ROLE OF ENVIRONMENT IN STRENGTHENING COMPETITIVENESS OF CITIES BY EXAMPLE OF EUROPEAN GREEN CAPITALS AND TALLINN

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Abstract

Guaranteeing a high-level living environment is one of the most important preconditions to the balanced and sustainable economic and social development of the European Union. Serious environmental problems can be seen in European cities, which are the places where most of the population live and which create the highest number of jobs, economic growth and added value. The level of urbanisation in Europe was 72.7% in 2010 and the UN forecast that it will increase to 82.2% by 2050. The European Green Capital Award was created in 2006 in order to recognise cities that have contributed to the improvement of their quality of life. The cities that have won the award have started using the most innovative and efficient measures for increasing the city's competitiveness, and are an example of how to achieve sustainable development for all cities, not just capitals. The environmental indicators of cities that have won the European Green Capital Award are high. In this article the problem is analysed using the example of Tallinn, the capital of Estonia, which strives for a place among cities with the highest quality of life in Europe. The objective of this article is to analyse the areas of the city's environmental activities and environmental organisation in the context of increasing competitiveness. The original database used by the author in this article consists of the responses given by the governments of the cities who have already been awarded the title of European Green Capital when asked to describe the impact that applying for and achieving the title had on their cities.

Keywords: city environment, competitiveness, sustainable development, European Green Capital (EGC), Tallinn

JEL Classification: R11, R12, R58, F64, H70

Introduction

Guaranteeing a high-level living environment is a precondition to the balanced and sustainable economic and social development of the European Union, in which cities have an important role to play. Urbanisation is one of the most fundamental characteristics of today's Europe, which has considerably changed the living environment (Antrop; 2004). This is why the development of cities is the main focus

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of spatial policies. More than 70% of European citizens live in cities today. Cities are not only places of residence for their population, but also the engines of economic activity that provide a large proportion (up to 85%) of the gross national product (United Nations; 2009). Jobs, economic growth and added value are mostly created in cities. A city is a human community with mental, physical and associated infrastructure. Cities are characterised by close social, economic and environmental connections and functional networks that are only characteristic of this habitat. European citizens are increasingly interested in the state of the environment and more aware of the impact the environment has on our quality of life and that of future generations.

The city's initiatives that have a significant impact on the improvement of the living environment need greater recognition and acknowledgement, and there should be more motivation for such efforts. This is why Tallinn, on the initiative of the author of this article, made the proposal to establish the European Green Capital (EGC) Award in 2006, to value the environmental protection activities of cities and recognise efforts made in the creation of a harmonious urban environment (Measuring urban…; 2010). This was based on the generally recognised opinion that the determined improvement of the environmental condition of cities and towns provides an important foundation for their competitiveness, which is increasingly important in today's world, which keeps integrating and becoming more open.

The author finds that the use of such living environment indicators as cleanliness of water and air, size of green areas, noise level etc. in the assessment of the competitiveness of the cities has so far been modest. At the same time, the number of people who consider these when deciding where to live is increasing. This means that a very good living environment gives cities an advantage in the recruitment of qualified labour. The purpose of this article is to analyse the environmental activities and environmental organisation of cities in the context of improving competitiveness and to develop proposals for the enhancement of the relevant competitiveness of Tallinn.

The data of the EGC cities originates from several studies published by the European Commission and the website (European Green Capital: http://ec.europa.eu/environment/europeangreencapital/index_en.htm). The detailed study compiled by the Sustainable Estonia Institute (SEI) in 2013, which describes and compares the environmental indictors of five cities that have won the award in 12 areas of activity, is also used (Overview…; 2013). The answers given by the governments of EGCs to the author's questions about the impact of the Green Capital on their cities have also been used. Several manuscripts that discuss the development plans and numeric indicators of Tallinn have also been used. These data have been analysed and compared with the data of existing EGCs, and the environmental status of Tallinn – which is striving to become a European Green Capital – is assessed on the basis of these.

Urban environment and supporting provisions

The urban development of Europe is increasingly influenced by the continuation of globalisation, the transfer to an economy that is knowledge-based and driven by technological development, the increase in the mobility of production factors, demographic changes, European integration and concentration of environmental problems (Hallika; 2007). In this day and age, sustainable development is only guaranteed in the conditions of an open economy and cultural life. However, this also means that cities must operate in an increasingly more competitive environment at both the national and international levels.

A city is a constantly developing system whose behaviour can be predicted and whose development can essentially be guided (Levald, Sander; 2005). The development of cities proceeds from development and other plans. Urban planning requires an awareness of the different aspects of a city's growth, and implementation of economic, social and economically sustainable development (Jauhiainen; 2005). The Charter prepared at the Torremolinos Conference in 1983 emphasised the importance of spatial planning that is democratic, coordinates and integrates the development plans of various walks of life and represents functional and long-term planning of spatial development (European regional…; 1983).

The general goals of urban development must guarantee a living environment that meets everyone's basic needs, i.e. that it is fit for life, sustainable, healthy and safe. It is important to satisfy the social, cultural and economic needs of citizens with the lowest possible energy and material consumption, rational use of land and the smallest possible damage to the environment. One of the conceptual bases of a plan is sustainable use and development of the valuable elements of the city structure for the achievement of social balance and diversity in the city as a whole as well as in single regions/districts of it, which often guarantee the fast and efficient development of the city as a whole (Mäeltsemees, Lõhmus; 2006). It is therefore important to creatively combine the natural environment with the man-made one to support the development of a region (Magnaghi; 1998).

Many concepts that were developed and adopted in the 1990s and in the early 21st century have strongly supported the improvement of the urban environment. Representatives of European local authorities assembled in Aalborg in 1994 to continue developing the positions of the World Conference on Environment and Development held in Rio de Janeiro in 1992 and to sign the Aalborg Charter. This became the basis for the preparation of the sustainable development plans of many European cities and towns (Aalborg Charter; 1994). In 1995 Estonia adopted its Sustainable Development Act, which at the time was the second in the world after Costa Rica. It emphasised development where the needs of future generations are taken as a priority in considering the long-term nature conservation requirements of the country. Such an approach is the practical output of the global nature conservation strategy and proceeds from the postulate that economic growth must consider the limits set by nature.

The Sixth Environment Action Programme of the European Union set goals in four priority areas: climate change; nature and biodiversity; environment, health and quality of life; and natural resources and waste (6th EU Environment…; 2001). This programme also highlighted several aspects in whose resolution cities and towns play a decisive role. Guaranteeing air quality, developing sustainable city transport, reducing the volume of traffic and preventing traffic jams, reducing general background noise, guaranteeing a quality living environment in built-up areas, guaranteeing order and maintenance, reducing greenhouse gases, reducing the negative manifestations of urban sprawl, reducing the generation of waste and treating and cleaning waste water are just some of the issues that cities and towns need to resolve.

In 2006 the European Parliament adopted a resolution about a thematic strategy concerning the urban environment (P6_TA(2006)0367) which is aimed at making a contribution to general environmental protection in European cities and towns by reducing bureaucracy and increasing the efficiency of environmental policy implementation and encouraging long-term environmental planning (European Parliament Resolution…; 2006). More green areas must be designed in urban planning and the expansion of cities, and enough natural areas should be left untouched when new city districts are built to preserve people's immediate relationship with nature.

In 2004/2005 the Union of Baltic Cities carried out a survey to clarify the situation and trends in the sustainable development of cities (Baltic Cities…; 2005). The indicators were selected from the main topics of the union's Agenda 21 Action Programme, which tie in with the thematic strategy on the urban development of the European Commission as part of the Sixth Environment Action Plan of the European Union: capable management; good living environment and nature conservation; social integration and health; sustainable use of energy and resources; and economy and transport that guarantee all of this. The introduction and implementation of environmental management systems in cities and towns must become more efficient. One of the main ways of improving the situation highlighted in the strategy on urban development is the preparation of an integrated environmental management system that covers the entire city.

The sustainable development of cities is also approached in the Leipzig Charter, which was adopted in 2007 and which provides new impetus to design sustainable cities using the integrated urban development policy, where economic development, social balance and cohesion and consideration of environmental aspects must find equal places in urban development. Cooperation between political and administrative units of different levels and the private sector is very important (Leipzig Charter; 2007)

The development of cities must also proceed from the EU Strategy 2020, which is planned as a follow-up to the Lisbon Strategy, whose objective was to make the EU the most dynamic and competitive knowledge-based economic area by 2020 whilst increasing social cohesion and guaranteeing development that does not harm the

environment. The Europe 2020 strategy is the new European competitiveness strategy, which should allow the EU to recover from the crisis and move towards a knowledge-based and environmentally sustainable economy, resolve many environmental and social inequality problems, achieve economic growth and create new jobs. The role of information and communication technology is becoming increasingly important in this process (The Global…; 2010). Estonia is also striving to become a state with a cohesive and user-friendly spatial structure and diverse living environment that is well connected to the rest of the world by the 2030s (National Spatial Plan…; 2012).

The economic indicators of cities are primarily used to assess the competitiveness of cities (Mayerhofer; 2005); the satisfaction of residents with their living environment is also important. The development level of infrastructure is also important, as city residents spend more and more time in urban space. The economy can only be competitive if the level of welfare of city residents is high and their standard of living is increasing constantly. In addition to the economic and social areas, the importance of the green sphere is also increasing constantly and has become an inseparable part of sustainable competitiveness.

Status and laureates of European Green Capital Award

The main goal of the European Green Capital status is to invite all European cities, towns and people to strive for a better and more sustainable environment every day. Using the urban environment also means protecting it, consistently improving its condition, where environmental protection becomes an inseparable part of the use of the environment (The Expert Panel's Evaluation Work…; 2009). This was the basis of the development of the proposal on the European Green Capital Award in Tallinn.

The proposal (memorandum) on the Green Capital Award, which had been signed by the mayors of European towns and cities, was presented to the European Commission in spring 2006 (Memorandum…; 2006), where it was approved. The European Green Capital Award was established in Brussels in 2008. The declaration outlines the main idea: to encourage towns and cities to raise their level of environmental protection and improve their environmental condition (Declaration…; 2008). Three goals were added to this: to reward towns and cities that manage to consistently achieve high environmental goals; to motivate towns and cities to set ambitious goals for additional improvement of their environmental condition and for sustainable development; and to set an example that promotes the spread of best practice to other European towns and cities (Expert Panel; 2010).

All towns and cities in the European Union, the European Economic Area and European Union candidates that have a population of at least 200,000 are eligible for the award (Eligibility Check; 2012). The application submitted by the city must contain information about several environmental indicators. The submitted data are assessed by internationally recognised experts.

Two cities that could be named the first European Green Capitals were selected in 2008. The cities were evaluated on the basis of 10 environmental indicators (The Expert Panel's…; 2009). The requirements for each environmental indicator considered in the selection of the EGC were relatively high. The number of evaluated areas of activity has since increased to 12. They are: role of the region in global climate change; local transport; green areas open to the general public, incl. sustainable use of land; natural diversity and biodiversity; local air quality and noise levels; generation and management of waste; water consumption; waste water treatment; eco-innovation and sustainable employment; and the environmental management and energy efficiency of the local authority (European Green Capital).

The European Green Capital Award is given to a town or city that has started using the most innovative and efficient measures and that will continue to implement such measures in future, and is an example to other towns and cities in the achievement of sustainable urban development (Expert Panel; 2010). A city that is worthy of the award increases its competitiveness among other cities and becomes more attractive to investors, tourists, urban designers and representatives of other walks of life. This also means new impetus to promote economic development in the city, not to mention the environment becoming more human-friendly.

The first EGC Award was given simultaneously to two cities: Stockholm for 2010 and Hamburg for 2011. The city that has made it to the final round more times than any other is Bristol, which is in the running for the EGC Award 2015 – the third time it has reached the finals (Table 1).

Table 1. Finalists and winners of European Green Capital Award 2010-2014

Selected for Award in:	**Held Award in:**	**Winning city**	**All finalists**
2009	2010	Stockholm (Sweden) 209 km²; population 881,200	Amsterdam, Bristol, Freiburg, Hamburg, Copenhagen, Munster, Oslo, Stockholm
	2011	Hamburg (Germany) 755 km², population 1.8 million	
2010	2012	Vitoria-Gasteiz (Spain) 277 km²; population 240,000	Barcelona, Malmö, Nantes, Nuremberg, Reykjavik, Vitoria-Gasteiz
	2013	Nantes (France) 65 km²; population 600,000	
2012	2014	Copenhagen (Denmark) 74 km²; population 541,989	Bristol, Frankfurt, Copenhagen
2013	2015	*Bristol (UK) 110 km²; 428,100 population	Bristol, Brussels, Glasgow, Ljubljana

* not considered in this article

The cities that have won the EGC Award differ from each other in area, population size and density and location, and their economic and environmental problems are also different. The environmental indicators of the cities also vary on a large scale

(Table 2). One of the most common indicators used is urban landscaping, which differs greatly in cities in terms of area, structure and use. For example, gardens actively used by the general public cover 32.67% (1091 ha) of Vitoria-Gasteiz. The best indicator for comparing cities is the size of green areas per person, which in EGC cities ranged from 28-86 m^2. Living distance from a green area also varied (Table 2). The purpose of green areas is to guarantee the usability of socially and ecologically sufficient, aesthetic, accessible and recreational locations in the city (Levald; 2001). Traditions in the field of environmental protection and research are also important. For example, the monograph *Stockholms Natur* by Sernander (Uppsala 1926) was published in Stockholm almost 90 years ago and was the first to indicate ambient air pollution zones in the city. Although all areas carried equal weight in evaluation, the most remarkable achievements of each candidate were also highlighted.

The extensive programme for improving quality of life in the city was considered remarkable in the case of **Stockholm (2010).** The most important activity was the traffic or congestion charge introduced in 2006, which reduced the volume of traffic and emissions in the city centre by 10-15% (Stockholm…; 2010). The goal established by the city is also worth mentioning: all public transport will be using non-fossil fuels by 2050 (Measuring urban sustainability; 2010).

In the case of **Hamburg (2011)** it was the quality of air that attracted attention – its improvement in 2006 compared to 1990 indicates that CO_2 emissions decreased by 25% per person. The goal Hamburg has set itself is to reduce CO_2 emissions by 40% by 2020 and by 80% by 2050 (Measuring urban sustainability; 2010). The establishing of an energy-efficient rate of return for public buildings should also be mentioned here: for example the 200,000 energy saving lamps that were installed in 400 public buildings are helping to save 4.3 million euros per year (Hamburg…; 2011). Also attractive was the travelling exhibition 'Trains of Ideas', which was organised by Hamburg and visited 18 cities in 13 countries, being seen by 71,000 people. The exhibition showcased visions and projects designed to make European cities more environmentally friendly.

The large proportion of green areas was seen as a significant advantage of **Vitoria-Gasteiz (2012).** It is also important that its green areas connect the mountains to the city, thereby increasing the city's biodiversity and making it more attractive to tourists. The city has gone to great effort to reduce its water consumption (Vitoria-Gasteiz…; 2012).

Nantes (2013), where the entire population lives within 300 metres of a green area, has established a sustainable transport policy. The city was the first in France to restore tram transport that had previously been abandoned (Nantes…; 2012). Its progressive transport policy has helped reduce air pollution. The city hopes to cut CO_2 emissions by a quarter by 2020.

Copenhagen (2014) stands out for its promotion of bicycle transport. 36% of the city's population use bicycles as a means of transport and the city aims to raise this

to 50% by 2015. Its goal of becoming a carbon-neutral city by 2015 is also important (European Green Capital. Winning Cities).

Table 2. Environmental indicators of three EGC Award winners and Tallinn*

EGC	Reduction in CO_2 emissions per person, % 1990-2005	Length of cycle paths		% of population who live <300 m from public transport stop	% of population affected by noise level during day Lden>55	Waste generation: kg/ person/ year	Water consumption l/person/ day	Population density	Public green areas	
		km	km/km²					people/ km²	m²/ person	% of population who live <300 m from open green area
Stockholm	-26	760	3,64	90	35	409	200	4 141	86	90
Hamburg	-25	1700	2,25	99	18	479	110	2 331	39	89
Copenhagen	-26	349	3,95	98	36	469	117	5 708	28	79
Tallinn**		210	1,32		67	276	94	2675		

* (Measuring urban sustainability; 2010 and indicators of Tallinn); ** data are being specified

This means that the winning cities have managed to achieve high environmental goals. They have set themselves ambitious objectives and developed innovative solutions to improve their environmental indicators and quality of life even further. These cities proceed from the admission that the only way to be sustainable is to achieve a balance between environmental protection, social quality of life and economy.

EGC laureates themselves appreciate the title highly, as it contributes to the city's development, particularly in improving the environment and raising environmental awareness among the people. It also increased the attention the cities gained on the international scene. The role of the European Commission in promoting the title is considered important in the achievement of international recognition. Among the cities that have been EGCs to date, the author has received feedback from Hamburg (2012) and Copenhagen, which will bear the title in 2014 and which considers the development of a green and sustainable city with high standards of living very important. The informative feedback from Hamburg, which has been considered a city with a good quality of life and high environmental standards for a long time, stated that being the EGC in 2012 was the factor that gave Hamburg the reputation of an internationally recognised green city with innovative environmental technology. As a growing port and industrial town, Hamburg has managed to demonstrate that an environmentally friendly way of living and economic development can go hand in hand by launching several innovative solutions. One of them is the so-called energy hill: a former toxic waste repository where solar, wind and bioenergy are now produced. Many international delegations visited Hamburg,

which gave the city the image of an attractive tourist destination, made it more attractive to business investors and increased the inflow of highly qualified labour.

The environment of Tallinn and chances to win the EGC Award

Every city has its strengths in environmental protection, but it is important to have a complex vision of the city's situation, which helps create a better and more economical living environment and thereby improve the city's competitiveness. The opinion that has prevailed in Estonia for decades is that guaranteeing the quality of the environment in the living and economic space of a unifying Europe is largely the result of long-term urban development, which also determines both economic and social development.

Tallinn (area 159.1 km^2, population 425,249 as at 1 April 2013)) is situated by the Baltic Sea in a coastal area with highly diverse nature (the city's coastline being 64 km long). The importance of Tallinn, its capital, in the life of the country is significant, as *ca.* 30% of the total population live here. Tallinn has been known as a port city and important economic centre for a long time. It is important for every city government to guarantee that its citizens receive all essential services (water supply, sewerage and public transport) irrespective of whether they are provided by the city itself or outsourced (Mäeltsemees et al.; 2012).

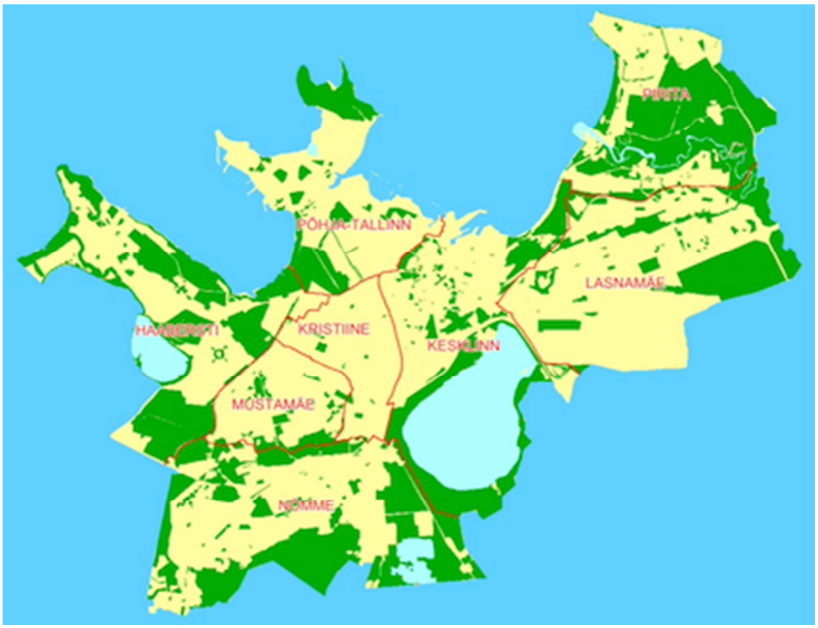

Figure 1. Urban space of Tallinn and location of green areas (Tallinn Environment Department).

Tallinn, as a city that contributes strongly to the environment, has nominated itself for the European Green Capital Award by 2018, which means that its application must be submitted in 2015. Winning the title is set as a goal in the Tallinn Environmental Strategy up to 2030 as well as in the Tallinn Environmental Protection Development Plan 2013-2018, which is currently being prepared in the Tallinn Environment Department. In it the city has presented the action plan of work and research to be carried out in eleven different areas and the financial plan for achieving the title of European Green Capital (Tallinn Environmental Protection…; 2013). The study entitled 'Overview of Environmental Indicators of European Green Capital Award Winners 2010-2014' (2013), which was prepared by the Sustainable Estonia Institute (SEI) and compares the indicators of the winning cities with those of Tallinn, is proving to be of great help in applying for the award.

Land is the main resource of urban space. This means that sustainable land use is the primary area of activity. Land use in Tallinn has changed considerably in the last few decades. New residential areas have been built in the city and new residential buildings have been added to older districts. Spatial planning is one of the main and most comprehensive tools of environmental management, which hereby means organising the expedient and sustainable use of housing in the best possible manner. The preconditions for this include public awareness, political wisdom and will, sufficient data and science-based environmental monitoring. Planning itself is a process based on social agreement that is designed to guarantee development and competitiveness, environmental protection and improvement of the quality of life proceeding from local conditions and traditions. The main problem in the current urban design of Tallinn is that too little space is left for public use.

Transport management, urban landscaping, access to green areas and cohesion are all dependent on the city's spatial planning. Green areas comprise 10-40% of EGCs. Green areas in Tallinn cover 43.3 km^2. 27.2% of the city's area is covered with greenery (Strategy Tallinn 2030; 2010). In Tallinn it is *ca.* 100 m^2 per person (Tallinn in Numbers…; 2012). Green areas in the city are investments in the future. They are necessary not only for aesthetic considerations or the preservation of biodiversity, but also because they act as air filters and reduce noise pollution. Problems in Tallinn's greenery are not so much caused by a lack of green areas, but their uneven distribution (Figure 1).

An important role is played by the city's green network, whose task is to mitigate the impact created by people and to ensure that existing ecosystems continue to function, and it also maintains the environmental processes that are essential for people and provides them with recreation opportunities close to home (Thematic Plan Green Areas in Tallinn…; 2007). In order to make Tallinn more attractive to its citizens and visitors/tourists, it is necessary to guarantee the preservation of coastal areas and environmentally and culturally valuable districts, and keep green areas in good order. Tourism has already become one of the most important economic sectors of Tallinn and produces a remarkable share of the city's and state's export and employment in the service sector (Strategy Tallinn 2030).

Highly diverse nature is one of the strengths of Tallinn. There are three landscape protection areas, two nature conservation areas, 50 parks, 117 single natural objects and five beaches in the city. There are also Natura 2000 sites (Tallinn in Numbers 2012; 2012). All of this creates relatively good opportunities for the performance of the main functions of modern nature conservation in the urban environment, which are also supported by research into urban biota (Uustal et al.; 2010; Kuldna; 2011 and others). Unfortunately there is no citywide database of urban biotopes, plant and animal species with a map application which would give provide source material for further urban planning.

Urban transport affects the city as a whole, incl. the mobility of people, goods and services and the state of the environment. The modes of travel used by people (light traffic, cars and public transport) are relatively different (Jüssi et al.; 2010). Increasing the proportion of light traffic and public transport is an important aspect of improving the environment. Measures that support public transport have been taken in Tallinn: all residents of the city have been able to use buses, trams and trolleybuses free since 1 January 2013 and there are special lanes and a priority system for public transport. The first months of free public transport have considerably reduced the use of cars.

The development of street infrastructure has unfortunately been based on the needs of motor vehicle drivers whilst pedestrians, cyclists and their safety have been regarded as of secondary importance (Strategy Tallinn 2030; 2010). The city must start paying more attention to the existence and condition of pavements.

The quality of city air depends mainly on road transport. The main problem with city air is the increased content of fine particle pollution at larger intersections. Increased noise levels have become a factor that affect people's health on the streets in many city districts, especially in the vicinity of the railway and main roads (Strategy Tallinn 2030; 2010). The number of cars in Tallinn is large. At present there are 350 cars per 1000 residents (Facts about Tallinn 2012; 2013). As the city is located by the sea, there are no instances where air quality limits have been considerably exceeded. The air in Tallinn has been assessed as clean, but the concentration of pollutants generated by cars is still too high at major junctions. The level of noise is also directly dependent on traffic. The general noise background in Tallinn can be reduced by offering suitable alternatives to car users. Quiet and noisy areas are mapped in EGCs.

The energy sector has a significant impact on the quality of city air. Tallinn has joined the Covenant of Mayors 2007, which means that it is obliged to guarantee higher energy efficiency and reduce greenhouse gas (CO_2) emissions. The action plan of the sustainable energy economy helps perform this obligation. The majority of energy savings and reductions in CO_2 emissions depend on the activities of companies and households located in and close to the city, which is something that the city needs to deal with in greater depth.

A lot of attention is paid to the quality of the water consumed in cities and reducing the quantity of water used. Water infrastructure is constantly being improved and pipes that are old and at risk of leaking have been changed. Tallinn has managed to reduce water losses due to leaks to 19%. The consumption achieved by EGCs today is a little over 100 l/person/day. Water consumption in Tallinn has decreased considerably in recent years (from 101 l/person/day in 2007 to 94 l/person/day in 2012). The catchment area-based organisation of water economy and creation of sanitary protection zones for surface water intakes in Estonia create a good basis for considering landscape-based preconditions and needs in further plans, designs and organisation of work. 99.8% of the city's residents have joined the public sewerage network (Yearbook…; 2012). The capacity of the waste water treatment plant of Tallinn is high, which has considerably improved the environmental condition of Tallinn Bay. As a result of the innovative activities of the water company AS Tallinna Vesi, which is co-owned by the city, Tallinn was deleted from the least of the main sources of pollution of the Baltic Sea in 2006. A biological treatment plant that is entirely unique in the Baltic States and Eastern Europe in terms of its complexity and the amount of investments required was built in 2011. The plant allows for the considerable reduction of the quantities of nitrogen disposed of in the Gulf of Finland (the pollution load decreasing by 37% in 2012). Storm water creates problems in all cities. A storm water tax has been established in Stockholm. Tallinn has not yet built a complete storm water drainage system.

Waste and treatment of waste comprise another important field in cities. Waste generation in Tallinn has decreased since 1997 and the quantity of waste is less than 300 kg per resident. The closest goal is to recycle at least 50% of household waste. The waste generated in Tallinn is processed and the remaining waste is deposited at Tallinn Recycling Centre, which was opened in Jõelähtme municipality in 2003 and meets all environmental requirements. A waste incineration plant will open in Iru in 2013 and most pre-sorted household waste will be sent there.

Work in the areas of eco-innovation and sustainable employment must become considerably more efficient. Tallinn has a few examples of eco-innovation: using your mobile phone to pay for parking, using an audio guide, free Wi-Fi etc. Cities cannot achieve success if they try to find solutions on their own – they must cooperate with various groups. For example, 1500 companies advise Hamburg on its eco-partnership programme.

Public participation is an extremely important lever in the promotion of environmental protection and development processes. Citizens as well as social and private organisations are given the opportunity to express their opinions about the city's policy goals or decisions that concern planned activities, discuss their opinions with others and be involved in decision-making. Active public participation in the various development processes of cities has many benefits for the public sector, developers, city leaders and the city as a whole. It facilitates finding solutions, promotes financing, saves time, reduces conflicts, educates, informs in consideration of public interests and generates civil liability.

The environmental management of a city as a complex entity must be competent and stable, and it should be strategically aimed into the more distant future in consideration of present needs and opportunities. This is a postulate that arises from the logic of urban development, which is also confirmed by the history of Tallinn, which dates back a thousand years. Well-functioning environmental management shapes interactive relationships between various sectors in and outside the city, creates readiness for investments, provides development impetus and guarantees the sustainability of development. It requires competent organisation and management of urban space as well as broad-based, horizontal and vertical cooperation. As the districts of Tallinn differ from one another in terms of population, identity and socioeconomic conditions, the best way to perform certain tasks is via city districts (Lõhmus; 2008). Progressive management calls for the monitoring of environmental results and regular environmental auditing.

Well-functioning environmental management must be independent of political trends. Only then is it possible to design a constantly economical, diverse and healthy urban environment. Tallinn has learnt several lessons in environmental management. The Environment Department of Tallinn City Government was liquidated more than ten years ago. The department was re-established in 2005 and it is now the main link in the city's environmental management. The Municipal Engineering Services Department deals with several sectors of environmental management (water supply, waste water treatment, streets and roads etc.). The department also has an environmental certificate.

Tallinn does not have a single environmental management concept. This is why various areas of activity have been moved from one structural unit to another without reason. The relevant concept must be developed as soon as possible. It is also necessary to involve various specialists and researchers in resolving the city's problems on a broader scale.

The principle of sustainable development has been emphasised with increasing frequency since the last quarter of the 20th century – economic, social and environmental issues can only be resolved in combination, considering their confluence. The understanding is that environmental protection is an inseparable part of environmental use and finding solutions to environmental problems also promotes economic and social development. In the spatial scope it mainly applies to cities.

Modern environmental policy is aimed at recognising and using market forces, incl. economic restructuring, transformation of social expenses caused by the use of resources and pollution to internal expenses and inclusion of all external expenses in the prices of services (Klarer at al.; 1999). Price and profit considerations are necessary and often determining factors. They cannot and must not be turned into fetishes, because there are other important criteria that concern environmental protection and social issues which cannot be placed in an economic dimension or where doing so is very difficult (Hanley et al.; 2001).

In order to improve its international competitiveness Tallinn needs to expand its planning and functional cooperation with neighbouring local authorities to guarantee that the region's advantages, incl. the international cooperation networks operating in the area, are used to the maximum. Urban space and its hinterland are the main location of enterprise. Economic and environmental indicators and their changeability are closely related and directly dependent on one another. Environmental conditions (air, water, raw materials, environmental condition, logistics etc.) are one of the main forms of input in economic activities. A set of modern policy measures in the form of economic levers approaches both economic and environmental goals. Economic levers are the factors that make it possible to transform environmental expenses into internal ones.

Summary

Guaranteeing a high-level living environment is a precondition to the balanced and sustainable economic and social development of the European Union, where cities have an increasingly important role to play. The cities that have won the EGC Award differ from each other in area; population size and density; and location, which means that their economic and environmental problems are somewhat different. These cities also have a different status in the lives of their countries. In the case of Tallinn, it should be borne in mind that a third of the country's population live here and that the city also produces more than half the country's GDP. In order to enhance their international competitiveness, however, cities have to cooperate with neighbouring areas to guarantee that the region is better used.

The development of cities with a good quality of life depends on well-thought-out planning of living space, which contains settlement systems, housing economy and nature conservation. Improving the urban environment calls for the existence of abundant green areas in cities, preferential development of green public transport, improving the quality of air and water and reducing waste and noise. There are many areas of activity that affect the environment, and the quality of the environment in the city can be improved when they are developed together. Environmental management is also important. All of this improves the competitiveness of cities. In order to improve the quality of urban space it is necessary for cities to communicate with one another and to exchange information, as this will also lead to the development of new initiatives and assumption of new obligations for the protection of the environment and the promotion of the city's development as a whole.

When a city wins the European Green Capital Award, this is an important signal – a form of recognition and advertisement on the international scene which suggests that the city is pleasant, free of pollution and hospitable. Such recognition certainly improves the city's competitiveness, because the general assumption is that the more attractive the living space, the greater its economic success.

References

1. **Aalborg Charter**. Charter of European Cities & Towns Towards Sustainability.1994. Approved by the participants at the European Conference and Sustaineble Cities & Towns. in Aalborg, Denmark on 27 May 1994). ec.europa.eu/environment/urban/pdf/aalborg_charter.pdf (02.06.2013)
2. Aastaraamat 2012 /Yearbook 2012/. Tallinn Environment Department 2012.
3. **Antrop, M.** 2004. Landscape change and the urbanisation process in Europe. Landscape and urban planning, 40:21-34
4. Baltic Cities sustainable development 2004/2005. 2005. Union of the Baltic Cities, Commision Environment Secretariat. www.ubc.net/commissions/environment.html (12.04.2013)
5. Covenant of Mayors. Committed to Local Sustainable Energy. 2007. http://www.eumayors.eu/IMG/pdf/covenantofmayors_text_en.pdf (01.06.2013)
6. Declaration establishing the European Green Capital Award. 2008. http:/www.caib.es/sacmicrofront/archivopub.do?ctrl=NTCS016144Z13269&id=32697
7. Eligibility Check. 2012. http://ec.europa.eu/environment/europeangreencapital/applying-for-the-award/eligibility-check/index.html (06.04. 2013)
8. European Communities 6th EU Environment Action Programme 2001-2010. 2001
9. European Green Capital. Winning Cities. http://ec.europa.eu/environment/europeangreencapital/winning-cities/index.html (14.04.2012).
10. European Parliament resolution on the thematic strategy on the urban environment. 2006. Texts adopted on 26 September 2006 – Strasbourg. http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P6-TA-2006-0367+0+DOC+XML+V0//EN (05.06.2013)
11. European regional/spatial planning Charter - Torremolinos Charter. 1983. Council of Europe Conference of Ministers Responsible for Spatial/Regional Planning (CEMAT). http://www.siestaproject.eu/Et2050_Library/index.php?view=article&catid=109%3Apolicies&id=625%3Aeuropean-regionalspatial-planning-charter-torremolinos-charter&format=phocapdf&option=com_content&Itemid=156 (04.06.2013)
12. Expert Panel, 2010. The Expert Panel's Evaluation Work& final Recommendations for European Green Capital Award of 2012 and 2013. http://ec.europa.eu/environment/europeangreencapital/wp-content/uploads/2011/05/Evaluation-Panel-Report-Award-Cycle-2012-2013.pdf (6.04 2012)
13. Fakte Tallinnast 2012 /Facts about Tallinn 2012/. 2013. Tallinn City Enterprise Board
14. **Hallika, U.** 2007. Linnapoliitika ülesanded ja võimalused innovatsiooni edendamisel Euroopa Liidus: praktilised soovitused Eesti linna poliitikale. Eesti majanduspoliitilised väitlused XV (Artiklid CD ROM ja kokkuvõtted). Berlin-Tallinn. http://www.mattimar.ee/publikatsioonid/majanduspoliitika/2007/03.pdf

(26.05.2013) /Tasks and Opportunities of Urban Policy in Promoting Innovation in the European Union: Practical Recommendation for Estonian Urban Policy. Discussions on Estonian Economic Policy XV (Articles CD ROM and summaries)/
15. Hamburg. European Green Capital 2011. 2011. European Union
16. **Hanley, N., Shogren, J.F., White, B.** 2001. Enviornemntal Economics. Oxford University Press.
http://eesti2030.files.wordpress.com/2012/09/eesti-2030-tekst_120725.pdf (26.05.2013)
17. **Jauhiainen J.S**. 2005. Linnageograafia. Linnad ja linnauurimus modernismist postmodernismini. /Urban Geography. Cities and City Research from Modernism to Postmodernism/ Estonian Academy of Arts.
18. **Jüssi, M., Poltimäe, H., Sarv, K., Orru, H.** 2010. Säästva transpordi raport 2010 /Report on Sustainable Transport 2010/. Sustainable Development Commission. Tallinn.
19. **Klarer, J., Francis, P., McNicholas, J., Gornaja, L.** 1999. Tulusam ja puhtam keskkond /A More Profitable and Cleaner Environment/. The Regional Environmental Centre for Central and Eastern Europe.
20. **Kuldna, P.** 2011. Linna bioloogilise mitmekesisuse indeksi rakendamine Tallinna näitel. Uustal, M. (Toim.). Inimmõju Tallinna keskkonnale VI (24 - 30). Tallinn: Tallinna Botaanikaaed
21. Leipzig Charter on Sustainable European Cities. 2007. It was adopted by the informal meeting of the Council of Ministers in Leipzig on 24 May 2007. http://lp.ncdownloader.com/eb3/?q=leipzig%20charta%20adr%20pt%20pdf (10.06. 2013)
22. **Levald, A.** 2001. Planning of urban green areas. In: (H.Tamm ed.) Linnade haljastud ja nende kaitse /Green Areas in Cities and Their Protection/. Estonian Academy Publishers. Tartu-Tallinn, 24-32. (In Estonian)
23. **Levald, A. Sander,H.** 2005. Loodus linnas, linn looduses /Nature in the City, the City in Nature/. Estonian Nature Magazine. 5, 3-15.
24. **Lõhmus, M.** 2008. Decentralization of Public Administration in Estonia. Doctoral thesis Tallinn University of Technology , Faculty of Social Sciences.
25. **Magnaghi, A.** 1998. Territorial heritage: a genetic code for sustainable development. INURA (toim.) Possible Urban Worlds. Urban Strategies at the end of 20 Centuary. Basel: Birkhäuser Verlag, 114-121.
26. **Mayerhofer, P.** 2005.Competitiveness of European Cities: Some Empirical Results for European Cities. WIFO Working Papers, No. 260.
27. Measuring urban sustainability. Analysis of the European Green Capital Award 2010&2011 application round. European Commission, 2010
28. Memorandum on the European Green Capital title. 2006. http://ec.europa.eu/environment/europeangreencapital/wp-content/uploads/2011/06/Tallin-Memorandum.pdf (07.04. 2013)
29. **Mäeltsemees, S., Lõhmus, M**. 2006. Tallinna juhtimise detsentraliseerimine /Decentralisation of the Management of Tallinn/. Riigikogu Publications, 13, 133-141.
30. **Mäeltsemees, S.; Kull, M.; Lõhmus, M.; Ratas, J. 2012.** Wirtschaftliche und soziale Ziele der kommunalen Gebietsreform. S. Mäeltsemees, J. Reiljan, M.

Raudjärv (Toim.). Eesti majanduspoliitilised väitlused: Aktuaalsed Euroopa Liidu riikide probleemid / Estnische Gespräche über Wirtschaftspolitik: Aktuelle Probleme der EU-Mitgliedstaaten / Discussions on Estonian Economic Policy: Current problems in the EU Member States. Berlin, Tallinn: Berliner Wissenchafts-Verlag, Mattimar, 108 - 125
31. Nantes. European Green Capital 2013. 2012. European Union
32. Stockholm. European Green Capital 2010. 2010. European Union
33. Strateegia „Tallinn 2030“ kinnitamine /Approval of the Strategy Tallinn 2030/. 2010. Tallinna Õigusaktide andmebaas /Tallinn Legislation Database/ https://oigusaktid.tallinn.ee/?id=3002&aktid=118878 (20.05.2013)
34. Strateegia Tallinn 2030 kinnitamine /Approval of the Tallinn 2030 Strategy/. https://oigusaktid.tallinn.ee/?id=3001&aktid=118878 (12.04. 2013)
35. Tallinn arvudes 2012 /Tallinn in Figures 2012/. 2012. Tallinn City Government. Tallinn.
36. Tallinna Keskkonnakaitse Arengukava 2013-2018 /Tallinn Environmental Protection Development Plan/. Version 08.03.2013. 2013. Tallinn. http://www.tallinn.ee/est/g4128s66928
37. Teemaplaneeringu „Tallinna rohealad“ keskkonnamõju strateegiline hindamine. Lõpparuanne. /Strategic Assessment of the Environmental Impact of the ‘Green Areas in Tallinn’ Thematic Plan. Final Report/ 2007. OÜ-E-Konsult. Tallinn. http://www.tallinn.ee/est/g3566s38220 (27.05.2013)
38. The Expert Panel’s Evaluation Work & Final Recommendations for the European Green Capital Award of 2010 and 2011, January 2009. www.stockholm.se/PageFiles/154134/eval-report_2010_2011.pdf (05.04.2013).
39. The Global Information Technology Report 2009 – 2010. 2010. World Economic Forum. http://www3.weforum.org/docs/WEF_GITR_Report_2010.pdf (06.06 2013)
40. United Nations, Department of Economic and Social Affairs - Population Division (2009). World population prospects: The 2008 revision (pp. 1–107). Working paper number ESA/P/WP.210.
41. **Uustal, M.; Kuldna, P.; Peterson, K.** 2010. Tallinna linnaelustiku strateegiline analüüs ja soovitused elustiku säilitamiseks /Strategic Analysis of the Urban Biota of Tallinn and Recommendations for Preservation of Biota/. Publication of SEI Tallinn, 14, 44
42. Vitoria - Gasteiz. European Green Capital 2012. 2012. European Union
43. Üleriigiline Planeering Eesti 2030+ /National Spatial Plan 2030+/. 2012.
44. Ülevaade Euroopa Rohelise Pealinna tiitli laureaatide 2010-2014 keskkonnanäitajatest /Overview of the 2010-2014 Environmental Indicators of European Green Capital Laureates/. Tallinn, 2013. http://www.tallinn.ee/est/g4128s66919 (14.04. 2013)

KESKKONNA OSA LINNADE KONKURENTSIVÕIME TUGEVDAMISEL EUROOPA ROHELISTE PEALINNADE JA TALLINNA NÄITEL

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Euroopa Liidu tasakaalustatud ja jätkusuutliku majandusliku ja sotsiaalse arengu üheks oluliseks eelduseks on kõrgtasemega elukeskkonna tagamine. Euroopa linnades, kuhu on koondunud suur hulk elanikkonnast ja kus toimub peamine töökohtade, majanduskasvu ja lisandväärtuse loomine, esineb praegu veel hulgaliselt tõsiseid keskkonnprobleeme. Urbanisatsiooniaste oli 2010.a Euroopas 72,7%, ÜRO prognoosib 2050. aastaks Euroopas selle tõusu kuni 82,2%**.** Et tunnustada neid linnu, kes on oluliselt panustanud enda elukvaliteedi paremustamisse, loodi 2006. aasta Euroopa Rohelise Pealinna tiitel. Selle tiitliga pärjatud linnad on kasutusele võtnud kõige innovaatilisemad ja efektiivsemad meetmed linna konkurentsivõime tõstmiseks ning on eeskujuks mitte üksnes pealinnadele säästva arengu saavutamisel. Euroopa Rohelise Pealinna lauraatide keskkonnanäitajad on kõrged. Artiklis analüüsitakse seda probleemi Eesti Vabariigi pealinna Tallinna näitel, kes püüdleb Euroopa kõige kõrgema elukvaliteediga linnade hulka. Artikli eesmärgiks on näidata ja analüüsida ERP osa Euroopa Liidu keskkonnaalaste eesmärkide saavutamisel tuginedes 12 tegevusvaldkonnale, mida arvestatakse tiitli saamisel.

Euroopa Liidu tasakaalustatud ja jätkusuutliku majandusliku ning sotsiaalse arengu eelduseks on kõrgetasemelise elukeskkonna tagamine, kus olulist osa etendavad linnad. Urbaniseerumine ehk linnastumine ongi tänapäeva Euroopa üks fundamentaalsemaid tunnuseid, mis on oluliselt muutnud elukeskkonda (Antrop, 2004). Seetõttu on linnade areng ruumipoliitikate tähelepanu keskpunktis. Tänapäeval elab linnades üle 70 % Euroopa kodanikest. Linnad on oma elanikele mitte ainult elupaigaks, vaid ka majanduse aktiivsuse mootoriks, andes suure osa (kuni 85%) rahvuslikust koguproduktist (United Nations, 2009). Linnades toimub peamine töökohtade, majanduskasvu ja lisandväärtuse loomine.

Linn on inimkooslus oma vaimse ja füüsilise ning kaasneva taristuga. Linnas põimuvad tihedad sotsiaalsed, majanduslikud ja keskkondlikud seosed, kujuneb vaid sellele elupaigale iseloomulik põhifunktsionaalne võrgustik. Linn on pidevalt arenev süsteem, mille käitumist saab prognoosida ja mille arengut saab põhijoontes ka suunata (Levald, Sander, 2005). Linnade areng juhindub arengukavadest ja planeeringutest. Linnaplaneerimises on vajalik olla teadlik linna kasvu erinevatest aspektidest ning rakendada majanduslikku, sotsiaalset ja keskkonnahoidlikku arengut (Jauhiainen, 2005). 1983. aasta Torremolinose konverentsil koostatud Harta toonitas ruumilise planeerimise tähtsust, mis on demokraatlik, erinevate elualade

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arengukavasid koordineeriv, integreeriv ja funktsionaalne pikaajaline ruumilise arengu kavandamine (European regional…, 1983).

Üldised linnaarengu eesmärgid peavad tagama kõigile põhivajadusi rahuldava, seega elamisväärse, säästliku, tervisliku ja turvalise elukoha. Oluline on rahuldada linnaelanike sotsiaal-kultuurilised ja majanduslikud vajadused võimalikult väikeste energia- ja materjalikuludega, otstarbeka maakasutusega ning vähimate keskkonna kahjustustega. Planeeringu üheks kontseptuaalseks aluseks on linnastruktuuri väärtuslike elementide säästlik ärakasutamine ja arendamine sotsiaalse tasakaalu ja mitmekesisuse saavutamiseks nii linnas tervikuna, kui selle üksikutes piirkondades/linnaosades, mis sageli just tagavad linna kui terviku kiire ja efektiivse arengu (Mäeltsemees, Lõhmus, 2006). Seega on oluline ühendada loovalt looduslik ja tehislik keskkond toetamaks mingi piirkonna jätkusuutlikku arengut (Magnaghi, 1998).

Linnakeskkonna paremustamist on suuresti toetanud mitmed 1990ndatel aastatel ja 21. sajandi alguses väljatöötatud ja vastu võetud kontsepsioonid. 1992**.** aastal toimunud Rio de Janeiro ülemaailmse arengu- ja keskkonna konverentsi seisukohtade edasiarendamiseks kogunesid 1994. aastal Aalborgi Euroopa omavalitsuste esindajad, et kirjutada alla Aalborgi Hartale. See sai aluseks paljude Euroopa linnade säästva arengu kavade väljatöötamisele (Aalborg Charter, 1994).
Euroopa Liidu 6. keskkonna tegevusprogramm seadis eesmärgid neljas prioriteetses valdkonnas: kliimamuutus; loodus ja bioloogiline mitmekesisus; keskkond, tervis ja elu kvaliteet ning loodusvarad ja jäätmed (6th EU Environment..., 2001). See programm tõi esile ka mitmeid aspekte, mille lahendamisel on linnadel otsustav roll. Õhukvaliteedi tagamine, keskkonnasäästliku linnatranspordi arendamine, liiklustiheduse vähendamine ja liiklusummikute ärahoidmine, üldise mürafooni vähendamine, hoonestatud aladel elukeskkonna kvaliteedi tagamine, heakorra tagamine, kasvuhoonegaaside vähendamine, valglinnastumisega seotud negatiivsete ilmingute vähendamine, jäätmete tekke vähendamine, reovee kanaliseerimine ja puhastamine on vaid osa valdkondadest, mille lahendamine on just linnade ülesanne.

2006. aastal võeti Euroopa Parlamendis vastu resolutsioon linnakeskkonda käsitleva temaatilise strateegia kohta (P6_TA(2006)0367), mille eesmärk on anda panus Euroopa linnade üldisesse keskkonnahoidu, vähendades bürokraatiat ja tõhustades keskkonnapoliitika rakendamist ning julgustades kohalikul tasandil pikaajalist keskkonnaplaneerimist (European Parliament resolution..., 2006).

2004/2005 viis Läänemere Linnade Liit läbi uuringu selgitamaks olukorda ja suundumusi linnade jätkusuutlikus arengus (Baltic Cities...,2005). Indikaatorid olid valitud Läänemere Linnade Liidu Agenda 21 tegevusprogrammi põhiteemadest, mis haakuvad Euroopa Komisjoni linnakeskkonna teematilise strateegiaga kui Euroopa kuuenda keskkonnaalase tegevusprogrammi ühe osaga: võimekas juhtimine, hea elukeskkond ja looduse kaitse, sotsiaalne integratsioon ja tervis, säästlik energia ja ressursside kasutamine ning seda tagav majandus ja transport.

Linnade jätkusuutlik areng leiab käsitlemist ka Leipzigi Hartas, mis võeti vastu 2007. a., ning annab uue tõuke säästvate linnade kujundamisele, kasutades integreeritud linnaarengu poliitikat, kus majanduslik areng, sotsiaalne tasakaal ja ühtekuuluvus ning keskkonna aspektidega arvestamine peavad linnade arendamisel leidma võrdväärse koha. Oluline koht on erineva tasandi poliitilise ja haldusüksuste ning avaliku ja erasektori vahelisel koostööl. (Leipzig Charter, 2007).

Linnade ettevõtmised, mis avaldavad olulist mõju elukeskkonna parandamisele, vajavad enam tunnustamist, teadvustamist ja sellealased jõupingutused enam motiveerimist. Just sel eesmärgil tegi Tallinn käesoleva artikli autori eestvedamisel 2006. aastal ettepaneku Euroopa Rohelise Pealinna (ERP) tiitli asutamiseks, mis väärtustaks linnade keskkonnahoiu alaseid tegevusi ning tunnustaks linnade poolt tehtavaid pingutusi harmoonilise linnakeskkonna loomisel (Measuring urban..., 2010). Lähtuti üldtunnustatud seisukohast, et linnade keskkonnaseisundi sihikindel parandamine annab olulise aluse linnade konkurentsivõimele, mis on praeguses üha avatumaks muutuvas ja integreeruvas maailmas järjest olulisem.

Käesoleva artikli eesmärgiks on analüüsida linna keskkonnategevusevaldkondi ja keskkonnakorraldust konkurentsivõime tõstmise kontekstis. ERP linnade andmestik pärineb mitmetest Euroopa Komisjoni poolt välja antud töödest ja interneti leheküljelt (European Green Capital: http://ec.europa.eu/environment/europeangreencapital/index_en.htm). Kasutamist leiab ka 2013. aastal Säästva Eesti Instituudi (SEI) poolt valminud põhjalik uurimus, kus kirjeldatakse ja kõrvutatakse viie tiitli saanud linna keskkonnanäitajaid 12 tegevusvaldkonna lõikes (Ülevaade…, 2013). Samuti on ka kasutatud autori poolt ERP-de linnavalitsustele esitatud küsimuste vastuseid Rohlise Pealinna mõjust oma linnale. Töö koostamisel on kasutatud hulgaliselt käsikirjalisi materjale, mis käsitlevad Tallinna linna arengukavasid ja aruandelisi arvandmeid.

2006. aasta kevadel anti Euroopa linnade linnapeade poolt alla kirjutatud Rohelise Pealinna tiitli ettepanek – memorandum üle Euroopa Komisjonile (Memorandum..., 2006), kus see heaks kiideti. 2008.a. kehtestati Brüsselis Euroopa Rohelise Pealinna tiitel. Deklaratsioonis on esitatud põhiidee – innustada linnasid tõstma keskkonnakaitse taset ja parandama oma keskkonnaseisundit (Declaration..., 2008). Põhiideele lisandusid kolm eesmärki: premeerida linnu, kes suudavad järjepidevalt saavutada kõrgeid keskkonnaalaseid eesmärke; innustada linnu seadma ambitsioonikaid eesmärke täiendavaks keskkonnaseisundi parendamiseks ja jätkusuutlikuks arenguks ning pakkuda eeskuju inspireerimaks teisi linnu ning soodustada parima praktika levikut teistesse Euroopa linnadesse (Expert Panel, 2010).

2008. aasta lõpuks selgitati välja kaks Euroopa linna, kes võiksid esimestena kanda Euroopa Rohelise Pealinna nimetust. Neid hinnati 10 keskkonnanäitaja alusel (The Expert Panel`s …, 2009). ERP konkursil esitatud tingimused iga keskkonnanäitaja kohta on küllaltki kõrged. Tänaseks on hinnatavate tegevusvaldkondade arv tõusnud 12. Nendeks on: piirkonna roll üleilmses kliimamuutuses; kohalik transport; rahvale avatud rohealad, sh keskkonnasäästlik maakasutus; looduse ja bioloogiline

mitmekesisus; kohaliku õhu kvaliteet ja müratasand; jäätmeteke ja jäätmemajandus; veetarbimine; reoveekäitlus; ökouuendus ja jätkusuutlik tööhõive; kohaliku omavalitsuse keskkonnajuhtimine ja energiatõhusus (European Green Capital).

Rohelise Pealinna tiitliga tunnustatakse linna, kes on kasutusele võtnud kõige innovaatilisemad ja efektiivsemad meetmed ja jätkab nende elluviimist ka tulevikus ning on eeskujuks teistele linnade säästva arengu saavutamisel (Expert Panel, 2010). Tiitli vääriline linn tõstab kindlasti teiste linnade seas oma konkurentsivõimet, muutub atraktiivsemaks investeerijatele, turistidele, linnaplaneerijatele ja teiste elualade esindajatele. See tähendab ühtlasi uut impulssi majandusarengu elavdamiseks linnas, rääkimata keskkonnatingimuste inimsõbralikumaks muutumisest. Esimene ERP tiitel anti välja üheaegselt kahele linnale: 2010. aastaks Stockholmile ning 2011. aastaks Hamburgile. Tallinn on seadnud eesmärgiks kandideerida ERP tiitlile 2018. aastaks, sellest tulenevalt tuleb taotlus esitada 2015. aastal.

Linna ruumilisest planeerimisest oleneb transpordikorraldus, linnahaljastus, rohealadele ligipääs ja sidusus. Rohealad moodustavad ERP-de pindalast 10-40%. Tallinnas on haljasmaid kokku 43,3 km^2. Linna pindalast on 27,2% kaetud haljastusega (Strateegia Tallinn 2030, 2010)**.** Tallinnas on see u. 100 m^2 ühe elaniku kohta (Tallinn arvudes..., 2012). Haljasalad linnas on investeeringud tulevikku. Neid ei ole vaja üksnes esteetilistel kaalutlustel ning liigilise mitmekesisuse säilitamiseks, vaid ka õhufiltrina ja mürareostuse leevendajana.

Looduse suur mitmekesisus on Tallinna üks tugevusi. Linnas paikneb 3 maastikukaitseala, 2 hoiuala, 50 parki ja 117 looduse üksikobjekti ning 5 supelranda**.** Neile lisanduvad Natura 2000 alad (Tallinn arvudes 2012, 2012). Kõik see annab võimaluse täita küllaltki arvestatavalt siinses linnakeskkonnas looduskaitse nüüdisaja peamisi funktsioone, mida toetavad ka mitmed Tallinna linnaelustiku uuringud (Uustal jt., 2010; Kuldna, 2011 jm.).

Linnatransport mõjutab linna tervikuna, sh inimeste, kaupade ja teenuste liikuvust ning keskkonnaseisundit. Elanikkonna liiklusviisid (kergliiklus, liiklemine autodega ja ühistranspordiga) on küllaltki erinevad (Jüssi jt., 2010). Oluliseks teguriks keskkonna paremustamisel on kergliikluse ja ühistranspordi osakaalu suurenemine.

Linnaõhu peamine probleem on peente saasteosakeste suurenenud sisaldus suurematel ristmikel. Paljude linnaosade tänavatel on tervist mõjutavaks teguriks kujunenud kõrgenenud müratase, eriti raudtee ja magistraaltänavate vahetus läheduses (Strateegia "Tallinn 2030“, 2010). Tallinn on suure autode arvuga linn. Praegu on linnas 350 autot 1000 elaniku kohta (Fakte Tallinnast 2012, 2013). Tingitud asendist mere ääres ei esine linnas suuri õhukvaliteedi piirmäärade ületamisi.

Suurt tähelepanu pööratakse linnades tarbitava vee kvaliteedile ja veehulga vähendamisele. Toimub pidev veetaristu parendamine, vanade ja leketeohtlike

torude väljavahetamine. Leketega veekao vähendamisel on Tallinn jõudnud 19%-ni. Praeguseks on ERP linnad saavutanud tarbimise veidi üle 100 l/in päevas.

Oluline valdkond linnas on jäätmed ja nende käitlemine. Alates 1997. aastast on jäätmeteke Tallinnas vähenenud ning jäätmete kogus on alla 300 kg elaniku kohta. Lähimaks eesmärgiks on taaskasutada vähemalt 50% olmejäätmetest. Tallinna jäätmete töötlemine ja järelejääva osa ladestamine toimub 2003. aastal avatud ning kõigile keskkonnanõuetele vastavas Jõelähtme vallas asuvas Tallinna Jäätmete Taaskasutuskeskuses. 2013. aastal läheb käiku Iru jäätmete põletustehas, kuhu suunatakse suurem osa eelsorteerimise läbinud olmejäätmeid.

Oluliselt on vaja tõhustada tööd ökouuenduse ja jätkusuutlik tööhõive valdkonnas. Tallinnas on ökoinnovatsiooni alal üksikuid näiteid: mobiiltelefonide teel parkimise eest tasumine, audiogiidi kasutamine, tasuta traadita internet jm.

Alates 20. sajandi viimasest veerandist on üha enam rõhutatud jätkusuutliku arengu põhimõtet ─ majanduslikke, sotsiaalseid ja keskkonnahoidlikke ülesandeid saab lahendada vaid terviklikus koosluses, vastastikust koosmõju arvestades. On jõutud seisukohale, et keskkonnakasutuse lahutumatu osa on keskkonnakaitse ning keskkonnaprobleemide lahendamine edendab ka majanduslikku ja sotsiaalset arengut. Ruumilises plaanis käib see eeskätt linnade kohta.

Rahvusvahelise konkurentsivõime suurendamiseks tuleb Tallinnal laiendada planeeringualast ja funktsionaalset koostööd naaberomavalitsustega, et tagada piirkonna eelduste sealhulgas piirkonnas toimivate rahvusvaheliste koostöövõrgustike parim kasutamine. Linnaruum oma tagamaaga on ettevõtluse peamine paik. Majanduse ja keskkonna näitajad ja nende muutuvus on vastastikku tihedalt seotud ja otseselt sõltuvad üksteisest. Majanduslikus tegevuses on keskkonnatingimused (õhk, vesi, toore, keskkonnaseisund, logistika jm.) üheks peamiseks sisendiks. Nüüdisaja poliitikameetmete kogum majandushoobade näol käsitleb omavahel põimuvalt nii majanduslikke kui ka keskkondlikke eesmärke. Seejuures just majandushoovad võimaldavad muuta keskkonnakulutusi sisekuludeks.

Hea elukvaliteediga linnade areng oleneb linnade läbimõeldud eluruumi planeerimisest, mis sisaldab nii asustussüsteeme, elamumajandust kui ka looduse kaitset. Linna keskkonna paremustamine sisaldab linnas rohke haljasalade olemasolu; keskkonnahoidlikku ühistranspordi eelisarendamist, õhu ja vee kvaliteedi tõstmist, jäätmete ja müra vähendamist. Keskkonna mõjutavaid tegevusvaldkondi on mitmeid, mida koos arendades saavutatakse keskkonnakvaliteedi paranemine linnas. Oluline on ka keskkonnajuhtimine. Kõik see tõstab linnade konkurentsivõimet. Linnade eluruumi kvaliteedi tõstmisel on kahtlemata vajalik linnade omavaheline suhtlemine, mis aitab informatsiooni vahetada, samuti toob see kaasa uute algatuste väljatöötamise ja kohustuste võtmise, et kaitsta keskkonda ja edendada linna arengut tervikuna.