

## REGIONAL STRUCTURE OF CULTURALLY-HISTORICAL LANDSCAPE OBJECTS AVAILABILITY IN LATGALE UPLAND AREA

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### ABSTRACT

*Culturally-historical landscape formation is based on certain functional meanings of elements in landscape space, and subdual of the surrounding space to specific functional needs. Over the last 50 years, the landscape space of Latgale Upland has changed along with territorial policy changes. The aim of the research is to analyse two object groups of culturally-historical importance in the context of regional and local structures such as church landscapes, watermill and small-scale hydroelectric power plant spaces, to define landscape transformation tendencies. The research territory was chosen to be Latgale Upland and its locality (surrounding territory) – Latgale Upland area. The research illustrates that, changes in the processes of regional planning have become an important reason for the transformation of culturally-historical landscapes' available structure, however, the characteristic of culturally-historical attributes and scale proportions in local landscape still exist.*

**Key words:** Regional landscape, Church, Watermill, Hydropower

### INTRODUCTION

This research is introducing a part of culturally-historical landscapes in Latgale Upland area. The term, 'culturally-historical landscape', is used throughout this research to include the following types of landscapes in Latgale Upland area: Churches and hydropower objects (watermills and a small-scale HPP (hydroelectric power plant)).

Transformations in culturally-historical landscapes are increasing along with the processes of globalisation. The aspect of accessibility could have an impact on culturally-historical landscape development possibilities for more active public use.

Historic landscapes are important national assets, and they provide some of the most special and valued places for public recreation and education (English ..., 2005). Church and hydropower object landscapes are an important culturally historic part of the history of Latgale region. Churches and places of hydropower objects can be found often in the contemporary landscape of Latgale. The importance, functionality and number of these objects have changed dynamically in the past, thereby influencing the landscape transformation processes. These changes are rooted in different historical periods, mainly involving a complete change of ethnicity and socio-cultural field (Fjodorovs, 2009).

For the local population, the countryside in Latvia is perceived as an important contributor to a sense of identity (Bell et al., 2007). Those landscapes, which are perceived daily, are mainly 'every day' landscapes, but usually these landscapes are in danger because of their unprotected status.

According to literature review, church gardens previously had too little attention from researchers.

Gardens were usually established and built without taking into account the church buildings' composition, but they are one entity. Garden and church landscape includes different culturally-historical elements – fences, crucifixes, free standing bell towers and separate compositional plantings (Markova, 2012). The division in denominations (Orthodox, Catholic, Lutheran, Old Believer) also has an impact on landscape design and functions in each territory. The denominational membership of the church territory is very important, because in the main contours, it already defines the landscape character (Markova, 2012). Each type of the churchyards has differences in architecturally compositional form, and also in element groups, that supplement the church architecture. Some experienced researchers have carried out their research in connection with churches and sacred art in Latgale, but the landscape issue has been left behind so far. Extensive research regarding wooden churches in Latgale, especially the Roman Catholic Church construction in the 18th century, has been done by Krūmiņš (2003), who was a multi-faceted architect, writer and scientist. An art scientist, R. Kaminska, whose works are mainly dedicated to the artistic heritage of eastern Latvia, particularly concerning the 17th to 19th century heritage, has published several books and articles related to church architecture and art researches (Kaminska, 2008). Kaminska together with Bistere have started work on sacral architecture, art heritage and existing inventory study, compiling and documenting the findings, and have already published their results in several books (Kaminska et al., 2006, Kaminska et al., 2011). These researchers reveal the wide meaning and value of churches, churchyards

and church landscapes that are important for the place development, one of which is tourism.

Hydropower objects have been researched in different fields of studies (Lazdāne, 2011; Lazdāne, 2012; Raitis et al., 1944; Siļķe, 2008; Tveins, 1985). These landscapes are the result of interaction between the human-made and natural landscape elements. Water reservoirs, historical watermill buildings, industrial character (watermill, power plant) united with public (watermill) and private (dwelling house) character in one landscape. Landscapes in these historically actively used territories are changing nowadays.

Several researchers focusing on the research of landscape structures and historical regional development in Latvia, including Latgale region, could be mentioned as Zariņa (2008), Penēze (2009), Melluma (2012).

The importance of globalisation processes is increasing (Reenberg et al., 2009). A lot of research has been carried out on urbanisation and globalisation processes and landscape transformation that is influenced by these processes. Among the processes that have an impact, local landscapes nowadays can be influenced from external driving forces, and the economical profitability of time consumed affects the urbanisation density and movement of people migrating (Reenberg et al., 2009; Harvey, 1996). At the European Union level, theoretically, free movement of labour and finances mean transformation from more remote territories to main economically powerful cities and towns, and thus demographic situation in border territories is changing, and population density particularly in the countryside is decreasing (Antrop, 2003).

To understand what qualities are important to people's quality of life, we need to acknowledge the diversity that exists in people's capabilities, experience, desires and needs (Thompson et al., 2007). For example, a person's decision to visit the historic landscape will be influenced by how easy it is to get there and back again (English ..., 2005). One of the key factors for good cultural landscape development is availability (Jongman, 2002). In this context, roads are one of the compositional elements, influencing not only object availability and accessibility, but also form object visibility. It is necessary to think about the functionality of these landscapes. If functional landscape transformation means space reorganisation and modelling of needed architectural elements, changes can be in shifting perception not in the form of object (Landecker et al., 1998). Landscapes are transformed around us with the aim to adjust them for our everyday needs; they define arrangement, style, and materials of the features, as they represent many eras of natural evolution and generations of human efforts (Yatsko, 1997). After passing time, needs and functions change and so do the

landscapes. But in all this process, we cannot leave the quality of life space behind.

In this research, in addition to the culturally-historical object availability and placement studies, specific connection to the tourism has been made, as it is an important sector for regional development. In researches about tourism territories and the importance of their location, tourism regions are emphasised. It is an idea about complex regional development. In one single regional development, idea is placed together with architectural monuments, landscapes and other elements (Banica et al., 2011). The territory of Latgale is a region with such dimensions. Those objects that are more difficult to reach have to be individual and varied in their cultural, historical and architectural meanings (Banica et al., 2011). On the other hand, the accessibility of a destination clearly influences the attractiveness and potential for tourism and development (Banica et al., 2011).

Latgale Upland is located in the southern part of Latvia. This territory is rich in lakes and has a very picturesque landscape that is complemented with different culturally-historical elements. Today the situation and placement of these objects are part of regional structural research for church and watermill landscape and their involvement in sustainable territorial planning.

Solutions for different landscapes have to be different, and at the same time, one has to consider all kinds of sustainable development of cultural landscape. There are landscapes, where people's presence needs to be limited and total rearrangement of territory functions is needed. One such example is Aglona church landscape. The basilica annually unites a lot of people, and that is the reason why this territory has changed considerably through the years. The vast frontal space substantiates functionality only once a year on the occasion of the Assumption on August 15.

We have to think also about the territories that are left behind and have lost their functional meaning. Environmental qualities often have a direct impact on human well-being, so we have to maintain them as much as we can.

The aim of this research is to analyse two object groups of culturally-historical importance in the context of regional structure, to define landscape transformation tendencies in the aspect of availability.

Both objects of this research – hydropower objects and churches – are evaluated in respect to the surroundings. They are architectural point objects that have wider visual, economic and ecological influence. In hydropower objects, the impact is on the presence of water, working places, economic and social activities and place maintenance. Water reservoirs in these objects can be up to several thousand square meters. Churches are not only architectural monuments, but also these are places

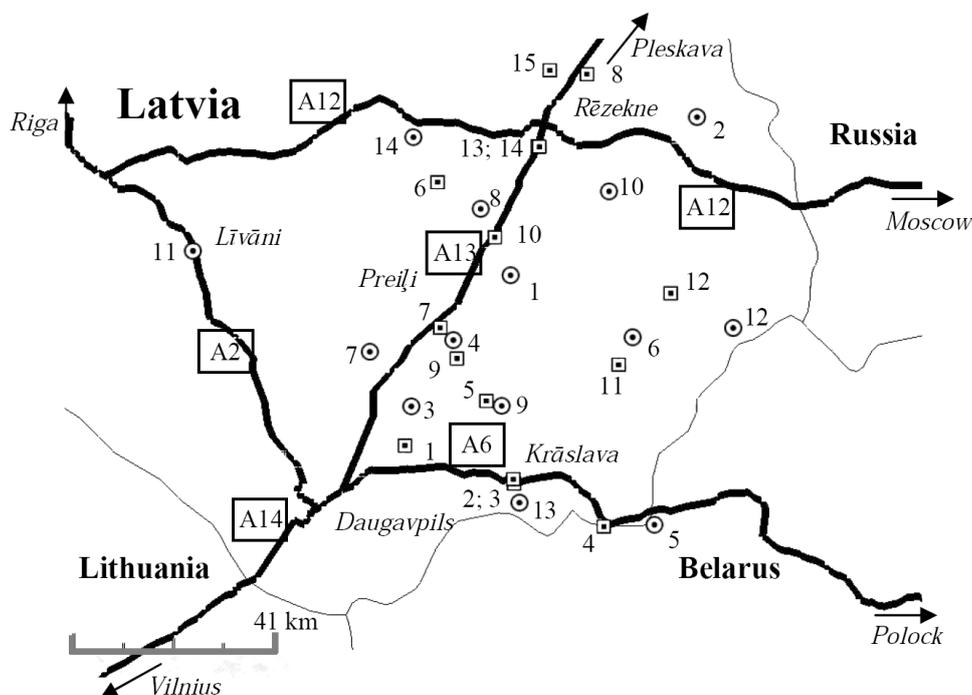
where people gather, and there is social interaction, participation, and spiritual growth. Life space in both of these landscape types has to be qualitative.

### MATERIALS AND METHODS

Latgale Upland is a territory located in the south-east of Latvia. Latgale Upland occupies the territory of approximately 6300 km<sup>2</sup> (Markots, 2011), and only a small part of it (in the south) is located outside Latvia (Мейронс, 1975), which will not be taken into account because the aim of the study is to research the territories only in Latvia. The area of this research is wider than the area of Latgale Upland, because of the densely built-up territories which are researched, and because of the fact that the visibility and availability can't be strictly demarcated in nature, as it might be possible to mark on maps.

The small-scale hydropower territories for this research were selected from maps of the 1920s

(Geodēzijas ...), where the places of watermills were marked, and the scheme of 2008 (Latvijas ..., 2008) where the places of small-scale HPP were located. The church territories were selected from the map of Jāņa sēta (2006) 'Dienvidlatgale. Latvijas tūrisma kartes - Tourism maps of Latvia' 1:200000, where the places of churches were located. In the map of Latgale Upland area, the number of territories for this research was marked on the map. In the research, 14 territories of hydropower objects (watermills and small-scale HPP) (Table 1.), and 15 territories of churches (Table 2.), (Figure 1) were included. They were chosen randomly from the region, by the criterion of even dispersion and location in different landscape types of urbanisation (rural, peri-urban, and urban).



**Figure 1.** Location of objects in Latgele Upland area, where — - Main country roads; ⊙ - Hydropower objects: 1 - Balda w, 2 - Felicianova w/ HPP, 3 - Galvāni HPP, 4 - Jaunaglona HPP, 5 - Koškoviči w, 6 - Obitēļi w, 7 - Pelēči w/ HPP, 8 - Prezma w, 9 - Sakova w, 10 - Sprukti HPP, 11 - Straumes w/ HPP, 12 - Tīmaņi w, 13 - Upmaļu w/ HPP, 14 - Viļānu w/ HPP; - ■ Churches: 1 - Biķernieki old believer 2 - Krāslava Catholic 3 - Krāslava Old Believer 4 - Piedruja Orthodox and Catholic 5 - Kovaļova Old Believer 6 - Paramonovka Old Believer 7 - Rušona Catholic 8 - Bērzgale Catholic 9 - Aglona Catholic 10 - Malta Old Believer 11 - Dagda Catholic 12 - Vertulova Orthodox 13 - Rēzekne Orthodox 14 - Rēzekne Lutheran 15 - Ilzeskalne/Kuļņeva Orthodox

This research was carried out during the period between 2010 and 2012. In this research, a cartographical method has been used to show location of researched territories in region (Figure 1), and to measure the distances for analysing the accessibility (Table 1., Table 2.); a literature survey

method was employed. The territories were visited and various photo materials collected. Measurements were made in base map, which was drawn using Internet tools by Google Earth. In assessment, the tables were designed, and the data were marked according to the researched

measurements. The distance measurements precision is up to 1.0 kilometre. Division by type of roads was used are: street; main country road (A); main regional road (P); main local road (P); and local road. Types of roads were taken from roads division by Latvian law on roads (Likums..., 1992). For availability survey, both the distance from the main roads and the distance from the main cities was taken into account. Administrative centres are places where all services are available.

In Table 1, in addition, the function of hydropower objects' buildings is marked. In Figure 1, the denomination of church is marked with the functions which are included in this research.

## RESULTS AND DISCUSSION

### Regional Accessibility

By the results of research made by European data project (ESPON), it was mentioned that 'regions with a high accessibility are most often also economically and competitively successful'

(ESPON, 2009). The accessibility in Latgale region and Latvia, in general, by 'potential accessibility by rail' (ESPON, 2006a) and 'by potential accessibility by road' (ESPON, 2006b) is in one of the lowest positions in Europe.

If the most accessible sites are usually those that offer different travel options (bus, car, public transport, etc.) (English ..., 2005), then the territories, which are located out of the cities, have fewer possibilities for diverse public transport and easy accessibility (two territories of hydropower objects are located in towns, but 12 in rural or village areas; nine objects of churches are located in towns, but six are in rural or village areas). The second important aspect is the time spent on the way to the destination. In Latvia, generally, the maximum allowed speed is 90 kilometres per hour. Then, using the road distance numbers from Table 1 and Table 2, we could get to the objects of this

**Table 1.**  
Watermills and small-scale HPP landscapes, and their connections to different road types and biggest cities  
(created by L. Lazdāne)

N°	Name of object and – watermill, HPP - hydropower plant station.	Near which road the object is placed (Attributes: street; A- main country road; P- main regional road; V- main local road; local road)	Closest main country road (attribute) / distance (km)	Distance (km) to the closest city of republic's significance city -Rēzekne	Distance (km) to the closest city of republic's significance city - Daugavpils	Distance (km) to the capital city of Latvia - Rīga	Functions of buildings
1.	Balda w	P	A13/9	30	79	247	dwelling house
2.	Felicianova w/ HPP	V	A12/11	44	133	281	HPP, old w. building abandoned
3.	Galvāni HPP	V	A13/10	72	39	232	new HPP
4.	Jaunaglona HPP	street	A13/9	59	56	234	Abandoned
5.	Koškovici w	local road	A6/4	115	82	302	Ruins
6.	Obiteļi w	V	A6/44	53	91	277	guest house
7.	Pelēči w/ HPP	V	A13/11	59	39	220	HPP
8.	Prezma w	V	A13/10	22	80	247	Ruins
9.	Sakova w	P	A6/17	70	61	246	dwelling house
10.	Sprukti HPP	local road	A13/26	22	112	266	HPP
11.	Straumes w/ HPP	A	A6/0	91	63	167	HPP
12.	Timāņi w	V	A12/37	69	116	303	Ruins
13.	Upmali w/ HPP	local road	A6/7	94	51	270	HPP
14.	Viļāni w/ HPP	street	A12/3	32	89	215	HPP

research from Riga in two to three hours. However, by the way of Google Earth Internet calculations (Google...), we could obtain more or less precisely calculated time that we could travel on road, which shows that it would take from 2.5 to 4.5 hours to get to these objects.

It has been researched for different types and needs for accessibility for several functions. Mainly, the longest distance to go to work by car, if the driver is driving alone, is 70 km, but to travel for recreation it is less than 50 km, but if there is a shared ride trip, the distances are shorter (In that case, it is

possible to travel to work 50 km, but for recreation 55km) (Iacono et al., 2008). In the case of the Latgale Upland area, if researched territories could be the place for work, for a driver alone (for the 70 km distance) ten of the 14 hydropower objects, and 11 of the 15 churches are accessible from Rēzekne town; 6 of the 14 hydropower objects, and 7 of the 15 churches are accessible from Daugavpils; none of the objects is accessible for daily work from Riga (Capital city). The possibilities to use territories for daily recreation (50 km distance) are: five of the 14 hydropower objects and seven of the 15 churches are accessible from Rēzekne town; two of the 14 hydropower objects and four of the 15 churches are accessible from Daugavpils city and none from Riga. Accessibility to Riga for daily work is impossible for both object groups, but the accessibility to both local towns have two of the 14 hydropower objects and three of the 15 churches.

According to Peneze (2009), in regional developments, the roads and infrastructure objects development at the local scale could be one of several factors, which will have an impact to landscape structure and quality. This development

could provide possibilities for access to work places or recreational territories (Peneze, 2009). But as a potential danger, she mentioned the depopulation and marginalisation of rural territories because of the negative attitude toward living in rural areas among the younger generations (Peneze, 2009).

The results regarding the territory's accessibility at the local scale show that locations of territories regarding the road intensity also vary. Hydropower objects locations are: by street - two; by main country road - one; by main regional road - two; by main local road - six; and by local road - three. Churches locations are: by street - eight; by main regional road - two; by local road - five. It can be concluded that most churches are near the main roads and in urban landscapes. A question as to why some of the churches in rural landscapes are with less households around them is a question that needs to be answered in further research studies.

The results of the criterion used here are different because it determines functional differences in landscapes. The accessibility in local scale differs by types of selected objects of research.

**Table 2.**

Church landscapes and their connection to different road types and biggest cities (created by M.Markova)

N <sup>o</sup>	Name of church object	Near which road the object is located (street, A-main country road, P-main regional road, V-main local road, local road)	Closest main country road/ distance	Distance (km) to the closest city of republic's significant city - Rēzekne	Distance (km) to the closest city of republic's significant city - Daugavpils	Distance (km) to the capital city of Latvia - Riga
1.	Biķernieki	local road	A6/7; A13/14	76	24	236
2.	Krāslava Catholic	street	A6/0	88	44	264
3.	Krāslava Old Believer	street	A6/0	88	44	264
4.	Piedruja Orthodox	street	A6/3	104	71	291
5.	Kovaļova	local road	A6/23; A13/23	70	66	246
6.	Paramonovka	local road	A12/19; A13/29	48	96	231
7.	Rušona	local road	A13/1	45	49	228
8.	Bērzgale Catholic	local road	A13/3	22	118	258
9.	Aglona	P	A 13/8	56	53	232
10.	Malta Old Believer	street	A13/1	20	70	238
11.	Dagda Catholic	street	A6/27	59	80	266
12.	Vertulova	P	A13/50; A12/37	51	99	286
13.	Rēzekne Orthodox	street	A12/4; A13/4; A15/4	0	90	240
14.	Rēzekne Lutheran	street	A12/4; A13/4; A15/4	0	90	240
15.	Ilzeskalne/Kuļņeva	street	A13/6	16	111	251

From researched hydropower objects by functions are as follows: Two territories are used as dwelling-houses; seven as small-scale HPP; one as guest house; main watermill or small-scale HPP building is in ruins or abandoned in five territories; newly constructed small-scale HPP in place, where never watermill was constructed is in one territory. The distance, of course, is not the only one reason why the territory is not used. From previously detected distances (70 km), hydropower objects areas with good access to both towns one territory out of two is abandoned; and with good access only to Rēzekne town, two territories are in ruins; a ruin can be found in one territory, which the location has a distance from both local towns of more than 80 km.

The territories of churches are located at different distances, but all of the researched territories are functionally used today. The active function and placement is a valuable characteristic for church landscape involvement in regional tourism establishment and development. Involvement of churches and churchyards in regional development plans and territorial planning promotes church landscape vitality. In church landscapes, functions are kept the same nowadays, but only not so intensively (Figure 1).

#### **Landscape availability for tourism market**

In tourism object evaluation, the possibility for people to get out of the city and then be able to return to it in the most comfortable way in quite a short time is an important evaluation. At the same time, if destination is one of a kind, or somehow differs from another, then accessibility has no influence on its attractiveness (Celata, 2007). One of the examples of being different from other objects could be Aglona church, where, at least once a year, the distance does not have any impact on the accessibility.

There are three scales of tourism potential planning. First is site scale. It deals with the single tourism unit (Inskeep, 1994; Formica 2000; Gunn et al., 2002; Pearce, 2012). In our case, there are several possible responsible stakeholders: private owners, companies, country or municipality, and religious organisations. In hydropower objects landscapes, most of the responsibility comes from private persons and companies. In church landscapes, responsibility for development is divided between the state and religious organisations. From the researched objects in the territories of churches, almost all are used as a tourism object occasionally by enthusiastic tourists, mostly devoting a large amount of time to travelling.

Second is the destination scale. This potential planning involves such objectives as socio-cultural, environmental, political and economic factors. In this scale, single sites are put together (Inskeep, 1994; Formica 2000; Gunn et al., 2002; Pearce,

2012). In this scale, an object provides variable components – natural and/or man-made attractions. Here the key role is for regional geographical qualities together with a wide range of culturally-historic objects. In the destination scale, the data according to accommodation places with offers in Latvia could show the prospect of existing possibilities to use the region for the tourism market, and according to the data in 2011, in the Latgale region, 8.4% places for accommodation were located, providing 5% of places to sleep from the total in Latvia (Latvijas..., 2012b). The Latgale region has the second lowest places to sleep for tourists in Latvia. The potential tourism market could be prognosticated according to the existing data of tourists' visits in Latvia. The visits to different regions in 2011 are: in Riga - 88%; in the suburbs of Riga - 8%; in the Vidzeme region - 0% (1591 people); in the Kurzeme region - 2%; in the Zemgale region - 1% (3603 people); in the Latgale region 1% (5412 people) (Latvijas..., 2012c). The main tourism market is located in the biggest city of Latvia – in Riga, the administrative centre which is densely populated. In group of regions with the lowest number of tourist visits, Latgale region is the second most visited rural region in Latvia, so there is a need for different objects in rural landscape, in order to make a variety of offers for different tourism interests.

The third scale is the regional scale. Planning the regional level of tourism potential includes a comprehensive structured activity geared towards the integration of attractions located in a region (Inskeep, 1994; Formica 2000; Gunn et al., 2002; Pearce, 2012). As the research objects are part of regional landscape identity, factors have to be taken into account, such as in transportation, ecology and forestry plans. For the tourism market, on the regional scale, it is important to take into account the population size, and its tendencies. The population of local residents in Latvia is decreasing, and from 1995 to 2012 the population has decreased by 18.4%, but if separately compared, then the of population decrease in the last two years only in the Latgale region is much higher – 26.4% (Latvijas..., 2012a). The data according to population density also are important, and according to data of Eurostat, the population density in Latvia, in 2006 was 37 inhabitants per 1 km<sup>2</sup> (European..., 2008). If we compare this number in the region located along the Baltic Sea with the population density in 2006, the count in Lithuania was - 54, Estonia – 31, Finland – 17, Sweden – 22, Poland – 122, Germany – 231, Denmark – 126 (European..., 2008). The population density is higher in countries, which are closer to the central part of Europe. These data lead one to think that the tourism market that was researched in the Latgale Upland region can't be developed based only on local population, or on regionally the closest countries along the Baltic Sea.

Centrally tended economic development in Latvia promotes the biggest growth in cities; similarly as it is in other countries under the influence of globalisation, and the territories in the country side are less actively used. Each landscape needs individual development according to its accessibility and intensity for everyday use. The existence of tourism resources in Latgale Upland is a necessary element of tourism attractiveness, but it cannot predict the significance of the attraction of the region. The pulling force of a region depends not only on the number of tourist objects located in a given area, but also on how these resources are valued and perceived by tourists (Formica, 2000). By simply increasing the number of tourism trails and objects, we would not always be able to increase the overall attractiveness of a region.

### Local Landscape Character

The centralisation processes according to financial possibilities and the development of dense areas of private house villages in last 20 years are concentrated in Riga, and this has saved the territory of Latgale region from an overdevelopment of territories in rural areas, close to cities, to suburban territories, and to main roads. Such situations last until today and preserve the unique landscape character for the Latgale Upland area, but the economic recession has impacted the landscape with new issues, and the culturally-historical landscape of Latgale Upland has to cope with pressure from the economic reality. The rural lands, private and public houses are becoming abandoned more and more by each passing year,



**Figure 2.** Wood-carving elements on an abandoned private house (Author: Lazdāne, 2012)



**Figure 3.** Wood-carving elements on a private house part of a watermill building (Author: Lazdāne, 2012)

and the loss of old, decorative, structurally diverse and historically-cultural rich buildings is increasing. The high-quality architectural values are still visible in these landscapes (wood-carving elements in architecture as seen in decorative elements of windows shutters, openings and frames, in doors, fences, facade cornice laths, rafters, etc.) (Figure 2, Figure 3). The culturally-historic objects and natural elements such as rivers and lakes, hill-relieves are connected in one system of interpretive values. This system of connections has to be researched in future. As the example of the existing situation for this interpretive system, the landscape of Līksna church could be mentioned. In the rural landscape of this territory, the height of church towers are approximately 45 meters, which is not common for these rural areas. Also the location of this church is in a hilly area, on the one of the highest tops of the hills, quite high in comparison to the surrounding landscape. The visibility of this churches' silhouette can reach up to 10 km in distance. In the formation of new private housing in the 20th century in the '1920s and 1930s, in the first period of Latvia's independence, the views of this landmark, was taken into account in surrounding landscapes (Figure 4).



**Figure 4.** View from a private house area to the church (Author: Lazdāne, 2012)



**Figure 5.** Old building has lost its function as a cattle-shed, and in the front, the decorative

plantings are not cared for. (Author: Lazdāne, 2012) In the character of Latgale Upland area, the views of churches still exist. The connection with traditions to religion historically was strengthening the development of Latgale region inhabitants' families. This is one of aspects, which characterises the identity of the Latgale Upland region.

Today the transformation of old private houses is developing, and the new inhabitants in rural landscapes are now using these houses as places for recreation during the weekends and holidays. The existence of traditional hard work on farms is disappearing, but the environment of a psychological culture is still developing (the maintenance of historical architecture, apple-garden, vegetable patches, site views to the surrounding landscape features). With the disappearance of historical meaning to each building (Figure 5.) today we are obtaining a new functional belonging (public centre for crafts; a place for summer camping; a place for artists' workshops, etc.). These functional transformations are acceptable because they are not reducing the quality of architecture and culture.

Of course, the processes of centralisation and the global economic recession also have an influence on the agricultural structure, which is changing the agricultural lands to unmanaged territories and worsen soil territories nowadays, and more bushes and tree seedlings are seen growing. The new, uncontrolled forest territories are destroying the system of irrigation and structure of the cultural landscape, changing it to a post-natural landscape.

## CONCLUSIONS

The tendencies of landscape transformations in culturally-historical importance objects were researched. There is obvious tendency of globalisation, and local population is decreasing. The access to the common territory of Latgale Upland area from capital city of Riga is low. Landscapes are also different in access to territories

from republic's significant towns. Possibility to attract tourists or potential inhabitants from capital city to Latgale region is low, especially for longer period of time, which is required for visiting each territory included in this research. If the landscape development (for public or private use) is important, it has to be accessible in the shortest time period, especially from big cities and towns, but the territory of Latgale is located too far away. The connection between Riga and Latgale Upland area has to be developed for faster traveling time and for a better quality of accessibility. The need for high speed roads and a good rail transport system is extraordinarily urgent.

Church landscapes mostly are placed near main streets and main roads and this is a good starting point for the development of these objects as tourism objects as dominance of the landscape is not only as ceremonial buildings, but also as qualitative architectural objects which are an important part of cultural history.

In the development of culturally-historical traditions in building constructions in the Latgale area, locally dimensional parameters in scale, proportions, colour scheme, disassociation between buildings and areas for living and the branch of wood trade are seen developing. These parameters are special determinants only to the Latgale Upland area which has a characteristic that is uniquely national aesthetic quality with a sense of scale, which has been formed in several generations and are definitely socio-political, economic, and it has to be protected and developed.

The development of technologies, the financial and economic situation, and cultural activity in both local and on a global scale will have an impact on the future development scenario, and has to be taken into account for future planning strategies.

Historical meaning of churches, as local cultural centres, may have lost their importance, but they are still places with not only religious, but also cultural and social importance. This existing possibility has to be used for future regional development strategies.

Of the researched territories of hydropower objects, most of them are developing as industrial territories or degraded, abandoned territories; a tourism possibility as a guest-house is used only in one territory, but the number of visitors in other territories (as to objects of tourism attraction) is not known. Of the researched church territories, almost all are used as tourism objects, but the number of visitors with the aim to use these territories as tourism objects is minimal and uncounted because of the small capacities. Culturally-historical landscape of Latgale is a resource for further tourism development and for providing landscape diversity.

## ACKNOWLEDGMENTS

This research work was supported by European Social Fund project „Realization assistance of LLU doctoral studies”, Agreement No. 2009/0180/1DP/1.1.2.1.2/09/IPIA/VIAA/017.

## REFERENCES

- Antrop M. (2003) Landscape change and the urbanization process in Europe. *Landscape and Urban Planning* 67, p. 9-26.
- Banica A., Camara G. (2011) Accessibility and Tourist Function Development of the Romanian Small Towns. *GeoJournal of Tourism and Geosites*. Vol.7, p. 122-133.
- Bell S., Penēze Z., Nikodemus O., Montarzino A., Grīne I. (2007) The value of Latvian rural landscape. In: *European Landscapes and Lifestyles: The Mediterranean and Beyond*. Z. Roca, T. Spek, T. Terkenli, T. Plieninger, F. Höchtl (ed.). Lisbon, Portugal: Edições Universitárias Lusófonas, p. 347–362.
- Celata F. (2007) Geographic marginality, transport accessibility and tourism development. In: *Global Tourism and Regional Competitiveness*, Celant, A. (ed.). Bologna: Patron, 37-46.
- English Heritage (2005) Easy Access to Historic Landscapes [online] [accessed on 10.12.2012.]. Available: <http://www.sensorytrust.org.uk/resources/eahl.pdf>
- ESPON (2006a) Map 3. Potential accessibility by rail [online] [accessed on 09.01.2013.]. Available: [http://www.espon.eu/export/sites/default/Documents/Publications/TerritorialObservations/TrendsInAccessibility/map3\\_accessibility\\_rail\\_2006.pdf](http://www.espon.eu/export/sites/default/Documents/Publications/TerritorialObservations/TrendsInAccessibility/map3_accessibility_rail_2006.pdf)
- ESPON (2006b) Map 5. Potential accessibility by road [online] [accessed on 09.01.2013.]. Available: [http://www.espon.eu/export/sites/default/Documents/Publications/TerritorialObservations/TrendsInAccessibility/map5\\_accessibility\\_road\\_2006.pdf](http://www.espon.eu/export/sites/default/Documents/Publications/TerritorialObservations/TrendsInAccessibility/map5_accessibility_road_2006.pdf)
- ESPON (2009) Territorial Dynamics in Europe: Trends in Accessibility, Territorial Observation No. 2 [online] [accessed on 14.12.2012.]. Available: <http://www.espon.eu/export/sites/default/Documents/Publications/TerritorialObservations/TrendsInAccessibility/to-no2.pdf>
- European Communities (2008) Eurostat Pocketbooks. Tourism statistics [online] [accessed on 20.12.2012.]. Available: [http://epp.eurostat.ec.europa.eu/cache/ITY\\_OFFPUB/KS-DS-08-001/EN/KS-DS-08-001-EN.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-DS-08-001/EN/KS-DS-08-001-EN.PDF)
- Fjodorovs F. (2009) The spiritual space of Latgale. In: *Latgale as a culture borderzone: comparative studies Vol II (1)*. Daugavpils: Saule, University of Daugavpils, p. 9-19.
- Formica S. (2000) Destination Attractiveness as a Function of Supply and Demand Interaction. Ph.D.dissertation, Blacksburg, Virginia [online] [accessed on 23.11.2012.]. Available: <http://scholar.lib.vt.edu/theses/available/etd-11142000-15560052/unrestricted/FrontMatterDissertationDefense.pdf>
- Ģeodēzijas topogrāfijas daļa. *Latvijas topogrāfiskā karte*. (Latvijas topogrāfisko karšu mērogā 1 : 75 000 komplekts, izgatavotas pēc 1911.–1927. gadu uzņēmumiem un rekognoscijas) [Topographical Set of Maps of Latvia 1920-1937]. Rīga: Armijas štāba Ģeodēzijas-Topogrāfijas daļa
- Google Earth Plug-in Driving Simulator [online] [accessed on 07.10.2012.]. Available: <http://earth-api-samples.googlecode.com/svn/trunk/demos/drive-simulator/index.html>
- Gunn C.A., Var T. (2002) *Tourism Planning: Basics, Concepts, Cases*. London: Taylor & Francis Books, 442 p.
- Harvey D. (1996) *Justice, Nature and the Geography of Difference*. Oxford: Blackwell Publishers. 480 p.
- Iacono M., Krizek K., El-Geneidy A. (2008) Access to Destinations: How Close is Close Enough? Estimating Accurate Distance Decay Functions for Multiple Modes and Different Purposes, Report No. 4 [online] [accessed on 07.10.2012.]. Available: <http://www.lrrb.org/PDF/200811.pdf>
- Inskip E. (1994) *National and Regional Tourism Planning: Methodologies and Case Studies*. London: Routledge, 249 p.
- Jāņa sēta (2006) Dienvidlatgale. Latvijas tūrisma kartes - Tourism maps of Latvia. Scale 1:20000. Rīga: SIA Karšu izdevniecība Jāņa seta, 1 p.

- Jongman R.H.G. (2002) Homogenisation and fragmentation of the European landscape: ecological consequences and solutions. *Journal Landscape and Urban Planning*, Vol. 58, Issues 2–4, p. 211–221.
- Kaminska R. (2008) Austrumlatvijas rekatolizācija un tās ietekmētais baznīcu arhitektūras un mākslas mantojums. In: *Sakrālā arhitektūra un māksla: mantojums un interpretācija*. K. Ogle (ed.). Rīga: Neputns, p. 31-47.
- Kaminska R., Bistere A. (2006) *Sakrālās arhitektūras un mākslas mantojums Daugavpils rajonā*. Rīga: Neputns. 296 p.
- Kaminska R., Bistere A. (2011) *Sakrālās arhitektūras un mākslas mantojums Rēzeknes pilsētā un rajonā*. Rīga: Neputns. 335 p.
- Krūmiņš A. (2003) *Latgales koka baznīcas Romas katoļu draudzēs 18. Gadsimtā*. Rīga: Jumava. 192 p.
- Landecker H., Mayer E.K., Vance S. (1998) *Marta Schwartz: Transfiguration of the Commonplace*. Washington, D.C.: Spacemaker Press. 175 p.
- Latvijas Mazās hidroenerģētikas asociācija (2008) *Mazā hidroenerģētika Latvijā*. Rīga: SIA Adverts, 96 p.
- Latvijas Republikas Centrālā statistikas pārvalde (2012a) Centrālās statistikas pārvaldes datu bāze. ISG12. Pastāvīgo iedzīvotāju skaits statistiskajos reģionos, republikas pilsētās un novados gada sākumā [online] [accessed on 20.12.2012.]. Available: <http://data.csb.gov.lv/DATABASE/Iedz/databasetree.asp?lang=16>
- Latvijas Republikas Centrālā statistikas pārvalde (2012b) Centrālās statistikas pārvaldes datu bāze. TUG091. Viesnīcas un citas tūristu mītnes Latvijas statistiskajos reģionos, republikas pilsētās un novados [online] [accessed on 18.12.2012.]. Available: <http://data.csb.gov.lv/DATABASE/transp/Ikgad%C4%93jie%20statistikas%20dati/T%C5%ABrisms/T%C5%ABrisms.asp>
- Latvijas Republikas Centrālā statistikas pārvalde (2012c) Centrālās statistikas pārvaldes datu bāze. TUG16. Tūrisma komersantu apkalpoto personu skaits Latvijas statistiskajos reģionos [online] [accessed on 18.12.2012.]. Available: <http://data.csb.gov.lv/DATABASE/transp/Ikgad%C4%93jie%20statistikas%20dati/T%C5%ABrisms/T%C5%ABrisms.asp>
- Lazdāne L. (2011) The Historical Development of Watermills and small-scale Hydroelectric Power Plants Landscape in Latvia. In: *Research for Rural Development 2011. Annual 17th International Scientific Conference Proceedings*. Latvia, Jelgava: Latvia University of Agriculture, Vol. 2, p. 200-206.
- Lazdāne L. (2012) Public Perception about Landscapes of Watermills and Small-Scale Hydroelectric Power Plants in Latvia. In: *Research for Rural Development 2012. Annual 18th International Scientific Conference Proceedings*. Vol. 2. Latvia, Jelgava: Latvia University of Agriculture. p. 141-147.
- Likums 'Par autoceļiem' (1992) pieņemts 11. 03. 1992. (Ziņotājs, 13, 02.04.1992.) [stājas spēkā 02.04.1992.] ar grozījumiem: [stājas spēkā ar 01.01.2012.] Latvijas Republika [online] [accessed on 10.11.2012.]. Available: <http://www.likumi.lv/doc.php?id=65363>
- Markots A. (2011) Plakanvirsas pauguru morfoloģija, uzbūve un veidošanās apstākļi salveida akumulatīvi glaciostrukturālajās augstienēs Latvijā. Promocijas darba kopsavilkums [online] [accessed on 18.12.2012.]. Available: [http://www.lu.lv/fileadmin/user\\_upload/lu\\_portal/zinas/Kopsavilkums-Aivars-Markots.pdf](http://www.lu.lv/fileadmin/user_upload/lu_portal/zinas/Kopsavilkums-Aivars-Markots.pdf)
- Markova M. (2012) Characterization guidelines for churchyard in Latgale Upland. In: *Peer reviewed proceedings of ECLAS 2012 Conference - The Power of Landscape at Warsaw University of Life Sciences – SGGW*. Warsaw: Warsaw University of Life Sciences, p. 59-64.
- Melluma A. (2012) Historical Contexts and Development Paths of Latvian Landscapes [online] [accessed on 18.12.2012.]. Available: [http://www.lza.lv/LZA\\_VestisA/66\\_3/5\\_Aija%20Melluma.pdf](http://www.lza.lv/LZA_VestisA/66_3/5_Aija%20Melluma.pdf)
- Pearce D.G. (2012) *Frameworks for Tourism Research*. New Zealand: Victoria University of Wellington, 224 p.
- Peneze Z. (2009) *Transformations of the Latvian Rural Landscape in the 20th and 21st Centuries: Causes, Processes, Tendencies*. PhD Thesis. Rīga: Latvijas Universitāte.
- Raitis J., Virsnieks R. (1944) *Lauku dzirnavas*. Otrais iespiedums. Rīga. 10 p.
- Reenberg A., Primadahl J. (2009) Editorial: Globalisation and the local landscape [online] [accessed on 21.12.2012.]. Available: [http://rdgs.dk/djg/pdfs/109/2/Pp\\_iv-vi\\_109\\_2.pdf](http://rdgs.dk/djg/pdfs/109/2/Pp_iv-vi_109_2.pdf)

Siļķe K. (2008) Ūdens enerģijas izmantošanas vēsture Latvijā. In: *Mazā hidroenerģētika Latvijā*. Rīga: SIA Adverts, Latvijas mazās hidroenerģētikas asociācija, p. 6-11.

Teivens A. (1985) *Latvijas dzirnavas*. Stockholm: Daugava. 298 p.

Thompson C.W., Takemi S., Bell S., Millington C., Southwell K., Roe J., Aspinall P. (2007) Landscape quality and quality of life [online] [accessed on 18.12.2012.]. Available: [http://www.openspace.eca.ac.uk/conference2007/PDF/Summary\\_Paper\\_\\_CWT\\_\\_31\\_Aug\\_07.AB\\_edit.pdf](http://www.openspace.eca.ac.uk/conference2007/PDF/Summary_Paper__CWT__31_Aug_07.AB_edit.pdf)

Yatsko M.S. (1997) Ethnicity in Festival Landscapes: An Analysis of the Landscape of Jaialdi '95 as a Spatial Expression of Basque Ethnicity, Master's Thesis [online] [accessed on 18.12.2012.]. Available: [http://scholar.lib.vt.edu/theses/available/etd-2230102449761431/unrestricted/etd5\\_chap2.pdf](http://scholar.lib.vt.edu/theses/available/etd-2230102449761431/unrestricted/etd5_chap2.pdf)

Zariņa A. (2008) *Vietas ainavas raksturs un tā izmaiņas attīstības pēctecīguma teorijas perspektīvā. Landscape path dependency: landscape development's historical and biographical aspects in Latgale [Latvia]*. Promocijas darbs. PhD Thesis. Rīga: Latvijas Universitāte. 91 p.

Мейронс З. (1975) Рельеф Латгальской возвышенности и сопредельных районов Восточно-Латвийской низменности. – В кн.: *Вопросы четвертичной геологии*, 8. Рига: Зинатне, с. 48-81. (In Russian).