

## THE LATVIAN LANDSCAPE AS SEEN FROM THE ROAD

**Kristīne Vugule**

Latvia University of Agriculture

Kristine.Vugule@llu.lv

### Abstract

Roads play an important role in our daily surroundings and provide access to landscape. Views from the road create the first impression about the country. It is important to pay attention to the landscapes along the roads used by tourists. The purpose of this study was to obtain general overview of the current state, identify existing and disappearing features of the road landscape in Latvia. Research on road landscape perception and design is well developed in the USA and some countries in Europe. The assessment of the current state and proposals for the road landscape development in Latvia are fields which are little discussed and need more attention. The research was carried out in several sections of the main roads and some sections of regional and local roads in July and August, 2011 and August, 2012. Photography method was used. Analysis of the results shows that the main reasons of aesthetic quality loss in road landscapes is lack of planning and management, indicating the necessity to find ways for rural landscape quality enhancement.

**Key words:** road, landscape quality.

### Introduction

Nowadays roads play an important role. Intensity of the main road use in Latvia increases by 4% per year (Latvijas ilgtspējīgas..., 2010). Besides serving as transport corridors, roads bring tourists from other countries. Many of the landscapes are seen from the road; thus, views from the road generate the impression about the whole country. With the development of tourism industry, the number of tourists visiting Latvia increases every year (Tūrisms - galvenie..., 2013). The Latvian Tourism Marketing Strategy (Latvian Tourism..., 2010) foresees the development of trans-border cooperation to sell all three Baltic States as a joint travel destination. It is important to pay attention to the landscapes along the roads used by tourists in Latvia in order to achieve the goals regarding the integrated tourism, culture, health and nature infrastructure services set in the Sustainable Development Strategy of Latvia 2030 (Latvijas Republikas..., 2010).

The research on the road landscape perception (Appleyard et al., 1964; Steinitz, 1990; Garré et al., 2009; Denstadli and Jacobsen, 2011), assessment methods (Brown, 2003; Matijošaitienė, 2010; Ramírez et al., 2011), classification (Grazuleviciute-Vileniske and Matijosaitiene, 2010) and design has been well developed in the United States of America and some countries in Europe. National road authorities offer landscape design and treatment guides for the road landscapes (Beautiful Roads..., 2002; A Guide..., 2005). The planning strategies for the road landscapes have been developed in some countries. For example, Denmark has the structural concept for the motorway environment. It explicates the generic policy on panoramas and motorway zones in the National Spatial Planning Act to protect the Dutch motorway panoramas (Piek et al., 2011).

There are regulations (Ceļu projektēšanas..., 2000) and methodology for the new road design and the old road reconstruction, the law on road use, management and development (Likums par..., 1992) in Latvia, but they do not influence and deal with the road landscape on a larger scale. The assessment of the current state and proposals for the road landscape development in Latvia are fields, which need more attention.

According to their importance, roads in Latvia are classified into state roads, municipality roads, business company roads and farmstead roads. State roads are divided into main, regional and local roads. State roads and road partition zones are the property of the Republic of Latvia and are managed by the state holding company 'Latvian State Roads'. Municipality roads are owned and managed by the municipalities, enterprises, whereas private roads are managed by their owners (Likums par..., 1992). Territories along the roads are owned by individuals, enterprises, municipalities and each of them plans the development and management of their properties in different ways. A variety of interests, uncoordinated planning and management result in the loss of landscape's aesthetic quality.

There are few regulations regarding the road side management in the Latvian law on protection belts. Some municipalities have identified scenic roads in their development plans (Rīgas rajona..., 2008). Neither legislation nor regulations can create beauty or attractive roads; however, it can help to improve the necessary conditions and potentials for incorporating aesthetic aspects into road design indirectly. The overall strategy of the landscape development along the roads in Latvia is missing.

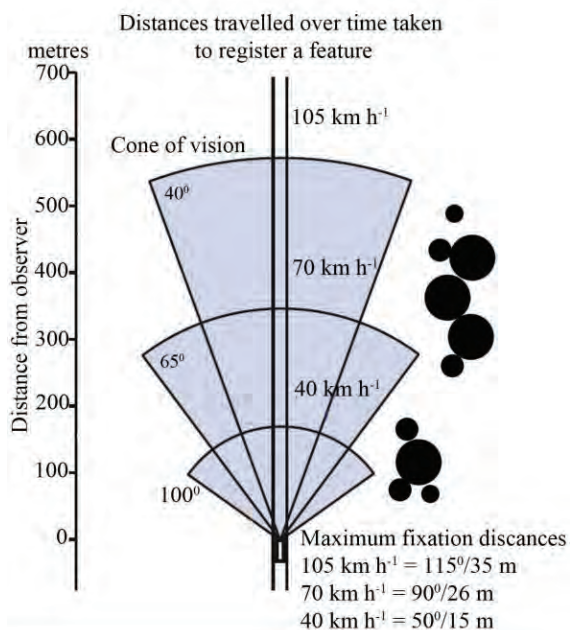
The aim of the research was to look at the current state of landscapes seen from the road, identify existing and disappearing features of road side

landscape, define problems and gather materials for further research on this topic.

*Theoretical background of the road landscape definition and road landscape perception*

In this study, road landscape is seen as a view from the road with all the surroundings. Visual perception zone from the road can be of different width. It depends on relief, the placement of forests and their distance from the road. Taking into account the vision possibilities of humans, the road landscape was considered to be 1 km to each side from the central axes of the road. Road side consists of foreground, formed by objects up to 25 – 30 m from the road side, middle ground, which is 130 – 150 m from the road side and background (Melluma and Leinerte 1992). The relationship between the mobile road user, the driver and the passenger within the vehicle and the roadside landscape is more complex than relationship between a person who views the landscape from a stationary position. Certain features of the landscape can only be viewed at a particular speed (Figure 1).

The speed at which the driver travels determines how far ahead, in what duration, and at what angle it is possible to focus on and appreciate the landscape. Roadside landscape elements are perceived gradually, on a move, in different angles. This is an important point for the road landscape evaluation.



Source: after Bell (1997)

Figure 1. Distance travelled over time taken to register a feature.

**Materials and Methods**

Filed survey took place in July and August, 2011 and August, 2012. It was carried out on sections of the main road E-77 Meitene – Jelgava – Riga, sections of E-77 road Rīga – Cēsis, E-22 Rīga – Rēzekne, A-6 Rīga – Daugavpils, E-22 Jelgava – Ventspils (Figure 2) and on some sections of regional and local roads.

Main roads were chosen as they are used by tourists travelling through Latvia and visiting the Baltic States. Considering former research on road landscape assessment in other countries (Denstadli and Jacobsen, 2011; Ramírez et al., 2011), a photography method was chosen. Most of field study photos were taken from the passenger’s seat at the average driving speed of 90 km per hour in a driving direction to the right side of the road. Pictures were taken during the day time on both driving directions. Canon EOS 60D camera was used. Viewpoints were not mapped, while pictures were taken on the move. The aim of the field survey was to get general overview of the present state and select shorter sections for future research and monitoring. Photos from the road E-77 section from Meitene to Jelgava were taken using a 1.5 m high tripod, which is similar to the passenger eye height. Viewpoints from this section were marked on an aero photo map.

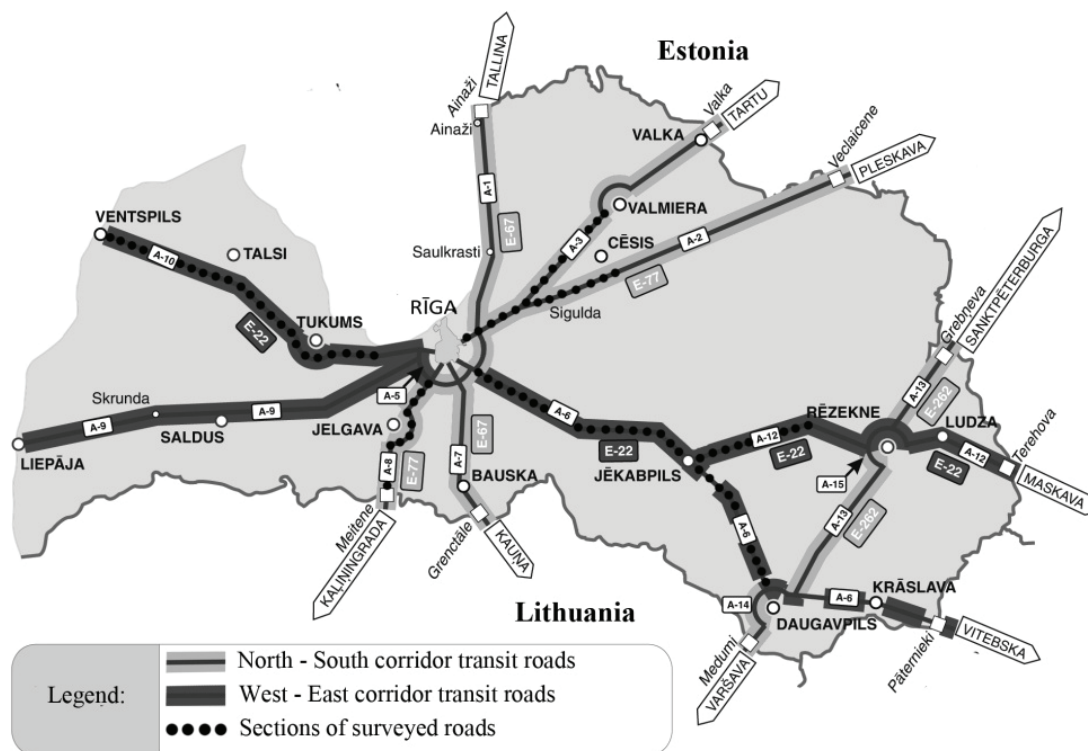
Landscape elements were analysed according to the distance from the road and were grouped into point and line elements according to their size and form. Road landscapes were analysed according to their types of use: agriculture landscapes, forest landscapes and mosaic landscapes, where forests change with open agriculture fields, pastures or meadows.

**Results and Discussion**

*Landscape elements in foreground*

The following point elements were observed: old trees, stork nests on electricity poles, road signs, road utility houses and other buildings. The most significant differences between these elements are on those sections of the roads where road reconstruction work has taken place recently. In these sections road utilities are in better condition, old Soviet time bus stops have been changed to more modern, but minimal facilities. Most of the houses close to the road are in poor condition or abandoned. This was noticed on all roads. It would be necessary to carry out the survey of residents to find out the reasons for this situation.

The following line elements along the roads were observed: ditches, protection plantings, safety walls and sound protection fences, electricity lines, tree avenues. Grass along the road sides is cut several times per summer, but ditches often are overgrown



Source: by author on the map of the Traffic Ministry (Valsts autoceļu..., 2001)

Figure 2. Sections of the road landscape field study.



Source: by author (2012)

Figure 3. Unmanaged road protection plantings along the road E-77 Meitene – Jelgava.

with bushes and block the view to the landscape behind. This raises the question about the ownership, owners interests, capacity and wish to manage the property. Most of the problematic situations were

noticed on the border between the state property and private owners.

Protection plantings are in different conditions, mostly unmanaged for a long time (Figure 3).

Monotonous protection plantings continue for several kilometres in some road sections. (Figure 4 and 5). Visibility is one of the main landscape quality values. Unmanaged protection plantings and ditches with overgrowing vegetation damage the aesthetic quality of the landscape.

Different style and quality fences and safety walls dividing private houses from the road appear close to the road.

The use of noise barriers and other structures should also be sensitively treated and integrated to

avoid simplifying and narrowing down the field of view of the road user. Visual field treatments should not be homogeneous and appear disconnected from the existing landscape. Large extensive areas of the roadside landscape should not be perceptually monotonous, and screening treatments should not create unnatural looking, simplified and repetitive vegetation patterns (National Roads..., 2005).

Tree avenues and rows of different age oaks (*Quercus robur* L.), lime trees (*Tilia cordata* Mill.) and sometimes other tree species are present in the



Source: by author (2012)

Figure 4. Continuous protection plantings along the road E-77 Meitene – Jelgava.



Source: by author (2012)

Figure 5. The hidden view to the agricultural landscape behind the protection plantings along the road E-77 Meitene – Jelgava.



Source: by author (2012)

Figure 6. Tree avenue on the road A3 Riga – Valmiera.

roadside landscape (Figure 6). Sixty tree avenues are protected by law (Noteikumi par..., 2005a), the rest are endangered in the case of road reconstruction. Road planning and managing authorities consider tree avenues as dangerous and tend to remove them. It is argued by some landscape architects and planners. This landscape feature was once widespread across Europe and draws on a long and rich heritage. It offers numerous benefits for the landscape and the environment, and also for safety and economic terms (Pradines, 2009).

The research on the value of Latvian rural landscape shows the importance of such elements as detached farmsteads, old oak trees (*Quercus robur* L.), stork (*Ciconia ciconia*) nests, avenues or rows of oak and lime trees (*Tilia cordata* Mill.) in traditional Latvian countryside landscape (Bell et al., 2007). The retention and incorporation of locally distinctive features promote regional identity including orientation, or a sense of place, for the road user within the road corridor.

#### *Landscape elements in the middle ground and background*

The following elements were observed in the middle ground: solitary trees, farmsteads, new villages, remnants of Soviet time farms, advertising billboards.

Solitary trees in the fields from the former farmsteads are typical to the Latvian countryside and can be visually lost in cases of field overgrowing with bushes. Houses further from the road are in better condition than the ones in foreground. House owners often do not pay any attention to the view of their property from the road. Farming equipment,

unnecessary household things are stored away from the owner's eyes but in the sight of road users.

New villages close to cities appear in the landscape. It is seen that new houses are built. They bring in new elements and variety in the landscape, but the lack of planning and design which does not harmonize with their surroundings often cause negative visual impact. Recent research on this topic shows that new family house villages bring visual, aesthetical, structural and functional changes into the landscape and there is a need for tools of landscape ecology and sustainable landscape planning for designing the interior landscape compositional space of the new private house territories (Zigmunde, 2010).

Half demolished, individual farms or buildings of the collective farm (kolkhoz) period as the evidence of our history still exist in the countryside. These buildings need a new function or have to be removed.

Advertising billboards appear close to cities, villages or separate objects connected with tourism. Distance of placement is at least 30 m from the road (Noteikumi par..., 2005b). Advertisements in so low density as observed in the study do not lower the landscape quality.

#### *Tendencies in agriculture landscapes seen from the road*

Photography method allows noticing general tendencies and processes in the landscape, spot separate features. Most remarkable and positive trend is returning of herds to landscape. Driving along the countryside, one can notice cows (*Bos primigenius Taurus*), horses (*Equus caballus*), sheep (*Ovis aries*) and goats (*Capra aegagrus hircus*). Cattle are the best open landscape managers. The area of pastures

and meadows has increased from 605,7 thousand hectares in the year 2000 to 651,2 thousand hectares in the year 2011 (Pļavas un..., 2013). Due to changes in land management techniques hay racks change to hay rolls (Figure 7). Such elements as milk can stands disappear. New crops like rape and cornfields appear.

Typical Latvian countryside landscape is associated with cultivated fields, country estates without hedges or fences (contrary to those in other parts of Europe) (Bell et al., 2007). Keeping open view to agriculture landscape is essential in road landscape design, as well as creating and maintaining views towards the

attractive components of the landscape and managing the edges along the road.

*Tendencies in forest landscape seen from the road*

Clear cuttings with free standing ecological trees are the most noticeable features in the forest road landscape. Contrasts between the forests, open areas and few lonely trees are so high, that it has negative visual impact. There are only a few clear cuttings along the road E-77 Riga – Sigulda where the landscape design principles have been applied. There is available some information on forest landscape design (Bell and Nikodemus 2000), but it is not



Source: by author (2012)

Figure 7. Hay rolls. Road E-22 Riga – Tukums.



Source: by author (2012)

Figure 8. Overgrowing of agriculture land, the road A-3 Valmiera – Riga.

used in practice very much. Forest covers 50.9% of the country's territory according to the State Forest Service data. Forest landscapes are often seen from the road and there is large potential to enhance them by the application of landscape design principles.

#### *Tendencies in mosaic landscape*

Field study shows that agriculture land overgrows with bushes and trees, while forest areas expand (Figure 8). This corresponds to the research about patterns of afforestation on abandoned agriculture land in Latvia (Ruskule et al., 2012).

Abandonment of agriculture land and subsequent natural afforestation have been common features of the contemporary Latvian rural landscape, particularly in the period since 1990. This process affects the structure, ecology and visual qualities of the landscape.

According to the research of Z. Peneze, Latvian people are not indifferent to the processes taking place in the countryside landscape. The countryside in general is associated with nature, forests, agriculture fields and fresh air. When asked about the characteristic features of the Latvian countryside in the 21st century, respondents paid most attention to overgrowing of agriculture land, forest cutting, left farmsteads and poor quality roads. Overgrowing is evaluated as a negative trend (Penēze, 2009). It is a problem which needs attention in future. Latvia has ratified the European Landscape Convention, which emphasizes the importance of landscape in the formation of local cultures. Landscape is the basic component of the European natural and cultural heritage, contributing to human well-being and consolidation of the European

identity (Likums par..., 2007). It is necessary to find the ways for rural landscape quality enhancement.

#### **Conclusions**

Results of the research show that landscape reflects priorities and life style of today's society and economic status of the state. Functional solutions and economic issues are the basis for today's landscape development. Following problems were detected – open landscapes and views from the road are formed chaotically; objects with historical and cultural value start to disappear from the zone of visibility, thus decreasing the visual quality of landscape and losing identity of the place. A negative trend is the disappearance of long distance views as a result of field overgrowing and afforestation. New landscape elements bring variety to the landscape in territories where new houses have been built, but it does not lead to higher aesthetic quality in all cases.

Landscape development is influenced by the state policy in agriculture, forestry and rural development. Disharmonised policies in these fields lead to chaotic landscape development.

It is necessary to raise importance of this question and think about the landscape development conception at all levels – local municipality, region, state as well as establish specific instruments to regulate the activities of land owners in future. It is necessary to find the best way to talk to land owners, show the importance of problems and propose possible solutions. Besides the state road development and management plan, there is a need for road landscape preservation and development policy.

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