pl/1294>

<http://client4.springmedia.hu/index.php?tpl=page&clD=21>

http://www.budapestt.infinity.waw.pl/joomla/index.php?option=com_content&task=view&id=536&Itemid=27

http://www.karpaty.travel.pl/?fn_mode=fullnews&fn_id=119

fig. 31 Narrow gauge railway in Szilvásvárad (Source: <http://kolej.darlex.pl/1294>)



The railway is characterized by the highest passenger traffic amongst narrow gauge railways in the region of Northern Hungary. It runs regularly about every hour from 8.30 to 18.30, throughout the whole year. In addition to regular transport, the railway offers their rolling stock for the purpose of hiring during events organized by schools, businesses, or other organizations.²³

3. Narrow Gauge railway in Lillafüred (Hungary) – the narrow-gauge forest railway in Lillafüred was built in the years 1919-1922 in order to transport timber. Since 1924, in response to the expectations of tourists and locals, it opened additional connections purely for the passenger's use. Currently, the railway route has 14.16 km and supports only the tourist traffic on the stretch from the periphery of Miskolc to the Garadna valley, connecting the most attractive tourist centres of the region, including Diósgyőr castle, palace Bethleni, Anna caves, Stephan and Szeleta, Hamor Lake and the Lillafüred waterfalls. There are ten stations on this route. Next to the main section, the railway also has a branch (route: Miskolc - Diósgyőr - Papírgyár - Taksalapa - Papírgyár - Diósgyőr - Miskolc) about 17 km long. Currently the train runs only in the summer, however due to a poor condition of the trails - in the opinion of the administrator Északerdő Zrt – this section is currently under construction and transports are not carried out here.

²³ <http://kolej.darlex.pl/1294>

<http://www.szalajka-volgy.hu/en/valley>

http://www.karpaty.travel.pl/?fn_mode=fullnews&fn_id=119

http://www.budapestt.infinity.waw.pl/joomla/index.php?option=com_content&task=view&id=536&Itemid=27

<http://www.narrowrail.net/old/hungary/>

Kolejki wąskotorowe na Węgrzech. Wyd. Magyar Turizmus Zrt.

fig. 32 Narrow gauge railway in Lillafüred (Source: <http://kolej.darlex.pl/1294>)



The railway is not electrified; it is operated by steam locomotives. It operates throughout the whole year and in the summer it delivers 7 courses per day, while throughout the rest of the year the railway carries 4 courses per day²⁴.

4. Narrow gauge railway in Palhazai (Hungary) – The Palhazai narrow-gauge railway is the oldest forest railway in Hungary. It is located in the north-eastern part of the country, in the Zemplén Mountains. Track gauge is 760 mm. The trail of the railway has about 10 km on the path: Pálháza - Kőkapu - Rostalló. The train covers this route in about 55 minutes; during the travel a 15 minute stop is also planned. There are six stations on the route of this railway: Pálháza, Pálháza-lpartelep, Kishuta, Kemencepatak, Kőkapu Üdülő and Rostallo, all of them lead to marked trails of tourist routes.

The railway runs daily during the period from mid-April to end of October. Nearest railway stations are Sátoraljaújhely and Slovenske Nove Mesto, situated at a distance of about 17 km, on the border with Slovakia. Railway station Slovenske Nove Mesto is on the Košice - Cierna route over Tisou²⁵.

5. Narrow gauge railway Gyöngyös Mátravasút (Hungary) – one of the most popular narrow gauge railways in the region - carries traffic on two stretches from the city Gyöngyös.

Transportation in a northward direction, on a seven kilometre stretch Gyöngyös to Mátrafüred, in the region of vineyards, is performed regularly throughout the year (in the winter only on weekends), there

²⁴<http://www.geocities.jp/rail73way/MajNarrow.htm>

http://www.budapest.infinity.waw.pl/joomla/index.php?option=com_content&task=view&id=536&Itemid=27

<http://kolej.darlex.pl/1294>

<http://www.narrowrail.net/old/hungary/>

Kolejki wąskotorowe na Węgrzech. Wyd. Magyar Turizmus Zrt.

²⁵ <http://www.narrowrail.net/old/hungary/>

<http://www.geocities.jp/rail73way/MajNarrow.htm>

<http://kolej.darlex.pl/1294>

Kolejki wąskotorowe na Węgrzech. Wyd. Magyar Turizmus Zrt.

are 7 stations on this route: Gyöngyös, Gyöngyös-felső, Nyúlmály-Kertészeti Tanszék, Farkasmály-Borpincék, Pipishegy, Mátrafüred-alsó, Mátrafüred. However, in the north-west, on the route from Gyöngyös to Lajosháza (there are eight stations: Gyöngyös, Gyöngyös-felső, Janoska, Zemanek, Gyöngyössolymos, Cserkő, Örlömmű, Lajosháza) shipments are carried out only on weekends and during the public holidays as well as on Wednesdays and Fridays during the summer, from 15 June to 31 August. The railway covers the eleven kilometre stretch in about 35 minutes. The total length of the route is 18 km.

fig. 33 Narrow gauge railway Gyöngyös Mátravasút (Source: http://www.kisvasut.hu/view_cikk.php?id=881&rfa=159)



6. Children's railway in Košice (Slovakia) – The historic narrow gauge railway - the children's railway in Kosice - was put into use on 1 May 1956. It operates on the route of about 4 km through the valley Čermel' to the periphery of Kosice. There are three stations on the route of this railway: Čermel', Vpred and Alpinka, where the passengers will find a children's playground, a restaurant and a small golf course. The journey takes about 15-20 minutes. The trains are usually powered by a diesel locomotive, while during the previously announced events a steam locomotive "Katka" is used - the oldest operating machine of such type in Slovakia. The intention of the creators was for the railway to serve as a form of education for children about the functioning of railways and railway work. Currently it supports the tourist traffic during the summer, from May 1 to the end of October. In July and August - usually from Thursday to Sunday – there are five trains operating on this route between 9a.m and 5p.m.. In the remaining months of the year the transport is carried out four times a day during weekends and public holidays. Since 2012, the Civic Association of Children's Railway Kosice is the owner. The association plans a further revitalization of the railway within the project "Košice - European Capital of Culture 2013". The railway is connected to the Kosice city's infrastructure; one can get there by a public bus. In cooperation with the Slovak Railways (ZSSK) the railway offers discounts on train tickets to Kosice from any place in Slovakia, in case the customer buys a package comprising of a train ticket including a ticket for the Children's train in Kosice. Furthermore, due to the fact that the target group of the railway's customers are primarily families with children, the ability to carry bicycles was recently launched. This

gives additional opportunities for planning an active form of recreation. For sure, an additional attraction is the restored child-service of the train, which was suspended in 1991. The driver of the locomotive is the only adult person on the train²⁶.

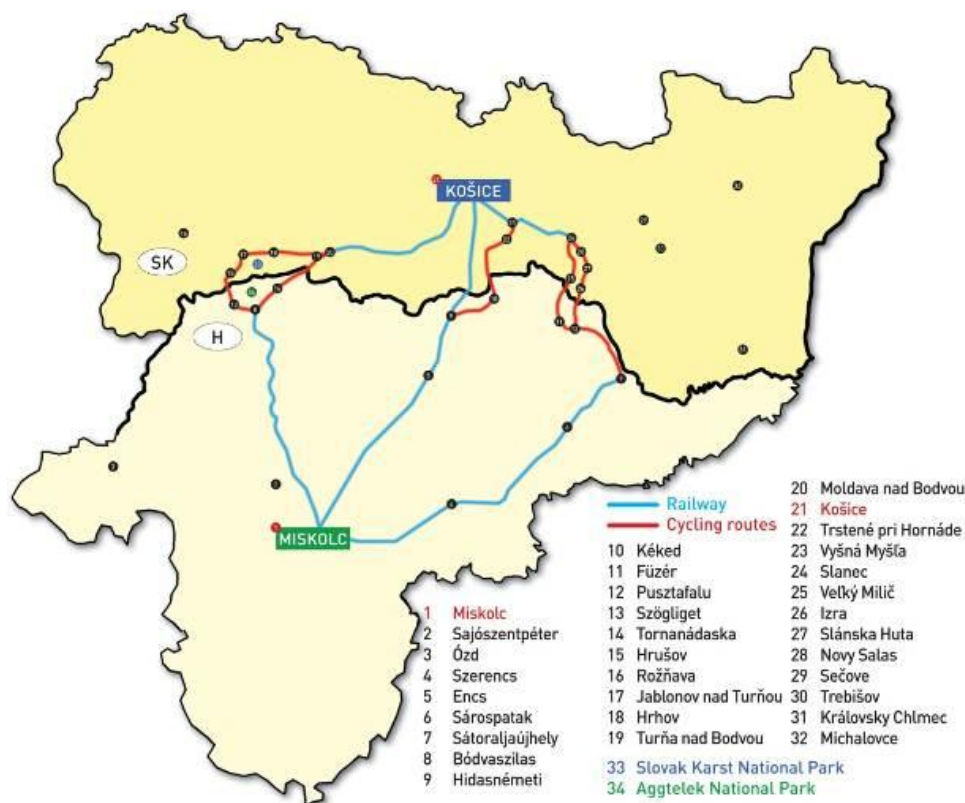
fig. 34 Children's Railway in Kosice (Source: <http://www.detskazeleznica.sk/index.php?id=4&gi=26>)



The narrow gauge in northern Hungary and Košice region currently supports mainly the tourist traffic and carries only a small range of the local transport. The lines are not fully communicated with each other; they do not function as coherent tourism routes merging various forms of transport (bike trail, walking trail, buses, railway standard gauge, etc.). The potential of event tourism has not been fully exploited yet. The diversity of terrain and the proven social diversity of the region (national and hence cultural) create opportunities for the inclusion of narrow gauge railways in coherent cross-border hiking trails. The existing tourist infrastructure can be used in the construction of such routes. The potential for further development of this infrastructure in both regions can be indicated. The richness of the cultural heritage of the region creates the possibility of building mentioned cross-border routes with the use of narrow gauge railways - f development of a tourist offer based on a network of transport linkages between operators (including narrow gauge railways), accommodation facilities, restaurants or regional cultural institutions (museums, national parks, heritage parks, etc.).

²⁶ <http://www.visitkosice.eu/en/things-to-see-and-do/attractions/childrens-railway>
<http://kolej.darlex.pl/375>
<http://hsci2013.info/free-time-activities/koscaronice-childrens-railway>
<http://www.detskazeleznica.sk/-cestovny-poriadok-kdz>
<http://kurierkolejowy.eu/kurier/2013/13/359/Pionierska-alpinka.html>

fig. 35 Proposals for routes linking Košice Region and the Northern Hungary (Source: WP5 – Synthesis report)



However, both of these cross border regions are predisposed to the development of transport connections (given their location) and this is the direction the undertaken actions move towards. Their goal is to create multi-modal routes, which in addition to the tourist use, take into account the needs of the local communities. Creation of three cross-border routes merging railway lines and bike routes has been foreseen:

1. **The Slovak Karst/Aggtelek (Slovenský kras):** Hrušov - Jablonov nad Turňou - Silická Jablonica (SK) / Szögliget- Bódvaszilas (HU);
2. **The Slanské Hills (Slanské vrchy):** Slanec - Slánska Huta – Izra – Byšta and Skároš - Vyšná Myšľa (SK) /Pusztafalu - Füzér (HU);
3. **Košice (SK) - Miskolc (HU)** (por. figure 10).

Among the actions foreseen for the nearest future are also:

1. Complete the information system in all areas;
2. Complete building of missing parts of infrastructure;
3. Promote development and expansion of complementary services;
4. Add complementary tourist amenities.²⁷

²⁷ Based on WP5 Synthesis Report

Pilot activities in the field of regional and narrow gauge railways:

Activities of Agency for the Support of Regional Development Kosice

Activities under the WP 4.2 led by ARR-KE in the region of Northern Hungary and Košice included a regional resource inventory of the railways. Studies were carried out that aimed at gathering information on both the operating and broken existing resources. The study was conducted in two stages; both of them resulted in a final report. The first one concerned examples of good practices in the area of narrow gauge railways in the region of Kosice and Presov ("Narrow gauge railways in the Košice and Prešov Region - good practices"). The first part of the study was completed in April 2012. The second part of the study consisted of a regional inventory of existing and abandoned railways in Kosice and in the northern part of Hungary ("Regional inventory of existing / operating and abandoned railways in the region, incl Northern Hungary <Borsod-Abaúj-Zemplén county>"). The second part of the study was completed in December 2013. The total cost of the two parts of the study amounted to 2950.80 euros.

fig. 36 Bike racks type 1 – Agency for the Support of Regional Development Kosice (Source: Activities-Report – date of last update: 24.09.2013)



As part of the pilot action in May 2013 an investment was completed, which included the adaptation of the wagons for the transport of bicycles, as well as placement of bicycle racks on two stations (Carmel and Alpinka). The aim of these activities was to enable train transport of bicycles from the Carmel station to the recreation area of the Kosice region - the Alpinka. The project was also of great importance for improving the safety of cyclists in the area. The region is characterized by the occurrence of many roads and bridges, which are dangerous for the bike users. The investment cost amounted to 9800 Euro.

fig. 37 Bike racks type 2 – Agency for the Support of Regional Development Kosice (Source: Activities-Report – date of last update: 24.09.2013)



All activities carried out under work package WP4 were executed to a full extent. The only problem that has emerged during the performance of the tasks concerned the first part of the study. The problem concerned the acquisition of some necessary information about the Slovakian Railway Company.

The modernization of wagons for the transportation of bicycles and the installation of bicycle racks on two stations had the greatest impact on the region as far as the activities carried out within the framework of WP4 go. Photos (No. 30 and 31) show the bike racks.

Lessons learned

- Not to reduce railway lines / passenger rail transport to areas with tourist attractions.
- Communication with local actors and authorities on the same issues are important for developing transport accessibility.
- Contact the right people in the municipality / local area.

Activities of Miskolc Holding

Miskolc Holding as part of the WP4 realized investments in bicycle transportation. 26 pieces of bike carriers have been manufactured and installed in wagons in the narrow gauge railways. This project was implemented in the period from 01.04.2013 to 31.05.2013. The budget that has been allocated for the implementation of this investment amounted to 38 910 euros. In addition to the installation of special bike handles, which help to safely transport bicycles, also special signs indicating the designation of the wagons for bicycle transport have been installed. Tasks within WP4 have been fully realized, implemented and reported on.

Bike handles photos (2 types) and the labelling of wagons that can carry bicycles have been added to the reporting documentation as a confirmation of the implementation of the investment.



fig. 38 Bike carriers – type 1- North Hungary (Miskolc Holding) (Source: Photo documentations created by Judit Fodor 08.07.2013)



fig. 39 Bike carriers – type 2 - North Hungary (Miskolc Holding) (Source: Photo documentations created by Judit Fodor 08.07.2013)



fig. 40 Placemark of the bicycle storage - North Hungary (Miskolc Holding) (Source: Photo documentations created by Judit Fodor 08.07.2013)

Lessons learned

In the process of developing sustainable transport expansion programs, based on the use of narrow gauge railways, the needs of the local communities and tourists should be diagnosed in the first instance. This process should be implemented in consultation with local and regional stakeholders (authorities, organizations and business).

Small scale investments in the development of the narrow gauge railway infrastructure may be sufficient to improve their current status and contribute to the increase in the number of passengers using their services. However, their implementation requires early endeavour to find public support for these investments and some efforts to develop a detailed and careful specification.

4.4 Cross Border Area Poland/Slovakia

Background

The Polish-Slovak border regions cover the border parts of three provinces in Poland: the Podkarpackie Region, the Malopolska Region and the Silesian Region, as well as two countries in Slovakia - Prešov and Zilina. This area is located within the Carpathian Mountains (East and West), as well as the North Podkarpackie region²⁸. The highest peak in the whole chain of the Carpathian Mountains - Gerlach (Slovak High Tatras, 2655 m) is also located in this area. The terrain diversity is very high, we can find there high forest cover, river gorges, caves and the presence of numerous sources of mineral waters²⁹. It is worth stressing that the degree of transformation of the natural environment is relatively small. All this constitutes a large potential for the tourism industry development.

fig. 41 The Polish-Slovak border (Source: Sustainable Mobility and Tourism in Sensitive Areas of the Alps and the Carpathians, s. 9.)



The grounds of the Polish-Slovak border are primarily occupied by I sector economy (agriculture and forestry). The existing tourism potential, as well as the possible development of the third sector are not fully exploited at this time.³⁰ There are several narrow gauge railways in the described area that are used largely for tourism, but have the potential to function as a component of the multimodal transport in the region.

²⁸ Kondracki J., 2002, Geografia regionalna Polski, PWN

²⁹ Pogranicze polsko-słowackie. Dostępność transportowa a turystyka., IGiPZ PAN, GuSav, Warszawa – Bratysława 2012

³⁰ <http://monitoruj.podkarpackie.pl/obszary-wiejskie-i-rolnictwo/>;
<http://www.malopolskie.pl/Gospodarka/Promocja/>; <http://www.slaskie.pl/infogosp/>; <http://www.presov.sk/portal/>;
<http://www.zilina.sk/>

1. The Commuter Rail of Przeworsk

The Commuter Narrow Gauge Railway of Przeworsk (Przeworsk-Dynów) was built in the years 1900-1904 to service as a means of transport for the local sugar factory, at that time the length of the line amounted to 46.25 km. Until the mid-80' of the twentieth century the railway changed its owner repeatedly and finally has been closed in 1985. In 2003, the Association of Local Railway Transport in Kalisz restored the tourist passenger traffic during the summer and in 2004 also the freight transport has been restored to a limited extent. Currently, the passenger transport is operated by the Association of the Local Railway Transport.

fig. 42 The commuter Rail of Przeworsk (Przeworsk-Dynów) (Source: <http://pogorzanin.powiatprzeworsk.pl>)



The local Narrow Gauge Railway Przeworsk-Dynów is primarily used to support the seasonal tourist traffic. It is not an alternative to the local transport; however it also operates freight transport on a small scale (coal transport to a private company dealing with fuel and building materials sales in Kańczuga). There are 4 stations and 8 stops on the way (Urzejowice, Krzeczowice, Kańczuga, Łopuszka Small, Łopuszka United, Manasterz, Highlands, Hadlej Glassworks, Jawornik Polish, Szklary k / Szklary tunnel and Bachórz). It carries a maximum of 280 people, including 160 seated tickets in passenger carriages and 120 seats in windowless carriages.

The only narrow gauge railway tunnel in Poland is located on the route of this railway, reaching the length of 602 m. It is also the longest structure of such kind in Europe. Tourist Trains run during the spring and summer season. Thanks to a convenient location of the railway and the bus station in Przeworsk, the Commuter Rail in Przeworsk may become an attractive part of the multimodal transport in the region. As an eco-friendly means of transport it would affect the preservation of the natural attractiveness of the Dynowskie Foothills and the San Valley³¹.

³¹ <http://pogorzanin.powiatprzeworsk.pl/>

2. The Forest Railway of Bieszczady

The Forest Railway of Bieszczady was built in the years 1895-1898 and connected Nowy Łupków with Majdan (24.2 miles). Until 1994 it functioned primarily as a timber transport. In 1996, the Forest Railway of Bieszczady Foundation (based in Cisna), which is also the current user of the railway, was established³². The railway is currently the only one in Poland (and one of a handful in Europe) which has mountain areas on its route. In the recent years the Foundation has performed a number of stocktaking actions and gradually increased the railway's rolling stock (including 1 wagon to transport people with disabilities), locomotives and steam engines. The Foundation acquires external grants, however the tickets are the primary source of its funding.

The railways are used only as a tourist attraction and are not an alternative mean of transportation for the inhabitants of the region. Most tourists use the railway in the summer months (July, August). It runs from May to the end of October on two routes³³: Majdan-Przysłop-Majdan and Majdan-Balnica-Majdan. The station building is located at the station in Majdan. There is also a tourist information desk, a ticket office, some offices, museum halls, a traffic supervision room, toilets and parking's. A restored roundhouse can additionally be found in Majdan. There is the opportunity to buy regional products from the region at the station - including honey, bread and cheese. Tourists can also use the dining carriage and buy regional souvenirs while taking the train.

fig. 43 The Forest Railway of Bieszczady (Source: <http://kolejka.bieszczady.pl/>)



The railway is not a part of the regional multimodal transport. Poor communication network (due to protected areas) prevents a sufficient connection between the railway and other means of transportation. Taking into consideration the low level of development of the transport infrastructure in

<http://www.pogorzanin.pl/historical-overview/12-oficjalny-serwis-kolei-wskotorowej-qpogorzanin-qprzeworsk-dynow>

<http://www.dynow.pl/upload2/KULTURA/pkw.pdf>

http://epodkarpacie.com/index.php?page=guide&main_guide_id=9&usection_id=214

³² Bezpłatne użytkowanie na czas nieokreślony. Kolejka jest majątkiem Nadleśnictwa Cisna i Nadleśnictwa Komańcza.

³³ www.kolejka.bieszczady.pl

the Bieszczady region, a highly modernized Forest Railway could potentially provide an environmentally friendly alternative mode of transportation for the inhabitants of the region.³⁴

3. Tatra Electric Railway

Tatra Narrow Gauge Electric Railway consists of two electrified monorail routes at the foot of High Tatras. The two 1000 mm gauge routes are: Poprad - Tatry - Stary Smokovec - Štrbské Pleso (about 29 km) and Stary Smokovec - Tatranská Lomnica (about 6 km). Rack railway running between Szczyrba and Szczyrbski Ples (4,5 km) is also considered a part of the railway system. Since 1992 the railway is supervised by the Railways of the Slovak Republic (the Slovak Železnice Republiky - ŽSR). The routes are operated by 15 modern low-floor trains, with capacity of 200 passengers (carriages 425.9), adapted for transporting bicycles. Except the rack railway all cars are wheelchair accessible. On the Poprad – Stary Smokowiec – Szczyrbskie Pleso there are 15 stops of which 7 are stations and the rest are only platforms with some roofing. The route Stary Smokovec - Tatranská Lomnica consists of 6 stops including 2 stations and the Szczyrby to Szczyrbski Ples is made of one stop and 2 stations. Apart from the introduction of a new rolling stock (low-floor wagons) in 2000, also the introduction of a self-service ticketing system and an electronic selling system was a significant investment. Numerous revitalizing works have been conducted on the railway's route since 2012. Their goal was to construct, among others, bicycle and car parking spaces.

Tatra Narrow Gauge Electric Railway is an important transport system of the Presov Region, which allows tourists to reach the most important tourist attractions of the High Tatras, including the important hiking starting points for Tatra trails (Mięguszowiecka Valley, Wielicka and the Wielka Studen). Trails that start near the railway stations lead to many mountain huts, for example the Silesian House and the Teryho Cottage. The railway also enables the passengers to reach the protected mountain parts of the cross-border UNESCO Biosphere Reserve.

Railway operates every day of the week. The Pored - Pleso route is operated by 20 train pairs from Monday to Friday and 19 pairs on Saturdays and Sundays. On the Stary Smokovec - Tatranská Lomnica route there are 19 pairs and weekdays and 18 on Saturdays and Sundays. Rack railways train count is the same everyday – 16 pairs.

³⁴ <http://kolejka.bieszczady.pl/>
<http://www.twojebieszczady.net/sor/szbciuchci.php>
<http://www.bieszczady.net.pl/kolejka.php>
<http://bieszczady.pro/bieszczadzka-kolejka-waskotorowa.html>

fig. 44 Tatra Electric Railway (Source: <http://kolej.darlex.pl/1294>)



The Tatra Electric Railway traffic is correlated with a long-distance train schedule, making the Railway an excellent, eco-friendly element of the multimodal transport system in the region.

The Railway operator runs a close marketing cooperation with the local government, businesses and tourist organizations, such as: Vysoké Tatry city, Vysoké Tatry Association, Slovak Association of Hotels and Restaurants, and the regional Tourist Organisation "High Tatras". Important actions undertaken by these organizations are: implementation of combined tickets for sporting and cultural events, increased distribution of tickets (kiosks and hotels), development of season tickets sales and monthly ticket subscriptions, conducting joint promotional activities (newsletter, website, brochures, timetable boards, virtual map of the ticket shops).³⁵

Narrow gauge railways on the Polish-Slovak borderland are currently used both for tourism and, on a small scale, as a mean of transport for residents. Routes are partly communicated with each other (they lack cross-border communication). There is a partial communication with the standard gauge railway and buses and there is also partial connection with bike and hiking trails. Narrow gauge railway works in network of tourist operators who offer varied services (restaurants, museums, open-air museums and landscape parks). The borderline areas aren't used now and create good opportunities for creating a net of communication exceeding national regions. Borderland with its interesting topography and social diversity (national and hence cultural) creates opportunities for including narrow gauge railways in the coherent cross-border hiking trails. The existing tourist infrastructure can be used in the construction of such routes. Potential of developing the event tourism offer is also not fully utilized. An interesting option can be tourist trains between Slovakia and Poland on lines which are recently only used for freight transport, e.g. Poprad – St. Lubovna – Plavec – Muszyna or Kosice – Kysac – Muszyna. With such connection the Slovakian and the Polish mountainous region could be together a very interesting tourist destination.

³⁵ <http://kolej.darlex.pl/375>

http://www.e-gory.info/index.php?kat=tatrzenska_kolej

<http://www.wysokie-tatry.pl/informacje/praktyczne-informacje/>

<http://regiontatry.sk/pl/mieszkanie/jak-do-nas-dotrzec/rozkłady-jazdy/>

Pilot activities in the field of regional and narrow gauge railways

The Regional Development Agency was responsible for the regional analysis of the narrow-gauge railway connections in the framework of WP4 in the Podkarpackie Province (Poland) and Country of Prešov (Slovakia). These analyses primarily related to the current state of the narrow gauge railways and the development of good practices. The study area concerned the near-border region of the Podkarpackie Province in Poland and the region of Prešov in Slovakia. The report was developed by an external expert in the first quarter of 2012. Another task pursued by the Regional Development Agency was the preparation of a synthesis report. The synthesis report contains a summary of all the activities undertaken by the partners involved in the thematic package WP4. Among the regions mentioned in the report (those which have undertaken activities within WP4) are: Mostviertel (Austria), Maramures (Romania), Northern Hungary (Miskolc), Region of Košice (Slovakia) and the Podkarpackie Province (Poland) [along with the country of Prešov (Slovakia)]. The synthesis report will be an integral part of the overall report summarizing the entire project ACCESS2MOUNTAIN. The report was developed in the first quarter of 2014.

Implementation of the above mentioned tasks required the acquisition of direct information and materials from different narrow-gauge railway operators and project partners involved in performing tasks within WP4. Close cooperation with project partners contributed to the implementation of all the planned work. There were no problems that would affect the project implementation during the realization of the mentioned activities.

Execution of the tasks that were included in the WP4 produced the following results:

- Demonstration of the current status and possibilities for the development of the narrow gauge railways infrastructure;
- Demonstration of the potential of the narrow gauge railways in the Podkarpackie Region;
- Indication of the natural values and tourist attractions in the Podkarpackie Region.

Lessons learned

- During the project realization, communication with project partners and the project meetings many experiences concerning the functioning of the narrow gauge railways have been gained. This is important from the point of view of adopting future measures in order to increase the role of the narrow gauge railways in the regional transport systems.
- The need for developing appropriate communication strategies aimed at drawing attention of the local governments to the necessity of strengthening the role of the regional narrow gauge railways has been highlighted. Some already finished projects that have dealt with the problems of the transport accessibility of the Alps and the Carpathians should be presented in order to skilfully and effectively draw attention to the issue. The presentation should also focus on the benefits arising from the use of narrow gauge railways as part of a multimodal transport system, which not only facilitates communication in the regions that are attractive to tourists, but is also in line with the policy of the sustainable development.
- One of the key success factors would be the inclusion of the project of the narrow gauge railways infrastructure improvement in the development strategy of the cross-border regions. This would

require, of course, communication both at the regional level, as well as coordination between the regions in order to assure that the undertaken actions were consistent and did not cause developmental disparities.

- Intensified marketing activities may be the second of the diagnosed success factors in order to encourage tourists, and other users to use the offer of the various carriers.

5. CONCLUSIONS

Action implemented within the WP4 in the ACCESS2MOUNTAIN project indicated, that there is a large potential for the development of a sustainable transport system using narrow gauge railways in the region of the Alps and the Carpathians. Furthermore, the benchmarking analysis have provided a number of examples of a model and successful implementation of projects related to improving transport accessibility of the regions in the spirit of sustainable development. Numbers of activities have been undertaken in the pilot regions aimed at strengthening the internal and external communication accessibility of the regions. These actions were based on the creation of a knowledge base, infrastructural investments, as well as building the foundations for local and regional partnerships for sustainable transport development. All of these actions result in a series of conclusions and recommendations that can and should form the basis for future efforts that will be made in order to improve the accessibility of the mountain regions.

The proposals presented below are a result of an analysis of the activities carried out by the project partners in the framework of WP4. They are also based on surveys filled out by both partners and experts involved in the project.

PROMOTIONAL ACTIVITIES

As demonstrated by an analysis of good practices one of the key factors for success in the market competition is the adequate communication with potential recipients of the offer. However, it is important not to confine the promotional actions to the most basic ones (for example printing flyers), but take a full advantage of the possibilities provided by the use of Internet or cooperation with various entities or organizations that are active in the region. A well prepared website is a necessity and the bare minimum; however the use of social media profiles also becomes essentially necessary. Social media gives access to a free source of new clients that are easily accessible. A way of supplementing the activities using online tools are the information about a particular offering and website links for a given narrow-gauge railway posted on industry portals, or hotels' and tourist attractions' websites. The mentioned cooperation with entities or organizations working in the region is very helpful while coordinating widespread promotion, as it may enable the use of additional information platforms.

ENGAGEMENT OF THE LOCAL AND REGIONAL POLICY MAKERS

One of the goals of the ACCESS2MOUNTAIN project was to initiate actions which would eventually make the narrow-gauge railways an important element of communication systems in the region. On one hand, this involves investments in the railway infrastructure (renewal of the tracks and station buildings, etc.), as well as making efforts to coordinate different modes of transport. Both require significant support - financial and organizational – from the local and regional authorities. Part of the decisions and actions are in fact beyond the financial and organizational reach of the railway managing entities. It should be emphasized that this kind of actions (to improve the availability of

communication) are used not only by the tourists but also by the local communities, which is a further argument supporting the necessity of a broader participation of the government in shaping the region's communication system by utilizing the potential of the narrow gauge railways.

LOCAL AND REGIONAL PARTNERSHIPS BUILDING (COOPERATION WITH THE TOURIST INDUSTRY)

From the analysis of best practices one can find that the narrow-gauge railway can serve a dual function – it can allow access to attractive parts of the region, but it can also serve as a tourist attraction itself. Either way, they are a part of the supply chain of services, which operate together with other entities in one system. All the entities are somehow connected with each other, thus cooperation between them may help to make a better use of the potential of the individual sites (through the promotion and introduction of tourist packages). On the other hand, through the establishment of partnerships, it allows for greater impact on the local authorities. Such cooperation also allows creating new ideas and jointly applying for funding for specific projects.

ACCURATE ASSESSMENT OF THE NEEDS OF TOURISTS AND THE LOCAL COMMUNITY

Preparation of an efficient transportation system should be preceded by an accurate analysis of its potential future users' needs. Such consultations may be carried out as a survey with the tourists or meetings with residents. As a result of such consultations the expectations regarding the direction and connection-frequency or the range of services that should be provided on the routes and in their nearest neighbourhood may be found. Such a diagnosis should be treated as a kind of marketing research that allows creating a product tailored to the consumers; needs.

SMALL SCALE INVESTMENT IN INFRASTRUCTURE

The previously mentioned involvement of the local and regional authorities is (among other things) a way of gaining support for the infrastructural investments. However, it is worth noting (and is frequently emphasized by the project partners themselves) that small investments are equally important. These are financially affordable for railway managing entities and contribute to improving the quality of services significantly, which has a big impact on the customer satisfaction levels. Such investments also have the advantage of being implemented in a relatively shorter periods of time and quickly reaching positive effects. Examples of such low-cost investments are the carriages handles allowing for easy transport of bicycles located in the wagons or all the information activities (panels with the courses routes and information concerning tourist attractions).

INTERREGIONAL AND CROSS-BORDER COOPERATION

The transport system is of particular value if it offers an uninterrupted sequence of communication that allows not only to travel within the region, but also to take interregional trips and (in case of regions close to the borderline) to take cross-border trips.

The Polish-Slovak border is an example. However, to make this scenario possible it is necessary to build cross-regional or transnational partnerships which have the purpose of appropriately targeting the actions undertaken in each region so that the result is a coherent concept for the development of the transport network. The result of such cooperation may be: infrastructural investments, coordination of timetables of different carriers and joint marketing campaigns.

INTEGRATION OF THE NARROW GAUGE RAILWAY WITH OTHER TYPES OF TRANSPORT

Transport accessibility of the region can be achieved through proper coordination of already existing connections implemented by various means transport (regional and narrow-gauge railways, bus lines), but also by making it possible to reach the hiking or biking tourist trails. This effect can be accomplished one hand by integrating the connections provided by different carriers, on the other hand by allowing passengers with specific needs to travel (such as transporting bicycles, see small-scale investments in infrastructure).

BENCHMARKING - EXCHANGE AND DISSEMINATION OF INFORMATION ON GOOD PRACTICES

Good practice analysis carried out within the WP4 revealed a series of examples of model solutions for the use of the potential of the regional and narrow-gauge railway. Measures ensuring the narrow gauge railways successes, as well as improving transport accessibility of the regions are being implemented in various regions. The key issue is that such knowledge should get to the regions (and entities) struggling with similar problems. This kind of knowledge can be a great inspiration for those responsible for railway managing and the development of communication systems in the regions.

RESTRICTING THE TERMINATION OF RAILWAY LINES AND CONNECTIONS

Narrow gauge railways that have been used frequently in the past for freight transport, have lost their importance due to economic structural changes. The high costs of maintenance and reduced traffic meant that they were eliminated quite frequently. Examples of good practice show that these railways can be used both for tourism, but also, with the right organization, become a component of the communication system in the region. For this reason, any decisions regarding the closure of railway lines should be preceded by a detailed analysis of the possibilities of using them in a different way than before. Analysis of good practice can be helpful by showing ways that can allow exploiting the potential of seemingly inefficient railway lines.

6. Index of figures

Overview of analysed examples of regional and narrow-gauge railways

Railways supported by regional- and local buses, network in Alto Adige / Südtirol

Dampfbahn-Route

Information of the Vinschgerbahn to points of interest near the stops

The Lower Austria Land and the Mostviertel region

Macroregion 1 and the land of Maramures

Brochure “Maramures-The Joy on Two Wheels”

Map of the modernized bike routes

North Hungary Region

Kosice Region

Proposals for routes linking Košice Region and the Northern Hungary

The Polish-Slovak border

Harzer Schmalspurbahnen – Steam Shop

Rhätische Bahn – Bicycle transport wagon

Vinschgerbahn – sort ways between train and the bus

Zillertalbahn – buffet-car in a steam train

The stations of the Vinschgerbahn were renovated with considerable contributions of communities and also maintained by the communities.

New station of the reconstructed Vinschgerbahn

Voluntary work of club members on Ilztalbahn

A hydraulic lift for passengers with wheelchairs - the Bregenzerwaldbahn

Tatra Electric Railways with space for skis, luggage or bicycles

Multi-purpose space in the Vinschger Bahn

Drinking offer in the wagons of the Harzer Schmalspurbahnen

The shop of the Harzer Schmalspurbahnen, called “Dampfladen”

Information of Rhätische Bahn in Japanese

Narrow gauge railway Marizellerbahn

Tourist travelling by bikes (Mostviertel Tourism Ltd.)

Tourists travelling by the narrow gauge railway (Mostviertel Tourism Ltd.)

Tastings of local specialties in the train (Mostviertel Tourism Ltd.)

Narrow gauge railway Viseu de Sus

Wagons for the transportation of bikes - Region Maramures

Bike racks - Region Maramures

Narrow gauge railway Felsőtárkány

Narrow gauge railway in Szilvásvár

Narrow gauge railway in Lillafüred

Narrow gauge railway Gyöngyös Mátravasút

Children's Railway in Kosice

Bike racks type 1—Agency for the Support of Regional Development Kosice

Bike racks type 2 – Agency for the Support of Regional Development Kosice

Bike carriers – type 1- North Hungary (Miskolc Holding)

Bike carriers – type 2 - North Hungary (Miskolc Holding)

Placemark of the bicycle storage - North Hungary (Miskolc Holding)

The commuter Rail of Przeworsk (Przeworsk-Dynów)

The Forest Railway of Bieszczady

Tatra Electric Railway

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8. Annex

8.1 Questionnaire for partners

1. Please indicate the tasks within the WP4 that your institution was responsible for implementing. Please describe the undertaken actions - including the scope of the work, the impact area (the place of implementation), the scale of involvement of other partners and the date of completion. Please attach any photos or other materials describing the above mentioned activities if possible.

2. Have these tasks been fully completed? If not, which parts have not been completed? What was the reason for the incomplete delivery?

3. What problems did you encounter while carrying out your tasks? Did you manage to overcome these problems? If so – how did you overcome them?

4. What effects did the realization of tasks within WP4 bring? Please indicate these results both in terms of the goals of the project itself, as well as the availability of communication in the regions involved in the executed task.

5. Which aspects of the implemented actions (success factors) do you regard as particularly valuable from the point of view of improving the condition of the lines, management systems and the offer of the railway operators within the ACCESS2MOUNTAIN project?

6. In your opinion, what lessons arise from the ongoing tasks that will help to shape the future actions aimed at developing the transport accessibility of the Alps and the Carpathians that will be in line with the concept of sustainable development? Which of your experiences are particularly valuable to stakeholders working in the field of transport and tourism, as well as local government activists/politicians in the field of regional railways and narrow gauge railways?

8.2 Questionnaire for experts

1. How would you evaluate the usefulness of the activities undertaken in the framework of WP4 in terms of improving the transport accessibility of the area of the Alps and the Carpathians? Which of the tasks are in your opinion most important from the point of view of implementing sustainable development?
2. Which aspects of the implemented actions (success factors) do you regard as particularly valuable from the point of view of improving the condition of the lines, management systems and the offer of the railway operators within the ACCESS2MOUNTAIN project?
3. What actions should be undertaken in the next steps in order to strengthen the results of the tasks implemented in the framework of WP4 and contribute to the improvement of the accessibility of communication in the area of the Alps and the Carpathians that is in line with the concept of sustainable development?
4. In your opinion, what lessons arise from the ongoing tasks that will help to shape the future actions aimed at developing the transport accessibility of the Alps and the Carpathians that will be in line with the concept of sustainable development? Which of your experiences are particularly valuable to stakeholders working in the field of transport and tourism, as well as local government activists/politicians in the field of regional railways and narrow gauge railways?

Project Partners

Lead partner

U-AT - Environment Agency Austria, AT

ERDF partner

bmvit - Federal Ministry of Transport, Innovation and Technology, AT

ERDF partner

Gesäuse - National Park Gesäuse, AT

ERDF partner

Mostviertel - Mostviertel-Tourism Ltd., AT

ERDF partner

Miskolc Holding - Miskolc Holding Local Government Asset Management Corporation, HUN

ERDF partner

UNICAM - University of Camerino, IT

ERDF partner

EURAC research – European Academy of Bozen/Bolzano, IT

ERDF partner

CJIT Maramures - County Center for Tourism Information, RO

ERDF partner

ARR-KE - Agency for the Support of Regional Development Kosice, SK

20% ERDF partner

RARR-PL - Rzeszow Regional Development Agency, PL

10% partner

TIMOK -Timok Club, RS

10% partner

CFUA - Carpathian Foundation Ukraine, UA

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