SCENIC ROADS IN LATVIA

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Abstract
United States of America and European countries like Great Britain, Germany, Norway have long traditions in the development of scenic roads, special scenic routes for tourists, National Scenic Byway Programs. They have set criteria for road landscape planning and design, discussed the economic value of scenic roads. Scenic roads are also important for tourism, as well as visual and cultural countryside development in Latvia. Planning regions and regional communities in Latvia have strategic development plans and spatial plans. All of them include high value landscapes and protected, scenic territories. Some scenic roads are defined in these documents, but criteria for scenic road designation are set in every region individually. There are unlisted roads with high aesthetic value which could be protected. Common methods, criteria for the assessment of road landscapes and scenic road designation in Latvia are not developed. The aim of the research was to evaluate and understand the present situation of scenic roads in Latvia. An online questionnaire was carried out in order to find out peoples' opinion about the road landscape quality. Spatial plans of regional communities and planning regions were examined. A field study of two sections of scenic roads was carried out. The research project was carried out from December 2014 to December 2015. Results show that current road landscape has a potential for development, and it needs improvements. The study gives a general insight into the scenic road situation in Latvia and provides basis for further research on scenic road planning and management.
Key words: road landscape, scenic road designation, scenic byway.

Introduction

Roads give access to the landscape and give us first impression of the place we are visiting. United States of America and European countries such as Great Britain, Germany, Norway have long traditions in the development of scenic roads, special scenic routes for tourists (Draper & Petty, 2001). The United States have National Scenic Byway Program which provides a formal way to identify, conserve, and promote roads that have special scenic, historic and recreational qualities. State byway designation process consisting of a basic description of the road, an inventory of each of the intrinsic qualities and a plan for how the road will be managed for promotion and resource protection is developed (Vermont Scenery …, 2000).

Researchers from Norway have elaborated theoretical framework for assessing the visual quality of roads (Blumentrath & Tveit, 2014), scenic road assessment methods are developed in the United States of America (DeWan &Terrence, 2008) and Spanish researchers have set the criteria for road landscape planning and design (Junta da Andalucia, 2009). Views of the road users about the scenic beauty of roadside vegetation (Akbar, Hale, & Headley, 2003), perceived quality of scenic tourism routes (Eby & Molnar, 2002; Denstadli & Jacobsen, 2011) and the economic impact of scenic byway designation is discussed (Timothy, Devitt, & Pizam, 1999).

In Latvia, the term scenic road is used by planning regions and regional communities in their strategic development plans and spatial plans. All of the plans include high value landscapes and protected, scenic territories. Some roads are defined as scenic in these documents. Tourism development plans of certain territories include information about scenic roads. The term is defined and explained in Landscape Policy Guidelines (Vides un …, 2013). Looking back in history, several roads in Latvia have been built as tourist roads or tourist demands have been considered in the road planning like the road from Sigulda to Turaida, from Riga to Saulkrasti (Dripe, 1940). Spatial development perspective 'Latvia 2030' sets areas of outstanding natural landscapes and historic sites in Latvia (Latvijas Republikas …, 2010). The objective is to save the diverse natural and cultural heritage, typical and unique landscapes. The road landscape is not marked out, but scenic roads are important for tourism, visual and cultural countryside development in Latvia.

Some research has been done on the Latvian road landscapes (Vugule, 2013; Vugule, Bell, & Stokmane, 2014); however, there is no overall information about the planned and existing scenic roads, and this field needs more attention.

The aim of the study was to understand and evaluate the present situation of scenic roads in Latvia. Three tasks were set in order to achieve the aim. The first task was to find out public opinion about the Latvian road landscape quality in the countryside. The second task was to examine how scenic roads are displayed in planning documents of planning regions and regional communities and the third – to carry out a field study, check the landscape features and quality of roads nominated as scenic roads as well as test the inventory method adopted from the United States for scenic road assessment and see if it is suitable for Latvian

conditions and for further research. Results from all three tasks were compared to see either results from document analyses conform with public opinion and real life situation.

Materials and Methods

An online questionnaire was carried out in December 2014. Information about the questionnaire was spread out through social networks and e-mail. A questionnaire form was open online for five weeks. The questionnaire consisted of nine questions. Eight of the questions were closed and one question was open, asking the respondents to name which features come into a person's mind when he/she thinks about the Latvian road landscape. The closed questions were about the age, gender, place of residence – city, village or countryside, region. The questions concerning landscape were about the level of management, how interesting or uninteresting it is. The survey was targeted both to drivers and passengers. Results of the survey were processed in SPSS (Statistical Package for the Social Sciences) software. Quantitative structure of respondents is analysed in the results section.

To obtain an overview of scenic roads named in planning documents spatial plans of 5 planning regions Kurzeme, Vidzeme, Zemgale, Latgale, Riga and 110 regional communities have been reviewed and compared. The authors looked for information about scenic roads in the community planning documents, checked which the most frequently used elements characterising scenic road landscape were.

Inventory of 2 road sections Ķipari - Nirmuži (V83) and Vējupīte-Jūdaži in Gauja National Park was carried out. The chosen road sections are situated in Sigulda region, one of the most visited regions by tourists in Latvia. The inventory took place on October 6, 2014. Evaluation method developed by the American Vermont Landscape Road Program was used (Vermont Agency …, 2000).

The surveyed roads were 4 km long each, and they were divided into 1 km long sections. Each section was evaluated using an inventory form consisting of two blocks with the list of positive and negative landscape features. Positive features are, for example, vegetation, road surface and functionality, presence of water bodies, manmade artificial objects like farmsteads, historic and cultural objects. Negative landscape features are, for example, landscape scars like lumbering scars, heavy erosion, disturbance, utility lines, buildings and manmade structures - unattractive, dilapidated buildings, structures out of context. The inventory led to the total amount of positive and negative landscape elements. This method allowed us to carry out the road assessment, to compare results of various road landscapes.

GoPro Hero 3 camera, mounted in front of the car at 1.1 m height from the ground was used for filming the road landscape. The driving speed was 60 km h^{-1} due to the uneven road surface. Photos were taken by Canon Power Shot A3300IS digital camera at the height of 1.3 m after each kilometre on both sides of the road. Panorama pictures were processed in Adobe Photoshop software.

Results and Discussion

Results of the questionnaire

The number of survey respondents was 114. Distribution of genders was 84% female and 16% male. It shows that women are more active and more interested in what is happening to the society and the environment where they live.

Average age of the respondents was 29 years. Forty seven percent of all respondents travel by car as drivers more often and 53% – more often as passengers. It was determined to find out whether drivers and car passengers perceive the landscape differently.

Results of the survey mainly represent the view of city residents while 75% of respondents live in cities, 15% in villages and 10% in the countryside.

The largest number of respondents was from Zemgale (39%) and the most common answer describing the landscape was – fields, meadows and open views are the most characteristic of the region.

Results of the questionnaire show that current countryside road landscape has a potential for development, and it needs improvements – 30% of respondents described the Latvian road landscape as interesting, 57% as medium interesting and 13% of the respondents as uninteresting. The majority of respondents, 86% believe that the Latvian countryside road landscape needs to be improved, 3% have an opinion that it does not need improvements and 11% of all respondents do not have a clear point of view on this issue. Female and male respondents have a similar opinion on this.

Respondents were asked to name the most characteristic elements of the road landscape in general. Landscapes consisting of fields, meadows, open views were mentioned most frequently (54.4%), the second most common response was the forest (45.6%) and the third – individual trees, groups of trees and shrubs, alleys (39.5%) (see Figure 1). Presence of these elements was checked in planning documents and is described further.

The answer 'other' includes the landscape characteristics and feelings expressed by people. For example, poor visibility, grey and gloomy overall picture, landscape enjoyment, visual landscape qualities - picturesque, colourful, diverse, calming, open, chaotic. Respondents who have an opinion that

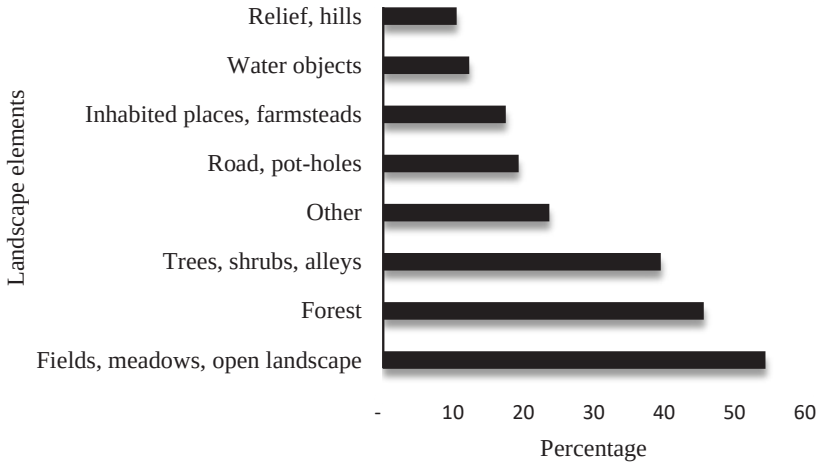


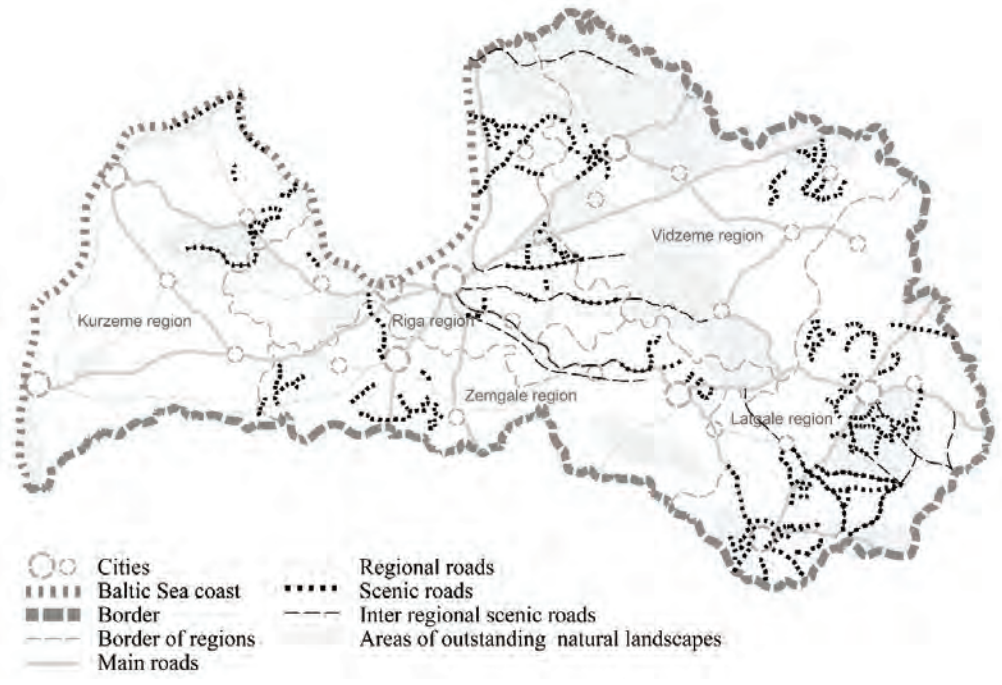
Figure 1. Characteristic elements of the road landscape named by respondents.

the Latvian road landscape is not interesting named such features like overgrown road sides, long grass, ditches, pot holes, pour quality of the road, garbage on road sides, forest clear-cuttings close to the road, trees, forests, abandoned buildings, no resting places along the road, fields, meadows. Research of S. Bell *et al.* and Z. Peneze on peoples' perception of countryside landscape changes has proved that Latvian people are concerned about field abandonment and see overgrowing as a negative trend (Bell *et al*., 2007; Peneze, 2009). Lack of management has been detected in previous research in the road landscape today (Vugule, 2013).

Evaluation results of planning documents

All regional communities in Latvia have spatial plans, which include high value landscapes and protected, scenic territories. The map in Figure 2 shows scenic roads listed in the spatial plans of regional communities, interregional scenic roads listed in the spatial plans of planning regions and outstanding nature areas marked in the Latvian spatial development perspective 'Latvia 2030'.

There are 110 regional communities in Latvia (Vides aizsardzības ..., 2016). Thirty nine of them mention scenic roads, landscape roads or sections of scenic roads in their spatial plans or sustainable



Source: author's marks on the map of the Latvian State Roads (Valsts akciju..., 2016).

Figure 2. Map of scenic roads in Latvia.

development strategies. Some communities have information about scenic roads both in spatial planning and sustainable development strategies. Sustainable development strategies describe the potential scenic roads. Twelve regional community planning documents mention road landscape elements that are present along the scenic roads.

The most frequently noted scenic road elements are cultural and historical objects and buildings (mounds, castles, manors, churches), forests and tree alleys, significant trees. Less frequently mentioned are farmsteads, agriculture land, open glades, lakes and rivers, and protected nature areas (swamps, bogs). Plains and hilly areas are mentioned least often.

There are 5 planning regions in Latvia. Each region has its spatial plan or regional strategy for sustainable development. They include information about scenic road development.

The Spatial Plan of Riga Planning Region foresees development of interregional scenic roads connecting larger and smaller cities and regional scenic roads in several road sections (Rīgas reģiona…, 2007).

Twelve from 28 regional communities from Riga Planning Region have defined scenic roads in their planning documents. Only a few regional communities have included scenic roads defined by Riga planning region in their planning documents. And not all of interregional scenic roads are included community planning documents.

The Spatial Plan of Latgale Planning Region foresees development of scenic roads in order to maintain cultural landscapes of Latgale and promote tourism there. It is stated that road reconstruction and improvement of road surface is necessary, and it should be done taking into account the landscape character (Latgales reģiona..., 2006). Scenic road sections should be defined more precisely in the spatial plans of regional communities and local municipalities (Latgales reģiona ..., 2006a). Currently several of Latgale planning documents foresee the development of various scenic road sections.

Eleven out of 19 regional communities in Latgale Planning Region have defined scenic roads in their planning documents. Some regional communities like Aglona, Dagda, Rezekne foresee to develop scenic roads defined in regional spatial plans as interregional scenic roads and develop some local scenic roads (Aglonas novada..., 2013; Reģionālie projekti ..., 2012; Rēzeknes novada …, 2013). The interregional scenic road along the Daugava River has been taken into account only in the Daugavpils Regional Community, but not in other municipalities through which it is passing (Rīgas reģiona …, 2007). Sustainable development strategy of the Vidzeme Planning Region sets out a long-term plan to develop the region's scenic roads (Vidzemes plānošanas …, 2014). Six out of 25 regional communities have defined scenic roads or sections of scenic roads in their planning documents. One community defines the criteria for high value landscape views.

The Kurzeme Planning Region Spatial Plan mentions that local municipalities should foresee development of scenic and tourism roads in their spatial plans (Kurzemes reģiona…, 2007). Four out of 18 regional communities have mentioned scenic roads planning documents. Two communities – Dundaga and Talsi – have defined precise scenic roads and some of the municipalities have mentioned reconstruction of scenic roads.

Scenic roads are not mentioned in any of Zemgale Region planning documents. There are 20 regional communities in Zemgale and 6 of them have defined scenic roads or sections of scenic roads.

The results of document analyses show that regional communities of the Latgale Planning Region are most active. Next comes Riga Region, followed by Zemgale, Vidzeme and then Kurzeme as the last one. Table 1 features the overview of regional communities mentioning scenic roads in their planning documents.

Table1

Overview of scenic roads in planning documents of regional communities

Planning region	Number of regional communities in planning region	Number of regional communities mentioning scenic roads in planning documents
Latgale	19	11
Riga	28	12
Zemgale	20	6
Vidzeme	25	6
Kurzeme	18	4

Some spatial plans include guidelines in the form of recommendations and compulsory requirements for landscapes with outstanding value along the roads and viewing points. The most frequent requirements are: road character and landscape vividness should be preserved; afforestation, large buildings or other structures blocking valuable views from the road are not allowed; road surface quality needs to be improved; resting places and tourist infrastructure should be provided.These requirements are essential for the scenic road development (Vermont Agency …, 2000) and should be considered for all scenic roads.

The distribution of scenic roads listed in the planning documents is uneven. There are unlisted roads with high aesthetic value and potential to be designated as scenic, for example, roads along the Baltic sea coast in Kurzeme and Baltic Sea gulf, roads

Source: author's photo (2014).

Figure 3. Vējupīte-Jūdaži. Positive landscape features - field and forest edge, agricultural pattern, significant tree, distant view, view with a dominant, wide panorama, gravel road surface.

Source: author's photo (2014).

Figure 4. Ķipari - Nirmuži. Positive landscape features - field and forest edge in the distance, agricultural pattern, gravel road surface. Negative features – overgrown unmanaged road ditches and edges of the road.

in areas of outstanding natural landscapes and historic sites which are set in Spatial development perspective 'Latvia 2030'.

Comparison of questionnaire results and documents of planning regions and regional communities show that most frequently mentioned landscape elements by respondents like fields, forests, trees are mentioned in the planning documents as well. Cultural and historical objects are more often mentioned in the planning documents, while respondents do not mention them as characteristic. The reason could be that such elements do not stand out in the landscape, for instance, churches often are hidden behind old trees which are in the protection zone of historic monuments. Visibility of such landscape elements is a problem as noted by other researchers (Markova, 2014). Planners and road designers should pay special attention how to show the presence of cultural and historical features in the landscape for road users.

Problems like bad road surface and poor visibility are recognized by people. Previous research shows that territories close to the road have maintenance problems (Vugule, 2013). Planning documents reflect it by foreseeing road reconstruction and management actions. Both people and planning documents name water bodies, farmsteads and buildings as important landscape elements. Road character and vividness is more stressed in the planning documents. Respondents and planning documents pay the least attention to the relief – hills and plains.

Definition from Latvian Landscape Policy Guidelines explains that scenic roads are those with significant landscape value for the identity of the territory, and they should be set in spatial planning documents on the bases of evaluation carried out by the society and might need specific management and planning (Vides aizsardzības …, 2013). Theoretically, the public should be involved in the process of scenic road designation process. The US Vermont Byways Program requires a nominating committee which seeks to represent the interests of a wide range of people and organizations along the road (Vermont Agency …, 2000). Meanwhile in Latvia, the scenic roads in the planning documents are mostly defined by experts.

Development and management plans of protected nature territories include information on scenic roads. No survey of these documents was included in this study. It is the next step to get a complete overview of present state of scenic roads in Latvia.

Results of field study

Results of the inventory of two road sections Ķipari - Nirmuži (V83) and Vējupīte-Jūdaži in Gauja National Park give insight about the scenic road landscape in Vidzeme Region (See Fig. 3 and 4).

Agricultural landscape dominates in both sections of the road. Other visible features are forests, field and forest edges, solitary trees, alleys and farmsteads, the road conforming to landscape.

Negative features are neglected overgrown unmanaged edges of the road, power lines. Previous research on road landscape (Vugule, 2013) shows that overgrowing of agricultural land is a problem in mosaic landscape. Results of the field study conform the public opinion detecting the negative aspects of road landscape, like unmanaged road side territories causing visibility problems. Values and features noticed by public like fields, open view to landscape, forests are present along the surveyed sections of scenic roads.

The total number of positive landscape elements in the section Vējupīte – Jūdaži is 29, total number of negative elements is 7. The average value of the landscape by kilometre after taking off negative features from positive features and dividing by number of kilometres is 5.5. The total number of positive landscape elements in the section Ķipari – Nurmiži is 21, total number of negative elements is 9. The average value of the landscape in the second section is 3. The difference is mainly from the number of positive elements.

Conclusions

Results of the public survey show that current Latvian road landscape has a potential for development, and it needs improvements.

Scenic roads are mentioned in planning documents of planning regions and regional communities. Two terms – scenic road and landscape road are used in Latvian planning documents. The term 'landscape road' appears mostly in planning region documents, the term 'scenic road' is used more often in regional community plans. The terms have the same meaning and this should be discussed further, which of the two should be used in planning documents.

There is no consistency between different planning levels. Regional communities do not follow regional plans regarding scenic road designation. One of the reasons could be lack of information and communication between the planning levels. The criteria for scenic road nomination and landscape assessment methods are set individually in every region. A comprehensive approach for assessing aesthetic road qualities and classification of scenic roads is missing. It is necessary to examine what kind of methodology is used in regional communities for scenic road designation and see how public can be involved in this process. Experience from other countries show that initiatives about scenic road designation should come from local municipalities, but the process of road designation should be developed and regulated by one institution, which should provide common methodology for road landscape assessment and scenic road designation.

The field study gives insight in the scenic road landscape qualities and highlights that negative features like overgrown and unmanaged road sides are present in a road landscape which is defined as scenic.

The adapted inventory method is suitable for scenic road evaluation. Further research with more sample territories is necessary in order to draw up general conclusions about the state of scenic roads in Latvia.

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