

## THE IMPACT OF LEGISLATIVE RULES AND ECONOMIC DEVELOPMENT ON THE COASTAL LANDSCAPE IN LATVIA

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### ABSTRACT

*The development of the coastal landscape in Latvia was affected by various factors during different periods of time; the economic development and legislative rules are among them. The aim of this paper is to study and analyse how these factors have influenced the coastal landscape, identify spatial, functional and visual changes as well as inter-relationships between the factors and changes in the landscape. The study presents the analysis of the impact of legislative rules and economic development on the coastal landscape in Latvia during three historical periods: the Soviet period, the period of regaining independence in Latvia as a period of transition, and the present period. The selected objects of the study - Ainaži, Saulkrasti, Kolka, Liepāja - are of different scales and with individual historical development. The main conclusion of the study is that both heavy restrictions in the Soviet period and rapid yet unclearly defined development in the period of transition and present period are in contradiction to the landscape, thus irreversibly changing the identity of the coastal landscape as well as the spatial, visual and functional aspects. Taking all this into consideration, when planning the coastal landscape and improving the legislative rules in future, it is important to establish a vision of sustainable development, take actions at the regional as well as national levels, and identify the priorities at the local level emphasizing the identity of the landscape, cultural, archaeological and natural values.*

**Key words:** landscape changes, coastal landscape, Baltic Sea, impact of legislative rules

### INTRODUCTION

For years the coastal area of the Baltic Sea and the Gulf of Riga has seemed appealing for people as a permanent living place, recreational space, and a biologically and archaeologically diverse landscape. Meanwhile, this part of Latvia is politically and strategically important, as it is the state border and the door to the international zone. The coastal landscape is multifarious. Currently the total stretch of specially protected territories along the sea is approximately 232 km, which composes 47 % of the total coastline length which is 490 km (Eberhards, 2003; Laime, 2005). There are 7 towns and more than 20 populated areas located on the coast having direct access to the sea (Piekrastes telpiskās...).

When looking to the Baltic Sea region as a whole, one should note the special role of coastal territories in development of this area. A considerable number of the population has already been there historically and economic activities have been performed for a long time. At the same time natural and aesthetically attractive landscapes have formed on the coast under the influence of nature's factors. The value of the coastal landscape is also formed by the unique cultural environment with the identity immanent to each place. Therefore preservation and protection of the coastal landscapes is important. Nowadays the topicality of the coastal landscape research is mainly related to the increase of human activities in this territory. By the towns and villages

expanding, new architecture that is often not typical of the rural landscape sets in; tourism industry is developing by attracting an increasing numbers of visitors. Development of infrastructure is related to it as well: construction of roads, bridges and various service objects. During the last recent years the trend of port operation rebirth is evident and new oil terminals have also been built. Coastal territories are increasingly used for obtaining alternative energy by developing wind generator parks. Thereby these territories are becoming increasingly attractive for economic and recreational activities of people (Melluma, 2003). In the Latvian Sustainable Development Strategy the Baltic Sea coast has been recognised as one of the greatest values of Latvia where cultural and historical heritage and natural wealth must be balanced with economic development (Latvijas ilgtspējīgas..., Hohlovska, Trusiņš, 2010).

As already noted earlier, development of the coastal landscape is affected by various nature and human factors (Nitavska et al, 2011). By human influence increasing, the role of planning for sustainable development of these coastal territories is becoming more topical. It also includes the analysis of existing and projected economic development and perfection of legislative rules.

The influence of legislative rules on landscape changes is related to two aspects. On the one hand it is the use of the term 'landscape' itself in legal documents. On the other hand there are legislative rules affecting the economic activity of people that

facilitate or minimise one or another activity on the coast thus directly or indirectly affecting the overall visual image and function of the landscape.

Latvian scientists have also characterised the influence of legislative rules and economic development on landscape changes in their studies by emphasizing coastline protective belt problems (Pižulis, 2010), coastline recreation development trends and problems (Hohlovska, Trusinš, 2010), relation of landscape management and planning to legislation and legislative rules (Melluma, 2002).

According to the suggestion of the Latvian scientist Aija Melluma (Melluma, 2003) sustainable development of the Latvian coastline directly depends on planning where it is important to adhere to the requirements of the Latvian legislative rules in nature protection and territory planning context. It is also important to consider the sustainable development principles and coastline protection guidelines that have been recognised in European countries and have been included in several international documents. Those are: HELKOM (The Baltic Marine Environment Protection Commission, also known as Helsinki Commission) recommendation 15/1: Coastline protection, adopted in 1994; joint recommendations for the coastal territory planning in the Baltic Sea region adopted by the 1996 Stockholm conference of the Baltic Sea region ministries responsible for spatial planning and development; the European spatial development perspective in which the sea coast territories have been distinguished as special spatial structural units (1999); the Spatial Development Action Programme VASAB (Baltic Sea Region Spatial Planning Initiative) 2010+ developed within the Vision and Strategies around the Baltic Sea 2010 that has been adopted by the 2001 Wismar conference of the Baltic Sea region ministers responsible for spatial planning and development; Recommendation 2002/413/EC of the European Parliament and of the Council concerning the implementation of Integrated Coastal Zone Management in Europe (Melluma, 2003). Principal emphasis in these documents is laid on coastal spatial planning, development, protection and management.

A regulatory approach was adapted in Latvia for coastal protection that was started in the 19th century. Nature protection is currently regulated by means of the Protective Belt Law and of major importance is the law On Specially Protected Nature Territories which provides for development of protection plans for protected nature territories. The laws On Environmental Protection and On Protection of Cultural Monuments provide for protection and preservation of environment and monuments. The documents governing planning in Latvia are: Regional Development Law, Territorial Planning Law, regulations of the Cabinet of Ministers regarding individual types of planning

(local and district local authorities, planning region, national planning) (Melluma, 2003). It should be admitted that quite often coastal protection is perceived very narrowly, only for the purposes of regulation. For the purpose of generalisation, the Protective Belt Law, unfortunately, does not respect the coastal diversity. Nowadays the principles of planning are justified by territory diversity, identity and development definitions that are based on balance of the economy and the social sphere (Briņķis et al, 2009).

Within the long-term development strategy of Latvia in 2008 the Regional Development and Local Authority Ministry was entrusted with drafting the coastal spatial development strategy and setting forth for the coast the status of the territory of national importance. "Proposals for ensuring sustainable management of the Baltic Sea and the Gulf of Riga coastline" have been prepared within this task and the work "Reviews regarding problems and conflict situations on the coast" for Kurzeme and Riga planning regions has been drafted as well. Notwithstanding such a large deposition in the direction of coastal development the many authors still note that planning regions are not being involved. Scrupulous work on the detailed plans with modelling approach should be regarded as one of the solutions (Briņķis et al, 2009).

Coastal development is important at the European Union level and is governed by the following international documents and documents of the Baltic Sea region and national level. Environmental protection and biodiversity issues are discussed by the Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki, 1974, 1992); Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar, 1971); Conventions on Biodiversity (Rio de Janeiro, 1992); Convention on the Conservation of European Wildlife and Natural Habitats (Berne, 1979); Convention on the Conservation of Migratory Species of Wild Animals (Bonn, 1979); General Convention on Climate Change (1992) and the Kyoto Protocol (1997); the EU directives on the conservation of wild birds (79/409 EEC) and on the conservation of natural habitats and of wild fauna and flora (92/43 EEC); the Helsinki Commission (HELKOM).

The landscape exploration, planning, management and development issues have been included in the European Landscape Convention (Florence, 2000); Recommendation (2002/413/EC) concerning the implementation of Integrated Coastal Zone Management (IPZP) in Europe (adopted on 30 May 2002); the EU Strategy for the Baltic Sea Region; the Baltic Sea region spatial planning documents (VASAB); Sustainable Development Strategy of Latvia till 2030; National Development Plan of Latvia for 2014 - 2020 (approved by the Republic of Latvia Saeima resolution of 20 December 2012);

the River basin section management plans; Land Policy Principal Guidelines for 2008 – 2014 (Ordinance of the Cabinet of Ministers No. 613 of 13 October 2008); Environmental Policy Principal Guidelines for 2009 – 2015 (approved by the Ordinance of the Cabinet of Ministers No. 517 of 31 July 2009); Riga Planning Region Spatial (Territory) Plan for 2005 – 2025 (approved on 2 February 2007); Kurzeme Planning Region Spatial (Territory) Plan for 2006 – 2026 (approved on 9 January 2008).

The national cooperation and security issues are discussed by the Convention on Access to Information, Public Participation in Decision-making (Aarhus, 1998); Convention for the Prevention of Pollution from Ships (1973); International Convention on Oil Pollution Preparedness, Response and Co-operation (1990); Convention on the Transboundary Effects of Industrial Accidents (1992); European Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment; the EU Water Framework Directive 2000/60/EC; Directive 2003/105/EC of the European Parliament and of the Council of 16 December 2003; Council Regulation (EC) No. 2371/2002 on the conservation and sustainable exploitation of fisheries resources under the Common Fisheries Policy; Energetic Development Principal Guidelines for 2007 – 2016 (approved by the Ordinance of the Cabinet of Ministers No. 571 of 1 August 2006); Strategic Plan of the Fishery Sector for 2007 - 2013 (approved by the Ordinance of the Cabinet of Ministers No. 201 of 11 April 2007 “On the Strategic Plan of the Fishery Sector for 2007 - 2013”).

Coastline sustainable development planning should be looked through at all planning levels: national, regional as well as local level. Each of these levels has different aims and approaches to their implementation; however they are closely interlinked and supplement each other. Researchers and planners see several important tasks that would be desirable to include and solve in each level of planning. On the national level the principal goals of sustainable development and coastline protection should be declared; the natural and cultural and historical values of national importance should be defined and revealed on maps; the coastline should be reasonably divided into sections based on natural, cultural and historical and development peculiarities; individual aims and priorities should be distinguished for each of these sections; coastline development and management strategies should be developed; spatial limits and management of the urbanisation process development should be foreseen (Melluma, 2003; Briņķis et al, 2009; Pižulis, 2010). The developed Latvian Coastline Spatial Development Principle Guidelines for 2011-2017 foresee developing the coast as a multi-functional and economically balanced space by

facilitating business specific to the coast, recreation and tourism (Piekraustes telpiskās...; Hohlovskā, Trusiņš, 2010).

On the regional level it is important to ensure an integrated approach to coastline management and planning which is based on detailed knowledge of landscape starting from the sea shore types, town and village positioning and current condition, types of landscape characteristic for the coast, nature processes, their dynamics and frequency, economic activities of people and their intensity, and ending with defining and recognition of places having great development potential.

Plans at the local level play the most important role since they are based on the existing real situation and conditions, not forecasts. At the local level it is important to involve the public in both the planning process and its implementation and management. It is exactly at the local level where it is possible to maintain the identity of particular landscape and to develop an individual approach to sustainable development of such a landscape. Plans and legislative rules at the local level can influence maintenance of local natural and cultural values and traditions which, in turn, create original landscapes. It is advisable to base local level plans on the following materials: existing values (both legally protected and formally unprotected) – excellent landscape places, nature creations, habitats, cultural and historical heritage; gathered information about the natural coastline process development places and risk assessment of such places – coast erosions, new creations and active sand travelling; consequences of economic activities of humans – damage, pollution, erosion, abandoned objects; opinions and conclusions regarding the individual place environmental capacity, admissible load of use, required activities for preserving cultural heritage (Melluma, 2003; Briņķis et al, 2009; Pižulis, 2010).

The purpose of this particular study is to determine how economic development and legislative rules affect the Latvian coastal landscape, what spatial, functional and visual changes happen under their influence and what mutual interrelations may be evidenced between these factors and landscape changes. Therefore the main tasks of the article are to research such influences in different periods of time and to obtain principal guidelines that should be included into coastal territory sustainable development planning.

## **MATERIALS AND METHODS**

### **Selecting Representatives**

The objects for research have been selected possibly different to obtain more diverse results regarding landscape changes in the Baltic Sea coastal territories in Latvia. The selected objects of the study are Ainaži, Saulkrasti, Kolka, and Liepāja

(Fig. 1). They are of different scales and with individual historical development. *Liepāja* is situated on the Baltic Sea on the SW side

of Latvia. On the inland side the town is limited by the Tosmare and Liepājas lakes.



**Figure 1.** Location of study objects - Ainaži, Saulkrasti, Kolka, and Liepāja

The rights of a town were acquired in 1625. Town area is 60.37 km<sup>2</sup>, population - 89 448, arranged green territories of 0.93 km<sup>2</sup> or 1.5% of the total territory of the town, forest territories occupy 10.12 km<sup>2</sup> or 17% of the total territory of the town, water territories 10.12 km<sup>2</sup> or 17% of the total territory of the town (*Liepājas pilsētas...*).

*Kolka village* is located near Kolkasrags - Cape Kolka that stretches into the sea and is a meeting place of the Baltic Sea and the Gulf of Riga. Kolka is one of the Liv villages. Kolka village dates back to the year 1387. Kolka civil parish current area is 116.9 km<sup>2</sup> and the population in Kolka village is 873 (*Dundagas pagasta...*). Kolka civil parish is now part of *Slītere National Park*.

*Ainaži* is located on the coast of the Gulf of Riga and borders on Estonia. Ainaži acquired the rights of township in 1926, but since long ago it has been a place populated by the Liv fishermen. The town area is 5 km<sup>2</sup>, rural territory 149 km<sup>2</sup>. At the end of 2003 there were ~ 1800 people residing in the territory, including 1200 in Ainaži town and ~ 600 in rural territories. The green areas are composed of forests, marshes, waters and bushes occupy 73 % of the territory (*Ainažu pilsētas...*).

*Saulkrasti* is located on the Gulf of Riga, 45 km north of Riga. The rights of township were acquired in 1991. Total area of the territory is 48 km<sup>2</sup>, including the territory of Saulkrasti town of 6.8 km<sup>2</sup>, rural territory 41.2 km<sup>2</sup>. At the beginning of 2003 the number of permanent residents in Saulkrasti town with its rural territory was 5398 (*Saulkrastu pilsētas...*).

### Analysed historical periods

The analysed period is from 1939 to 2012. It has been divided into three sections: Soviet period, the period of regaining independence of Latvia and the present period. Characteristics of those are given above.

*The Soviet period.* For the Baltic Sea coastal territories the Soviet period was characterised by sharp changes because these territories became the external border of the USSR. The largest towns on the Baltic Sea western coast became the Soviet military navy bases (*Ciganovs, 2010*). A special borderland regime was developed on the Baltic Sea coast and border guard units, posts, tank practice areas, aviation firing grounds, military airports, weapon and ammunition storages, military intelligence objects, etc. were concentrated there (*Militārais mantojums...*). Resources and territories were required for placing these objects as well as for army living quarters. This facilitated pressing local residents out of their native places of residence, adjustment of several cultural heritage objects for military needs as well as announcing the coastline as a restricted movement zone. The border status imposed on the landscape cardinally changed the cultural and historical development of this area, both the historically formed lifestyle and the type of economic activities.

Parallel to these processes on the coast, the Latvian rural landscape was also affected by the land reform that had already started in 1940 and collectivisation. Its task was nationalisation of land by decreasing

the existing peasant households to 20-30 ha; land was declared property of the state (Boruks, 2003). Collective farms united the land formerly owned by peasants the inventory and cattle, which they were deprived of during the nationalisation of land. Economic development of collective farms differed and this facilitated the migration of people from less developed rural areas to the towns. During the period of 1940 to 1985 the rural population in the territory of Latvia decreased from 65 % to 30 %. After collectivisation the number of homesteads in the territory of Latvia decreased from 89.8 % (in 1948) to 3.5 % (in 1950) (Boruks, 2003).

This period which is characterised by forced industrialisation and collectivisation of agriculture also caused a migration of people from other Soviet republics thus changing the ethnical composition of Latvia (Zvidriņš, Vanovska, 1992). Development goals of the new government affected the existing construction system; changes appeared in the field of city planning, standardised architectural solutions were adopted (Briņķis, Buka, 2001). Later, in 1959, the building of new industrial plants began. The number of military industrial complexes increased in Latvia, but sufficient attention was not paid to environmental protection (Butulis, 2010).

As of 1956 the CPSU CC 1st Secretary N. Khrushchev condemned the Stalin's totalitarian regime and started a partial liberalisation that was reflected in many areas of life. This period was characterised by improvement of cultural and social life. People who had come during the migration lived in many places, also in barracks and in the 1960s mass construction of residential houses began based on the model projects. The apartment fund increased twice from 1960 to 1985, but all the needs of the population were not satisfied (Butulis, 2010). When developing the social sphere, there were several legislative rules and national standards issued in the Soviet Union that regulated the nature protection field and use of water objects for recreation. This legislation had started to operate by the '80s by controlling both location of recreation places with respect to the national economy objects and arrangement of such territories, water quality, sanitary protective zone size and type of control. For example, 20-40% of green areas were foreseen for recreation zones which in certain places did not correspond to natural conditions of the beach (Библиотека нормативно...). Recognising the consequences of industrialisation, the resolution of the Council of Ministers was issued in 1988 regarding reviewing and transforming the cardinal nature protection issues. In the introduction part of this document all imperfections of the system and the already existing problems were discussed (Библиотека нормативно...).

*Regaining independence of Latvia.* After Latvia regained independence in 1990 the Soviet army left its bases. Several thousand hectares of vast

territories were abandoned in coastal territories unpopulated, but with rocket bunkers, underwater ports, neglected cultural heritage monuments that served earlier for the needs of the army, soldiers' barracks and other constructions. Quite often these areas were polluted (Luksa, 2007). When the Soviet army left, the military territories were quite often handed over to the management of local authorities. There were not enough funds to manage and guard those, therefore they were robbed most often (Belta, 2008). A part of these territories was denationalised or privatised.

At the beginning of the '90s the collective farms were transferred into joint stock companies or liquidated (Boruks, 2003). Territories of collective farms and the army were left without legal owners which facilitated the degrading of these territories, vandalism, destruction of nature and cultural heritage objects and violation of laws, since the new legislation had not yet been prepared to protect such territories. During this period the most common violations on the coast were - dunes destroyed by cars and illegal construction in the protective zone. Notwithstanding the fact that the Soviet laws also prohibited construction in the dune areas, local authorities deemed these laws as having lost their effect (Matulis, 2000). These times of change, in general, changed the town construction policy because a new form of private property and market relations entered into force in both town and rural construction (Briņķis, Buka, 2001).

The former border of Eastern Europe and Western Europe gained attention also for the great biological diversity of these territories that was facilitated by limited access to this zone. After the collapse of the Berlin Wall an idea for developing the Green Belt project arose that is valid nowadays as well. The Baltic Green Belt project operated within it, which is implemented by 15 governmental and non-governmental organisations from five countries in the eastern and southern shores of the Baltic Sea. There are the German, Lithuanian, Latvian, Estonian as well as international nature and nature protection resource union (IUCN) in Belgium and the Coalition for Clean Baltics (CCB) in Sweden. The task of this project is preserving, using and developing natural and cultural heritage on the Baltic Sea coastline; developing an international cooperation platform for nature protection and sustainable coastal development organisations; demonstrating good examples in tourism, ecological farming and involvement of the public into regional planning. (Project "Baltic...; Sliteres nacionālais..."). Another such project that took place in the '90s was the European Union INTERREG IIIB a co-funded project Sustainable Reintegration of the Post-Soviet Military residential territories as a Challenge and Opportunity for Regional Development – ReMiDo. Within the project territories - they were evaluated, their development trends were defined, experience

of other countries was assessed, action plans on governmental and local authority level were developed and some pilot projects were implemented (Luksa, 2007).

*Present period.* After the Soviet army left many territories remained with an unclear status and an unarranged environment. Former military territories on the coast were polluted and dangerous. It was not only the pollution of ground waters and soil, but also unexploded ammunition that was in the ground. The Ministry of Defence, the Ministry of Environment, local authorities and National Armed Forces (NAF) are currently responsible for putting these territories in order. There are more than 100000 ha of such territories currently in Latvia, which is one seventh of the territory of Latvia. Approximately 80000 sea ammunition units are in the Baltic Sea, including the territorial waters of Latvia. The Defence Property State Agency has been operating since 2003. It performs and organises environmental protection activities in military defence objects as well. Planned research of such territories has been performed together with NAF, but implementation of protection and cleaning activities is delayed by the need for large financial investments (Polītis, 2007).

An increasing number of tourists are interested in military heritage and a lot of specialists consider this field as a unique and competitive direction of tourism having its target audience. Several objects have been inspected already and recommendations have been provided for sustainable management of military heritage and its use for tourism in the Natura 2000 and other protected nature territories. Quite often the USSR military bases used military constructions dating back to the Tsar's period and World War I. A data base of these military heritage objects and the military heritage tourism map have been developed. Recommendations have been summarised and the Military Object Use Guidelines have been drafted that include information about the data base, examples from other countries and Latvia (Militārais mantojums...; Militāro objektu...).

#### **Assessment materials and approaches**

In order to study the impact of legislative rules and economical development on spatial, functional and visual changes in the coastal landscape cartographical materials from different periods of time, historical photographs and images, development plans, legislative rules and statistical data are used.

Legislative rules at the local level have been used in research, because they most directly affect the decision-making in relation to development of particular territories. For the purpose of historic research the electronic archives of legislative rules of the USSR for the period from 1939 to 1990 has been used (Библиотека нормативно...), for the purpose of research on the situation of the present

period – the nature protection and management, construction legislative rules and the local municipality development plans for the period from 1990 to 2012. According to those the main causes for landscape changes were defined, which were influenced by decisions adopted during the particular period based on these legislative rules. The findings of previous studies (Ņitavska et al, 2011; Ņitavska, Draudiņa, 2012) regarding the town of Ainaži and the Liv coast territory historic development have been used to characterise economic and historic development. They mark the principle development stages and events that had a significant impact on the coastal landscape changes. The USSR General Headquarters military topographic maps of scale 1:10000 for the territory of Latvia of 1942 as well as the Latvian Geospatial Agency topographic map based on surveys of 1994 – 1999 were used for cartographical analysis. For the analysis of historical changes also the Latvian National Library map coverage possibilities were used by using historical maps of different periods and modern maps (Latvijas Nacionālā...). Based on the cartographical material the spatial and functional changes of landscape were defined: increase or decrease of construction, forest, road and water territories.

Black-and-white and coloured photographs from archives, books, internet resources and photo materials from the personal archives that had been obtained by inspecting the territories in 2010, 2011 and 2012 were used for additional analysis as well. Visual changes in landscape were defined based on the photographs: changes in the objects important for the place in the course of time as well as occurrence or disappearance of new man made or nature elements (Ņitavska et al, 2011).

The obtained data have been summarised in tables which distinguish three periods of research, and the main development stages and changes in landscape relevant to those have been defined for each of them (Fig. 2, 3, 4, 5).

#### **RESULTS AND DISCUSSION**

Changes in each populated area landscape caused by legislative rules and economic development are depicted in the schemes (Fig. 2, 3, 4, 5) and the detailed descriptions following further.

#### **Liepāja**









After research of the cartographical material it was determined that the main spatial changes have taken place in the town of Liepāja expanding when the urban territory increased and natural territories shrank. By the town expanding, the anthropogenic load increased as well, because the number of inhabitants in Liepāja till today has increased almost tenfold. It did not increase during the Soviet period as fast as in other places in Latvia because a



closed military port zone was established there. Thereby the principle growth in population during this period was due to the fact that several parts of the town were allocated for military persons that were operating in the coastal military objects. Legislative rules of that time set forth that these territories were not accessible or had limited access. Thus, closed territories with specific infrastructure appeared in the landscape of Liepāja. After regaining independence, when the Soviet army left, entire parts of the town were left unpopulated and abandoned. Thereby territories started to gradually appear in the town landscape that were, and in some places still are non-functional and degraded.

To overcome a hard economic crisis, in '90s Liepāja was established as the SEZ (special economic zone).

Its establishment and the laws and legislative rules related thereto, in their turn, facilitated flourishing of the town (Latvijas pilsētas...). Some parts of the territories obtained new functionality. The improvement of the visual quality of landscape was promoted which, in its turn, facilitated the development of tourism. The most popular tourist objects at the moment are Liepāja Karosta and Karosta prison, but one must admit that the infrastructure has not yet developed to a sufficient extent.

	Soviet period – 1939–1990	Latvian independence period -1990s	Present period – from 2000
Events	Closing of port area because of World War II Closing parts of the city and its infrastructure for military purpose Movement of inhabitants from country to the city; growth of population affected by migration and industrialization	Abandonment of several parts of the city become Decrease in economic development affected by economic crisis Establishment of Special Economic Zone; city development	Tourism development The coastal nature protection Continuation of degradation of former military areas
changes in the landscape	Increase of built-up areas Increase of urbanization in the area	Degraded landscape of former military areas Uncontrolled use of natural areas Apiering of new architectural objects	Still degraded landscape of the military areas New architectural and tourism objects
maps, photos	 	  	  

**Figure 2.** Development of Liepāja city.

(Source: PSRS Ģenerālštāba...; Latvijas Ģeotelpiskas...; Liepāja vēstures...; Izstāde “Karosta...; Latvijas pilsētas...)

### Kolka





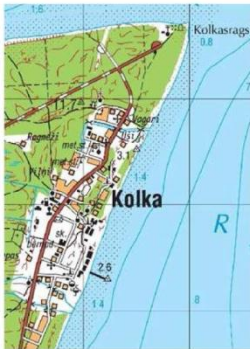

After research of the legislative rules and historic materials, it was determined that the first significant landscape changes in the territory of Kolka were

related to the strict protection regime established during the Soviet period. This facilitated inaccessibility of landscape. The territory could be visited only by a limited range of persons; local fishermen could not go into the sea freely. Such

closed territory status facilitated increase of biodiversity, because anthropogenic load in the territory decreased rapidly. However, it was defined as a negative feature that along with the re-naturalisation processes in this territory several cultural and historical objects were lost or degraded, traditions and traditional territory management types were lost. Many residents were forced to move out of the nearby Liv villages because military army bases were placed there.

Basing on the cartographic material it could be evidenced that the territory of Kolka village expanded during the Soviet period. After studying historical materials and legislative rules, it could be concluded that this was facilitated by the development of Kolka as the civil parish centre.

Thereby new elements came into the landscape. Collective farms and new infrastructure were developed, the number of inhabitants increased because of migration (Šuvcāne, 2010; Lībiešu krasts). The architectonic structure of landscape changed rapidly. Model-type multi-storey construction appeared that did not match with the cultural and historical traditions of the coastal village. The scale and visual image of landscape were changed. After regaining independence the collective farm collapsed and vast unmanaged territories remained that were reflected in the landscape as degraded territories. As long as Kolka civil parish is currently a part of Slītere National Park, specific conditions are imposed on

	Soviet period – 1939–1990	Latvian independence period -1990s	Present period – from 2000
Events	Strict protection regime of the Soviet Army; development of military zones Denationalization of private properties Building of collective farms; collectivization Development of new infrastructure Population growth in urban centres	Establishment of Slītere National Park Collapse of collective farms Regaining of private properties Abandonment and degradation of the military areas	Tourism development The coastal nature protection Insufficient financing for maintenance of territories of former collective farms
changes in the landscape	Increase of built-up areas Increase of urbanization in the village A loss of traditional way of economic activities Increase of biological diversity and loss of heritage values in restricted areas	Nature degradation as the result of illegal construction Degraded landscape of collective farms of the Soviet period Uncontrolled use of natural areas	Improvement of the infrastructure in protected areas Continuation of landscape degradation in the areas of former collective farms Aforestation of unmanaged areas
maps, photos	 	 	 

**Figure 3.** Development of Kolka village.

(Source: Ģenerālštāba...; Latvijas Ģeotelpiskas...; Fotostasts “Senais...; Šuvcāne, 2010; author’s photo)

management and development planning of this territory. The village itself is located in a neutral protective zone which allows developing this territory comparatively freely. But the territories

adjacent to the village are within the landscape protection zone that sets forth much stricter restrictions by minimising the anthropogenic load (Slīteres nacionālais...). The territory of the former










collective farm that is on the sea shore is abandoned and still degraded. As long as sufficient funding for territory management or transformation is not available, the territories will continue to be gradually overgrown. Nowadays tourists are attracted more by the Cape Kolka itself and less by Kolka village, because its most important cultural and historical values had practically been lost or degraded during the Soviet period.

### Ainaži

Ainaži flourishing period is related to shipbuilding and port flourishing at the end of the 19th and the

beginning of the 20th centuries. During this period Ainaži port developed rapidly, there was also a railway. After World War II the town infrastructure developed in Ainaži and the number of inhabitants increased. By natural territories decreasing, the town environment increased in the landscape. One can see the evidence by researching historic photographs that during the Soviet period, like in other towns of Latvia, the model-type architecture appeared. The multi-storey block-house construction in conjunction with the collective farming infrastructure elements (hothouses, cattle-sheds,

	Soviet period – 1939– 1990	Latvian independence period -1990s	Present period – from 2000
Events	Building of collective farms Development of new infrastructure Population growth in urban centres Closing a rail line	Establishment of the border control point in the town Regaining of private properties Dissolution of the collective farms and many other companies Establishment of North Vidzeme Biosphere Reserve status	Tourism development The coastal nature protection Still existing degraded areas of former collective farms Population decline
changes in the landscape	A loss of traditional way of economic activities The increase of built-up areas Enclosed areas of natural recovery The increase of urbanization in the village	Degraded landscape of collective farms of the Soviet period	Improvement of the infrastructure in protected areas Continuation of landscape degradation in the areas of former collective farms Aforestation of unmanaged areas
maps, photos	 	  	 

**Figure 4.** Development of Ainaži town.

(Source: Latvijas Ģeotelpiskas...; Ainažu baka; Renemanis, 2006; Ainažu jurnieku...; Latvijas pilsētas...; author's photo)

warehouses, etc.) explicitly changed the scale of the landscape. Collective farms and many other enterprises ceased to exist after regaining independence in the '90s. People had to look for work elsewhere, but the number of unmanaged and








degraded territories increased in the landscape. Nowadays the flourishing shipping days are bygone, only by the lighthouse is a reminder of those times, the museum and the breakwater also dominate the landscape (Latvijas pilsētas; Ainažu

pilsētas...). Currently, the territory of the town, together with the Randu meadows and forest areas, has been included into the Northern Vidzeme Biosphere Reserve. This facilitates landscape protection and controls use of natural resources.

### Saulkrasti

Saulkrasti formed by gradually uniting several populated areas that had existed since 1641. When the town environment expanded and new territories gradually joined in, the number of inhabitants

increased also from 1935. Based on the historic and modern photographs it was possible to establish that after World War II, when Skulte fishing port and several productions were built, the scale and visual image of landscape changed explicitly. Specifics of Ainaži town landscape are mainly related to the increasing use of this territory and the anthropogenic load. Already Saulkrasti has been a favourite summer holidaymaker place since the Soviet times, also there are many campgrounds, guesthouses and summerhouse districts there.

	Soviet period – 1939 – 1990	Latvian independence period -1990s	Present period – from 2000
Events	Development of new port area Denationalization of private properties Development of collective farms Establishment of new infrastructure Population growth in urban centres	Collapse of collective farms Gaining a town status; covering larger area Regaining of private properties Many factories and enterprises have been privatized	Tourism development, The coastal nature protection Development of new road around the town Increase of guest houses, holiday home areas
changes in the landscape	The increase of built-up areas The increase of urbanization in the rural landscape	Nature degradation as the result of illegal construction Degraded landscape of the farms of the Soviet period Uncontrolled use of natural areas	The increase of built-up areas The increase of urbanization in the rural landscape
maps, photos	 	  	 

**Figure 5.** Development of Saulkrasto town.

(Source: Ģenerālštāba...; Latvijas Ģeotelpiskas...; Regional policy...; Uzņrmejdarbība – ieskats...; Neubad, Pension...; Latvijas pilsētas...)

After regaining independence in the '90s many productions and enterprises were privatised (Latvijas pilsētas...). The number of degraded territories is not so large comparatively, because the territory of Ainaži town is attractive for various types of use. However, expressed uncontrolled use of natural resources is evident that was facilitated by lack of relevant legislative rules during the transformation period from the ones developed during the Soviet period to the ones drafted in Latvian period, as well as a prolonged unclear granting of the nature object protection status and property right conflicts. The town is currently developing the coastal infrastructure by arranging the beach area, coastal walking trails and visiting objects; such processes are partially hindered by lack of financial support. In its development strategy the town is planning the transformation of summerhouse districts into residential quarters as well as the development of Zvejniekciems port (Saulkrastu pilsētas...).

## CONCLUSIONS

The main conclusion of the study is that both heavy restrictions and rapid yet unclearly defined development are in contradiction with the landscape, thus irreversibly changing the identity of the coastal landscape as well as the spatial, visual and functional aspects.

After researching different size and character populated areas on the coast it should be concluded that the effect of economic development and

legislative rules on coastal landscape may be both direct and indirect. As the result of their influence the main trends in landscape changes may be proposed.

Economic growth and increase of population is reflected in the landscape by an increase of construction and a decrease of natural territories. Introduction of closed zones and strict protection regime facilitates an increase of natural diversity, though at the same time it facilitates also the disappearance of traditional landscape and individual cultural and historical objects.

The slow development of laws and new legislative rules in conditions of changes, facilitates illegal use of natural resources and quite often also degrading of natural territories.

Unarranged property right issues and lack of financial investment is reflected in landscape as chaotic and in some places also uncontrolled territory development or landscape degrading and inaccessibility of landscape.

National and local level planning issues should be closely related to research of historic events by clearly recognising mistakes and benefits provided by the earlier planning and management processes.

Taking all this into consideration, when planning the coastal landscape and improving the legislative rules in future, it is important to establish a vision of sustainable development, take actions at the regional as well as national level, and identify the priorities at the local level emphasizing the identity of the landscape, cultural, archaeological and natural values.

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