# A new mode of public transport in Skåne

Visions for transforming municipalities through light rail investments

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## Abstract:

In Skåne three municipalities, Helsingborg, Lund and Malmö are planning to introduce a new mode of transport, light rail. There have been visions for light railway for a quarter of a century, but it is during the last three years that the visions have become plans. Since then the discussion of public transport and light railway has become vivid but in this discussion the complexity of the urban space is often forgotten and the different needs of the municipalities are not discussed.

The aim of this thesis is to disentangle the discourse in the current land use plans in the municipalities, and answer the questions

- What differences and similarities do the municipalities show in how public transports are discussed within the policy documents?
- Which aims are the municipalities expecting to meet through the investments in light railway?
- How is national policy effect the light railway project?

In order to answer these questions two methods have been used. Discourse analysis is used to analyze the land use plans and ArcGIS to analyze statistical data. The research is mainly qualitative, and the quantitative data is used to put the case into a national context. The analysis is based on plans, on visions, and there is no guarantee that they will be made into reality. However, the policy documents are indicators of the view of the Swedish society and are treated as plans and not the truth.

The result of the research shows that the three land use plans have similarities and differences, Malmö and Lund are discussing environment and sustainability in a very comprehensive way and see public transport as one of the means to a more sustainable society. Malmö and Helsingborg both wants to use the light railway to reallocate resources within the city; the urban space will become more collective as public transport is given more space, and the high end transport investments are directed towards areas that are socially vulnerable. the plan for Lund is aiming at strengthening the research centers and the university and the travelers that will use the light railway is probably going to be people with resources, not as in Malmö and Helsingborg, less prosperous citizens. The research also shows that there is an inequality in how the national infrastructure resources are allocated.



# A New Mode of Public TRansport in SKåne

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MASTER'S THESIS, 2014 DEPARTMENT OF HUMAN ECOLOGY, LUND UNIVERSITY ADVISOR: PERNILLE GOOCH PUBLIC TRANSPORT HAS ALWAYS BEEN AN INTEREST OF MINE; MY FATHER SAYS THAT I TALKED ABOUT HOW TO CHANGE BUS ROUTES WHEN I WAS NINE YEARS OLD. OVER TIME I HAVE MADE THIS QUITE DIFFERENT INTEREST OF A NINE-YEAR OLD INTO THE SUBJECT OF MY STUDIES IN UNIVERSITY.

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# PREFACE

Transport is a large contributor to the green house gas emissions. A large part of the emissions are produced by private transportation, facilitated by already existing urban scapes. A change of mobility of private transport is crucial in order to meet the climate change challenges as well as in order to create an ecologically, socially and economically sustainable society.

Public transport is an important tool in order to change mobility. But for some reason, the changes are slow and it seems to be difficult to convince different stakeholders to make the sacrifices that are needed to meet the environmental goals. In this context the light railway project in Skåne is interesting, there are visions of radical changes in mobility, and the plans are on the verge of becoming reality. However, the three municipalities are different, and although they are part of the same project the challenges that are going to be met through a high quality public transport system are not the same.

This thesis has been written in the department of Human Ecology, Lund University, in the spring of 2014, as a part of the Masters Program of Social Science, Human Ecology – Culture, Power, and Sustainability. At this time the discussions of light railway was a very popular topic in the Scanian society.

Throughout the thesis there are figures, pictures, maps and tables, where nothing else is mentioned these are made by or taken by the author.

I also want to thank my advisor Pernille Gooch in the Department of Human Ecology, Lund University, for the support during my process.

Lund, May 2014

Klara Strandberg

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# **1. INTRODUCTION**

#### 1.1 FOREWORD

During the summer of 2013 I did an internship at the project office for the light railway project in Skåne, SPIS<sup>1</sup>. I wanted to do this internship because of the municipalities' courage, courage to radically change the urban structure and to move toward realizing plans that have been a vision for a quarter of a century.

During my time in the project office I realized that there are many obstacles to maneuver in order to make the ideas of light railway into reality. The question I asked myself then, and still ask myself, is why does it have to be so difficult to change the mode of transportation? It also struck me how different the cities within the light railway project in Skåne are.

Often human ecology research is taking place in the global south. And when reading UN Habitat's last report on the world's cities, my urban research could be focused on highly dense, fast growing urban areas in the global south.

"Nowhere are the commitments of cities to environmental sustainability more vital than in developing countries, where urban demographics are growing rapidly and current total population accounts for 82 per cent of the world population. This underscores the need for growth and prosperity to sustain and fulfill basic needs. Vitally important as economic growth may be, it must be sustainable if any city is to achieve prosperity."

#### UN Habitat 2012, 79

However, the emissions per capita in the global north are high and needs to be decreased (United Nations 2013), in order to make it possible to meet the environmental challenges, I believe that the post-modern, industrialized countries have to make radical changes regarding our way of living. The Swedish national goal is to decrease the GHG emission by 40 percent by 2020, compared to the levels of 1990 (Naturvårdsverket 2014 b). Transport is one large component in order to meet the goal of decreased emission.

<sup>&</sup>lt;sup>1</sup> Spårvagnar i Skåne

#### **1.2 THE PROBLEM**

The common link between Helsingborg, Malmö and Lund, except their linkage by train and geographical location in the eastern part of Skåne, is that the cities, together with the Skåne Region are actors in a project to invest in light railway. For almost 25 years there have been thoughts about trams or light railway in the region (Lunds kommun 2010, 6).

In the land use plans,  $OP's^2$ , of the three municipalities there is a focus on changing the mobility patterns of the citizens through high class public transport, in the long run light railway. The light railway project is coordinated through the project office SPIS. The project office is essential because of how the Swedish legislation in the transport sector is designed. The municipalities are responsible for the city infrastructure and the region is responsible for the public transportation system. There is also a financing component; In order to make it possible to do this large scale infrastructure investment in the three cities, the municipalities are trying to get financing from the national government or private actors. It has never happened that a local project, as a light railway system within one municipality, has gotten national financing. None of the three light railway systems planned in Skåne is crossing a municipal boarder, and is not defined as regional. Helsingborg, Malmö and Lund are three very different municipalities and cities. However, all are in need of a more effective public transport system that can transport large amounts of travelers in an effective and attractive manor. In the land use plans for Helsingborg, Lund and Malmö the municipalities wants to invest in light railway systems, in order to work towards cities that will function in the 21<sup>st</sup> century.

Globally, 15 percent of the emissions are created by the transport sector (Ecofys 2013), and 23 percent of the total emissions in the European Union are created within urban areas (European Commission 2013, 1). But there is potential to do reduce the emissions. The Euro Barometer survey in 2013 investigated the attitudes towards urban mobility. A large majority of the citizens of Europe consider traffic congestion, the cost of the congested traffic situation, the negative environmental and human health impacts, and the transport patterns to be important problems (ibid. 2013, 1). There is also potential for a faster progress within urban than in rural areas, as there is a high share of short-distance trips and there is a great potential for walking, cycling and public transport (ibid.). All Swedish authorities agree that there is a large potential for lowering emissions though change of the transport system, and the investments that are needed in order to facilitate a change in mobility are often seen as very expensive. However, the calculations usually made based on rational

 $<sup>^2</sup>$  ÖP, is an abbreviation for Översiktsplan. ÖP is a more extensive concept than land use plan, the concept is discussed in *"1.5 key concepts"* 

economics (Hultén 2012, 17), and I believe that there are other factors that should be highlighted. In this thesis the focus will be on these 'other' intended effects of the light railway project. How are the municipalities discussing mobility in their ÖP's?

# **1.3 THE QUESTIONS**

This thesis is aiming to identify the different challenges the municipalities Helsingborg, Lund and Malmö are aiming to solve through investment in the same infrastructure. This overall aim is going to be investigated through three questions

- What differences and similarities do the municipalities show in how public transports are discussed within the policy documents?
- Which aims are the municipalities expecting to meet through the investments in light railway?
- How is national policy affecting the light railway project?

# **1.4 HUMAN ECOLOGICAL SIGNIFICANCE**

In order to lower the transport emissions and become sustainable urban areas, and at the same time grow, Helsingborg, Lund and Malmö wants to make large changes within the municipalities.

The transitions into more sustainable cities have to be facilitated by changes of mobility within cities. Today the car is a common mode of transport for people in Skåne, and in order to change the mobility behavior the public transport system, as well as the infrastructure for cycling and walking, has to be improved. There is a vast amount of research arguing that attractive, effective and trustworthy public transport is a good way of changing mobility patterns (Redman, et al. 2013).

There are many stakeholders in the formulation of transport policy, and there are political conflicts, mainly concerning economic resources, between different levels of government. The starting point of this thesis is that the light railway is the appropriate choice for these municipalities and that the investigations into the technical aspects, as well as the calculations of capacity and demand for different modes of transport are correct. The focus is to identify the different challenges that the three municipalities wants to meet through the investment in a new mode of transport, light railway. This will be done by a discourse analysis of the ÖP's of Helsingborg, Lund and Malmö. I will analyze the documents from an urban political ecology perspective. The investment in light railway will be seen as a one of the infrastructures within the cities, not as separate or independent of the existing

context. The perspective of the city as a socio-natural metabolism will be used to clarify the relation between the constructed nature of the city and the citizens that are producing and reproducing it.

For the case as such I want to contribute with a comparison of the three cities. The policy documents produced are focusing on one of the municipalities at a time, or the light railway as mode of transportation. The contribution I am aiming to do with this thesis is to fill the void left from the lack of discussion on why the light railway is a good investment for the societies. It will look at all the three municipalities with the aim to give a more comprehensive picture of the project as a whole.

# **1.5 KEY CONCEPTS**

# 1.5.1 ÖVERSIKTSPLAN (ÖP)

Swedish municipalities are by law required to have an Översiktsplan<sup>3</sup> (ÖP). ÖP is the municipalities' strategic declaration of intent for the future development. ÖP is covering the whole geographic area of the municipality, and it has to address the strategic planning as well as the consideration between different public interest<sup>4</sup> and environmental quality standards<sup>5</sup>. ÖP also have to state the environmental impact of the plan in accordance with the Swedish environmental law. ÖP is the basis for zoning plans and other land use directives. ÖP is composed by many elements, as current and future land exploitation, public interests and guidelines and it is the basis for the planning of traffic, transport and infrastructure. In this process the traffic authority is striving to be a part of the early process of municipal planning (Trafikverket 2014 b, Boverket 2011).

<sup>&</sup>lt;sup>3</sup> Land use plan is in Swedish called Översiksplan, or most commonly talked about as ÖP. The Swedish ÖP has a more comprehensive aim than land use plans. Therefore I will use the Swedish abbreviation ÖP throughout the thesis.

<sup>&</sup>lt;sup>4</sup> Public interests have to be weighed against each other and private interests in ÖP. The planning should take place with consideration of nature and culture values, environment and climate aspects as well as the neighboring municipalities and the regional consideration. (Plan- och bygglagen 2010:900 2010, chapter 2 § 3). Public interests are among others; large untouched areas of land or water; land of importance for agriculture or foresting; land suitable for energy production, waste management or water security; environmental quality standards; environment and climate aspects; nature and culture values (Boverket 2014).

<sup>&</sup>lt;sup>5</sup> Environmental quality standards are a Swedish policy instrument introduced in 1999. The standards were put in place in order to help remedy the impacts on the environment from emissions from e.g. transportation and are legally binding. At the moment there are environmental quality standards in five areas; ambient air, regulations on air quality assessment, fish an bivalve waters, noise and water for swimming (badvatten) (Naturvårdsverket 2014)

#### 1.5.2 MUNICIPALITY & CITY

The municipalities discussed in this thesis are named after three cities. Malmö and Helsingborg have the word "stad", city, in the official name of the municipality. In this thesis the concepts will be used as follows; **municipality**, refers to the whole administrative area; **city**, refers to the urban areas. However, in the ÖP of Malmö and Helsingborg the municipality is using the word city as referring to the whole municipality, and in quotes I have kept the concepts as they are in the original text.

#### 1.5.3 LIGHT RAILWAY

Light rail is defined in relation to heavy rail. Heavy rail is referring to railroad in the classic sense as well as subway. Both railroad and subway are technologies depending on heavy infrastructure and heavy vehicles. All other form of rail bound traffic is light railway, no matter if the route is within an urban area or between a city and rural areas (Trivector Traffic 2014). The concept light rail in Sweden is usually a synonym for modern trams. Modern tram systems are ideally built with advanced

technological systems and separated from other traffic, which will make them faster than older systems. In Sweden the concept "lätta spår" (light rail) is also used to make the technology of railway within urban areas new and attractive and to separate new systems from older trams or trolleys (ibid.). In Sweden there are three cities that have systems of trams or light rail, Göteborg, Norrköping and Stockholm (ibid.). The system being planned in Skåne is by SPIS defined as light railway (picture 1) (Spårvagnar i Skåne 2013).



Picture 1 Illustration, Malmö Västra Varvsgatan (Spårvagnar i Skåne 2013, 23)

# 1.6 OUTLINE

The second chapter of the thesis is explaining the theoretical framework of the study. The main theories used are urban political ecology and theory of urban areas, but the basis of the thesis is political ecology and this is also discussed in this chapter. The third chapter is explaining the methodology used, qualitative text analysis, and how the research was done in practice, as well as how the sources was chosen and handled.

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In chapter four the context of the case is discussed. The Swedish structure of governance and the different political and administrative actors that are involved in transport policy. The history of the three municipalities and Region Skåne, the identities of the municipalities now and historically are discussed. The last section in this chapter describes the current infrastructure and how the current situation came to be. In this section the case is put into context through the visualization of statistical national and regional data.

In chapter five the empirical material is presented, the three ÖP's, the policy documents for Region Skåne, and the role of the different authorities are discussed. Chapter six is presenting and discussing the challenges that the municipalities are trying to meet and goals they are trying to fulfill and which obstacles that they have encountered. This is done by first discussing the overall aims and then the strategies using the five themes; environment, mobility, urban planning, regional development and growth. In the seventh chapter the results of the study are presented and concluded.

# 2. THEORETICAL FRAMEWORK

#### 2.1 POLITICAL ECOLOGY

Political ecology as a discipline is normative, and has been so since the beginning. Political ecologists are taking stand for marginalized groups and social justice, and are trying to find solutions to the problems that are caused by current practices (Paulson, Gezon and Watts 2005, 17-18). Blaikie and Brookfield wrote about political ecology;

The phrase 'political ecology' combines the concerns of ecology and a broadly defined political economy. Together this encompasses the constantly shifting dialectic between society and land-based resources, and also within classes and groups within society itself.

#### Paulson, Gezon and Watts 2005, 17

Political ecology has an ambition to address environmental challenges through intra-disciplinary methods, combining social and physical sciences. Tools that are used are often taken from political economy and focused around the control over resources and how the production relations are organized, but are used to answer questions related to environmental challenges (Paulson, Gezon and Watts 2005, 17). There have always been class analyses in political ecology, which often is combined with a comprehensive social theory that is intersectional and takes many overlapping dimensions of identity into account. Political ecologists have been focusing on ethnic identities, gender roles and gender relations as well as political and civil institutions, governance systems and land management (ibid. 26).

The focus of political ecology until the 1990s was the politics of land-use in non-urban, non-Western spaces. During the last decade of the 20<sup>th</sup> century a reassessment of political ecology took place. Escobar (1999) was one of the most influential scholars in this process, as he left the concept of political ecology behind for a definition based on ongoing social construction. Escobar widened the definition into;

Political ecology can be defined as the study of the manifold articulations of history and biology and the cultural mediations through which such articulations are necessarily established

#### Escobar 1999, 3

Escobar's definition of political ecology is not relying on categories such as nature, culture or environment, categories that might be defined differently depending on context and academic background (Escobar 1999, 3). Within Escobar's anti-essentialist political ecology nature is experienced difference depending on the persons' position, and the production of nature is different depending on social group or historic period. Nature is conceptualized in the form of what Escobar calls three 'regimes'; organic nature, capitalist nature and technonature<sup>6</sup>. The regimes are according to Escobar the result of discursive articulation that includes biological, social and cultural couplings. These regimes are not linear, they overlap and coexist, and they co-produce each other (ibid. 5). Escobar also argues that one should approach the regimes in the way that is most suitable of the study at hand (ibid. 6).

#### 2.2 URBAN POLITICAL ECOLOGY

During the poststructuralist reassessment of political ecology in the mid-1990s urban areas became an interest for political ecology scholars. For a long time urban areas were seen as unnatural, but as David Harvey put it, there is nothing unnatural about cities (Angelo and Wachsmuth 2014, 3).

Urban political ecology (UPE) combines the political ecology aim of bringing the methodology of political economy into the study of environmental problems, with a re-theorization of urbanization as a process where the social and the natural reinforces each other. Before this new approach urbanization was seen as a process of social transformation (ibid.). In UPE the city is analyzed by focusing on the structures of power and division of resources, through this viewpoint the aim is to understand the appropriation of nature and how the flows are distributed within society (Pincetl 2012, 32). The city is seen as a 'metabolic socio-environmental process' that stretches from the nearby environment, to all corners of the world and the urban areas are not treated as separate from its hinterland (Angelo and Wachsmuth 2014, 4). Urban metabolism is a contradicted term; as ecologists argue that metabolism is occurring within a single individual, and a city is in this view more of an ecosystem, a complex system of many individuals within its environment. Within UPE, as in geography, however, the term metabolism has its origin in Marxist writings and not within natural science. The German word that Marx used for metabolism was Stoffwechsel, which means a combination of 'circulation', 'exchange', and 'transformation', all at the same time. Within UPE the idea of metabolism is used to explain urban environmental change as a dialectal process between human and nature, and to investigate the change in urban socionature, within broader political

<sup>&</sup>lt;sup>6</sup> Organic nature is not essential, it is historical. Nature and society are not ontologically separate. Organic nature does not correspond to "the natural", it is not stable. As capitalist nature and technonature it is constructed and they are intertwined (Escobar 1999, 5, 7).

economic processes. The concept of metabolism is used to shed light on the processes of uneven urban development and how the power over the material conditions within the urban environment are controlled, manipulated and used to serve the elite and marginalize people with less wealth (Heynen 2006, 499, 502).

# 2.3 URBAN AREAS

Urban areas are complex socio-ecological and political systems. They are human made and the biotic systems are combined in ways that would not occur "naturally". Urban areas are made of built environments, planned and structured by human agency (Pincetl 2012, 35). In 2010 the "urban millennia" took place, more than 50 percent of the population in the world is now living in urban areas; however the population growth in European and North American urban areas are far slower (UN Habitat 2012, 25). Emissions that are fueling climate change are higher in urban areas (ibid. 33), and the emissions per capita are higher in the global north (United Nations 2013) At the same time the global reach of technological, consumerist economies is spreading over the world (Ehrenfeld 2008, 1).

The urban life in the 21<sup>st</sup> century is based on the idea of freedom of choice, but most often is the freedom of choice only available for people with wealth. Cities are branding themselves as good for consumption, tourism and cultural experiences, and there is a focus on knowledge-based industries (Harvey 2008, 31). It is often assumed that infrastructure is equally distributed among the citizens, and this idea influence how the urban infrastructure is viewed (Graham and Marvin 2001, 8). Urban areas are shaped by processes that are created through many complex and interconnected infrastructural 'landscapes'. These landscapes are acting as mediators between nature, culture and the productions of what is taking the form of the 'city'. The infrastructural scapes are among others taking the form of energy and power, water and waste, electronic communication and roadscapes (ibid.). On a global scale urban areas are becoming more divided, the last 30 years the division of wealth globally and within regions is getting more unequal. The neoliberal policies and economy have created more wealthy people and the incomes for the poor have stagnated or even diminished. In the urban landscape the urban process has been taking spatial forms. Gated communities are blooming, and there is more and more private public space, as indoor shopping malls or gated areas (Harvey 2008, 32, UN Habitat 2012, 68). The urban infrastructure is in this process getting more fragmented. More wealthy neighborhoods have a wide range of high quality services, as schools, health centrals, waste management and public transportation, that are not as accessible or have the same quality in neighborhoods where the socio economic situation in worse (Harvey 2008, 32). Globally, cities are becoming more private or quasi-private. By restructuring the urban space unwanted groups can be kept out of parts of the city, and citizens can live their life without ever having to meet people from other groups within society (ibid. 38).

The different 'scapes' are intertwined, they are relying on each other and co-evolve in relation with urban development and urban space (Graham and Marvin 2001, 8). The management and development of infrastructure is often done by technical institutions and is driven by "the supposedly depoliticized, instrumental rationalities of engineering cultures" and this conceals the interconnectedness of the network of urban infrastructures (ibid. 20). Because of the depolitization of infrastructure the networks have often been taken for granted, the infrastructure is 'normalized' and seen as invisible by its users (ibid.), as long as everything is working, but when there is a crisis the effects are panic and chaos (ibid. 30). The infrastructure scapes are often path dependent. When a society has invested in a technology, it will defend that one technology, and this, in combination with a narrow perspective on only one city or one set of impacts, makes the technology itself the aim, and the slower shifts within society as a whole becomes obscured. This technological determinism reinforces the idea of one technology, instead of focusing on the processes that are taking place as one infrastructure is *added* to an already existing place (ibid. 22). According to Graham and Marvin (2001) these four factors combined; the neglect of networked infrastructure, the panic when there is a crisis, the fact that the networks are hidden and taken-for-granted, and the assumption of technological determinism makes the attention to the infrastructure networks reactive to crisis or collapse, instead of proactive, sustained and systematic (ibid. 30).

# 3. THE METHODOLOGIES

#### 3.1 THE CASE

The vantage point for the thesis is the question of challenges that the municipalities Helsingborg, Lund and Malmö are trying to meet, in part through investments in high end public transportation. Problem-driven research are by Flyvberg (2004) described as good social science as it has the problem in the center of the research design and not a method that a case is fitted into, it is also an advantage that a case study is able to study a question in depth (Flyvbjerg 2004, 432).

The priority has been to find material that has the possibility to answer my inquiry, as well as being reliable. I have a predilection for policy and this has influence my choice of method in this research, as well as how the material was chosen. I have tried to do the work with the aim of the study in mind and this has required flexibility in choice of method and data (Holstein and Gubrium 2004, 310). Since I know the case well from the beginning, there might be some bias, however since thesis is written with the preconceived assumption that the light rail is the appropriate choice for the municipalities there is no contradiction in the case of the mode of transportation.

The starting point of the thesis is the light railway project SPIS. Within the SPIS-project there are four main actors, the municipalities (Helsingborg, Lund and Malmö), and Region Skåne. But the Swedish government is also an actor in the project, albeit from afar.

#### **3.2 CHOICE OF METHODS**

The main method used is text analysis of policy documents. The documents are treated as representations of the policy within the different administrative areas (Titscher, et al. 2007, 34). The documents have been guiding throughout the process and the questions have been studied with no hypothesis.

The ÖP's have been studied through content analysis, in order to describe and explain how the three municipalities are using the mean of light railway to meet challenges or goals. Question one is concerned with how, and the second question with why, and therefore the aim is to describe as well as trying to find the answer to why (Esaiasson, et al. 2012, 36). This study is qualitative. It is not concerned with the number of times concepts are written, or the exact wording used. The importance has been what the texts are implying and how different themes are discussed. In order to

be able to analyze the material the documents have been coded. However the coding should not be seen as a sign of quantitative method, but as a way of defining themes and context in order to make sense of the material (Crang 2005, 224)

The texts have been coded in three phases, in order to find the concepts that are related to public transport and sort them into themes. The first phase was to detect areas of the ÖP's discussing transport, in a wide definition of the concept. The second phase coded the texts in order to find in which context transport was discussed. The third phase consisted of making themes through the clustering of concepts (ibid.). The result was five overriding themes, mobility, environment, regional development, growth and urban planning (the clustering is presented in Appendix 1). I decided to use this investigative approach in order to not put myself in a position where important data would be left out because of pre-conceived categories in the coding (Titscher, et al. 2007, 58-59).

In addition to the qualitative text analysis, geographic information science (GIS) has been used to analyze regional data about growth and travelling patterns. The data analyzed with GIS is quantitative and gathered from a number Swedish state and regional authorities. GIS has been used to make the statistical data a spatial and is visualized through a number of choropleth maps. This method was used in order to make a spatial connection to the statistical data gathered from a number of sources.

# **3.3 THE POLICY DOCUMENTS**

The primary data used in this thesis are policy documents. Policy documents are viewed as having a high degree of reliability (Clark 2005, 58). ÖP's are political strategic documents that are transferring the vision of the elected politicians into the spatial development of the land, they are political documents and this might be seen as a predicament, since the documents might be bias (Thurén 2005, 13). However, this is one of the reasons the different documents are interesting in this study, as politics is power and power is important in formulation of change in the urban space. The governmental documents are also public documents, and have the same status as the ÖP. The documents are throughout the whole thesis viewed as representations of the politics for the different administrative areas they are produced for (Titscher, et al. 2007, 32). The documents concerning the light railway are bias as they are reinforcing the decision to invest in light railway over other forms of high quality public transport or infrastructure investments. I am aware of the bias within the data and realize the importance of being critical toward the sources all the way through the research. It is also important to note that all of the documents are the latest produced. This is not

an historic thesis; it is focusing on plans and the vision for the future. The oldest document used was produced in 2009.

The credibility of the research is secured by using sources that are easily accessible for everyone, as they are public record, and by describing the method for analysis as thoroughly as possible (Seale, et al. 2004, 407). The documents I refer to in the text are all in Swedish. This might be viewed as a problem as "translating understandings [...] from one culture and language to another also implies eliminating certain concepts and contextual understanding expressed" (Widerberg 1998, 133). And the transparency of the research and the reliability might be affected as there are always nuances lost in translation as. I acknowledge this problem, and supply original quotes as footnotes. There is also a discussion about the background of the texts in order to situate the case within the cultural context of Sweden.

# 3.4 THE QUANTITATIVE DATA

The secondary sources used is quantitative data is used to put the qualitative research into a national context. The data is gathered from two main sources SCB, Statistics Sweden, and Regionfakta, regional statistics. Both of these sources are reliable and transparent. They are open public databases where the gathering of data is clearly explained in the sources.

# 4. THE CONTEXT

#### **4.1 THE GOVERNANCE STRUCTURE**

#### 4.1.1 THE THREE POLITICAL LEVELS

Sweden is a unitary state with three levels of administration, governmental national, regional, and municipal. In addition to the three elected bodies the transport system is influence by the county administrative board as well as the transport authority. The state, region and municipalities are governed by a parliaments that are elected every fourth year through direct elections (Norén Bretzer 2010, 57, 93). The second level of administration is regions<sup>7</sup>, there are 21 regions in Sweden (map A) (ibid. 142), and each region is governed by its own parliament. The region has the responsibility for the regional development, the health system, public care the transportation and culture (Region Skåne 2010). The third level of administrations is the municipalities. There are 290 municipalities in Sweden; these too are governed by elected parliaments (Utrikespolitiska Insitutet 2012). The municipalities are required to administer social welfare, schools, waste and environment and urban planning among other things (Regeringskansliet 2013). The three



Map Design: Klara Strandberg, 2014 Data source: Department of Human Geography, Lund University 2014 Regionfakta 2014, Sveriges Nationalatias 2014

<sup>&</sup>lt;sup>7</sup> On the regional level there are two forms of administrations. Counties are the most common form, but since 1999 there have been a restructuring of the administration and since then three regions have been created. The county and the region have in most regards the same governmental responsibilities (Utrikespolitiska Insitutet 2012). Skåne is a region, not a county; therefore the concept region is used in this thesis.



Figure 1 The Swedish Governance System (figure by author)

municipalities in this study, and the region, all have different political governments, created through coalitions of three, four or five parties (Femklövern i Skåne 2014, Helsingborg 2010, Kommunkontoret 2014, Alliansen 2014).

There are 21 county administrative boards in Sweden, as there are regions (map A). The county administrative boards are the government's and national parliament's local, regional, office (Länsstyrelsen Gotlands Län 2010). The county administrative boards have a double role, as an actor in implementation of national policy, and as the voice for the citizens towards the government (Norén Bretzer 2010, 145). The county administrative boards are responsible for, in cooperation with municipalities, regions and actors in civil society, the health protection, climate and energy policies and national environmental goals (Länsstyrelsen Skåne 2013)

Sweden has approximately 250 of governmental authorities. The authorities' role is to execute government policy. The authorities have the mandate to independently handle the day to day work without the interference of the government or the parliament (Skatteverket 2004, 11). The authority responsible for infrastructure and traffic is the transport authority (Trafikverket 2014 c).

#### 4.1.2 THE REGIONAL TRANSPORT POLICIES

Every region has to have a regional transport infrastructure plan (RTI-plan). The current RTI plans are based on the national transport plan 2010-2021, and with the new transport plan 2014-2025 the RTIplans are getting re-prioritized (Trafikverket 2013).

#### 4.1.3 THE SWEDISH STATE & TRANSPORT POLICY

#### 4.1.3.1 THE GOVERNMENT'S TRANSPORT POLICY

In Sweden there are national environment and transport goals set by the national government. The overall transport goal is "to secure a socio-economic effective and long term sustainable transport providing for the citizens and the industry in the whole country"<sup>8</sup> (Näringsdepartementet 2009). The goal is divided into two parts, the function goal and the consideration goal. The consideration goal is focusing on "the design, function and use of the transport system must be adjusted in order to make sure that no one is killed or badly injured. It is also supposed to contribute to the fulfillment of the environment quality goals and better public health"<sup>9</sup>, and is the goal incorporating the national environment goals. The function goal is aimed at the accessibility and mobility of the citizens (ibid.).

#### 4.1.3.2 THE TRANSPORT AUTHORITY

The transport authority is responsible for the planning of the whole transport system, the roads, the railway, the air traffic and the water bound traffic. This planning should be done in cooperation with regions and municipalities. Beyond this, the transport authority is also responsible for construction, operation and maintenance of the state roads and railroads. It is also within the authority's responsibility to ensure the effective use of the infrastructure as well as making it safe and environmentally compatible (Trafikverket 2014 a).

#### 4.1.4 THE COUNTY ADMINISTRATIVE BOARD & TRANSPORT POLICY

Every year the 21 county administrative boards do a follow up on the 16 national environmental goals. In 2014 the county administrative board in Skåne came to the conclusion that of the 15 goals that are relevant to Skåne, 13 will not be fulfilled by 2020 (Puch and Åberg 2013, 6, 11). In 2014 the county administrative board lists the environmental challenges for Skåne, these are explained in detail in Appendix 2. The report states the overall situation in Skåne. The emissions from the transport sector are almost the same as 1990 and the emissions both from cars and from heavy transport are increasing in Skåne. The traffic on the roads in Skåne are expected to increase as there is a population growth within the region, there are also more transit trips. One way to decrease the

<sup>&</sup>lt;sup>8</sup> "att säkerställa en samhällsekonomiskt effektiv och långsiktigt hållbar transportförsörjning för medborgarna och näringslivet i hela landet"

<sup>&</sup>lt;sup>9</sup> "Transportsystemets utformning, funktion och användning ska anpassas till att ingen ska dödas eller skadas allvarligt. Det ska också bidra till att miljökvalitetsmålen uppnås och att ökad hälsa uppnås."

emissions is through strategic physical planning, and the municipalities are working with this method (ibid. 13). The air quality is not as good as it should be, in Malmö and Helsingborg the municipalities has worked to reduce the particles in the air through small scale place specific action. Puch and Åberg (2013) are stating that long term investments in high quality public transport and changes in behavior is a strategy to be used (ibid. 16-17). In the years 2010-2013 Skåne was a pilot project for green development. In the report the conclusion of the project is that the challenge is that there is too little effectuation within the climate and energy sector (ibid. 14).

# **4.2 THE HISTORY**

# 4.2.1 SKÅNE

The administrative unit Region Skåne consists of 33 municipalities. Region Skåne is responsible for health care, public transport, culture and regional development, among other things. Region Skåne



# Øresund Region

Data sources: Department of human geography, Lund University 2014 GADM database of Global Administrative Areas 2012

Map design: Klara Strandberg 2014

The three largest cities in Skåne are located in the western part of the region. Malmö is the largest city in Skåne and the 3<sup>rd</sup> largest city in Sweden. Helsingborg is holding the place as Sweden's 9<sup>th</sup> largest city with and Lund is in 12<sup>th</sup> place. The three municipalities stand for 43.9 percentage of the total population in Skåne as a whole (Table 1) (Statistiska Centralbyrån 2014 a).

The western part of Skåne has since 2000 been going through a rapid transformation. The population is growing fast in the three big cities Helsingborg, Lund and Malmö, and the cities roles within the

region as well as the relation between the cities are changing. Since the opening of the Øresund bridge the 1<sup>st</sup> of July 2000 Skåne has become one of the partners together with Sjaelland in the Øresund region (Öresundsbron 2014). The bridge has changed the mobility of the Scanian, and Danish, people and the mobility has been affected by the building bridge.

	Population in 2013	Percentage of
		total population
Sweden	9 644 864	
Skåne	1 274 069	13,2 %
Helsingborg	132 989	1,38%
_und	114 291	1,5%
Malmö	312 994	3,25%
		Table 1 Population
	Data source Statistis	ka Centralbyrån 2014 c

# 4.2.2 HELSINGBORG

Helsingborg was the Swedish boarder city towards the continental Europe. Helsingborg was, before the bridge, the place where the transports between Sweden and Denmark were most frequent. Øresund, the water between Skåne and Sjaelland is most narrow between Helsingborg and Helsingør (map 2), and most of the ferries transporting people, vehicles and cargo was trafficking this part of Øresund. Helsingborg has had an important geographical role, as a boarder city, as a defense hold and as a place for trade. Helsingborg has for a long time been trying to get a permanent connection between Sweden and Denmark, the HH-connection<sup>10</sup> and is still doing so (Helsingborgs kommun 2010, 36). Helsingborg is sometimes described as Sweden's most geographically segregated city, a problem that has been tackled in many ways over the last decades. Lund University has since 2000 had a part of the education located to Helsingborg, in the branch called Campus Helsingborg with 4200 students (Campus Helsingborg Lunds Universitet 2014).

<sup>&</sup>lt;sup>10</sup> Helsingborg- Helsingør connection

#### 4.2.3 LUND

Lund is one of Sweden's oldest university cities, Lund University has almost 48 000 students and the students are a large part of the population. The city has a long history tracing back to the 11<sup>th</sup> century, a history closely linked to the cathedral and the city's status as the home of the bishop. Lund is a municipality divided in two, the country side east of the city where half of the citizens live. The people who live in the eastern parts of the municipality seldom indentify themselves with the city name 'Lund 'or with the university, the cathedral and the medieval city center. When Lund is discussed the city refers to the urban area, and the municipality to the whole area.

The identity of Lund city is tightly linked to the medieval city center with the university and the cathedral. The bishop of Lund became the arch bishop of the Nordic countries in 1103 and the oldest part of Lund cathedral is from 1123 (Lunds Domkyrka 2014). The other influential institution in Lund is the university. The university was established in 1668, ten years before this Lund had become Swedish in the treaty at Roskilde. The university was one of the actions taken to make Lund more Swedish and less Danish, however the process of making Skåne a part of Sweden took a long time (Wickström 2013).

At the end of 2013 Lund was the 12<sup>th</sup> largest city in Sweden, there was 114 291 citizens living in the municipality of Lund, that is 1.18 percent of the population in Sweden as a whole. In the last 40 years Lund the population in Lund has doubled, the city has been growing twice as fast as Sweden as a whole (Lunds kommun 2013 a, Statistiska Centralbyrån 2014 a, Statistiska Centralbyrån 2014 b, Statistiska Centralbyrån 2014 c)

#### 4.2.4 MALMÖ

The largest employer in Malmö until the 1970's was the ship building company Kockums. After the First World War and into the 1970's Kockums was one of the largest producers of ships in the world (Gentili 2009), and Malmö was relying heavily on industrial production. In the beginning of the 1960's 45 percentage of the population was employed in the industrial sector (Lundin 2007, 9). In the 1970's there was a "death of the docks" in Sweden, and Kockums was hit hard by this industrial crisis (ibid. 29). The population in Malmö has been growing, except for during the crisis in the 1980's. In order to move forward after the crisis a Vision 2000 work is started in 1995. Around the millennium there were a lot of different large changes in Malmö. Malmö university was established in 1998, in 2000 the Øresund bridge was opened, and in 2001 there was a large housing fair in the Western Harbor of Malmö, called BO01 (Möllerström 2011, 18, Malmö Stad 2011 b). This combined has changed the

identity of Malmö into a knowledge based community on the border to the rest of Europe (Möllerström 2011).

#### **5.1 THE EMPIRICAL MATERIAL**

The policy documents that are used as empirical material in this thesis are on the local level the ÖP's for Helsingborg, Lund and Malmö. In addition to this and the plan documents for the light railway in the three cities as well as the strategic mobility and environment programs produced for the municipalities have been used in order to get a comprehensive picture of the three projects.

The regional documents featured in the thesis are not used as empiric material, but as background material in order to explain the context of the light railway project.

On the national level the government has a strategic transport plan that was released in April 2014. This plan is long term and shows the direction for the national infrastructure investment in Sweden 2014-2025. The plan is divided into regional documents, as well as documents for each planned infrastructure investment. As empirical material the regional document for Skåne is used, and in order to put the investments in Skåne into a national context the documents for Stockholm and Västra Götaland and national as well as regional statistics are also included.

#### 5.2 THE MODE OF TRANSPORTATION

The light railway project in Skåne is coordinated through the project office SPIS. The project office was established in 2011 with support from EIB<sup>11</sup> and the Elena founds<sup>12</sup>. The idea of a common project started as a traffic issue, the common denominator between the three largest cities in Skåne was that some of the bus routes reached the capacity roof. In order to solve this problem in the long term the municipalities had an interest to investigate how the urban public transport should develop. In this process the municipalities realized that it would be better to study the different options together. In the beginning the cooperation was informal, but over time it became an official coproject between the municipalities and Region Skåne (Horning 2014). Within the light railway project the part in Lund, Lundalänken, is first in line.

<sup>&</sup>lt;sup>11</sup> European Investment Bank

<sup>&</sup>lt;sup>12</sup> The European Local Energy Assistance

Since the first idea of high class public transport there have been a number of studies done in order to decide which mode of transportation is the most suitable (Lunds kommun 2011, 10). When the frequency of busses, in order to meet demand, becomes five minutes or less the capacity within the system has to be analyzed. When the frequency is less than two minutes the traffic cannot function

Type of vehicle	Frequency	Comfort capacity
		per hour <sup>13</sup>
City bus	5 minutes	540 passengers
Articulated bus	5 minutes	828 passengers
Double articulated bus	5 minutes	990 passengers
Light rail 30 meters	7,5 minutes	1289 passengers
Light rail 30 meters	5 minutes	1933 passengers
Table 2 Vehicle capacity		

Adapted by author: data, Schiöth 2010, 7

in a trustworthy manor (ibid.). The most discussed modes are a development of the current city and regional busses, bus rapid transit (BRT) with articulated busses and light railway (ibid.).

There are different ways to increase the capacity within the transport system. Separate lanes for the busses and elongated bus stops are two ways. These two investments are in line with BRT-traffic. Lundalänken is today a BRT-solution in parts, as is the Malmö express that opened in the summer of 2014 (Schiöth 2010, 7). In Lund a full scale BRT-concept would solve the capacity problems, compared with the current system, however the restructuring of the urban space in order to make the large scale bus stops possible would not be suitable in consideration to the high end urban visions that the municipality has for Lund (Lunds kommun 2011, 11). The light railway system would also have a higher capacity, and railway will attract more travelers than busses do, so the idea is that light railway will be a long term sustainable solution (ibid.). In Malmö the capacity will be managed for another decade with Malmö Express (Schiöth 2010, 4)

<sup>&</sup>lt;sup>13</sup> Comfort capacity is not the same as maximum capacity. However in order to create a public transportation system that is comfortable is vehicles with maximum usage not to prefer. In light rail vehicles the comfort capacity is said to be 90 percent, since the vehicles are very comfortable and stable. Busses are more instable, this results in a comfort capacity of 75 percent. It worth noting, that both of these capacity counts are higher than the number of seating in the vehicles, the number of seating is about half of the maximum capacity.

#### 5.3.1 HELSINGBORG

#### 5.3.1.1 ÖP HELSINGBORG

The focus in ÖP Helsingborg is sustainability; ecologically, socially and economically. The definition used is that "sustainable development means to use human and natural resources knowingly and balanced, by taking social, environmental, and economic consideration. Sustainable development is distinguished by the fact that the common resources are used as effectively and equally as possible in order to reach set goals" (Helsingborgs kommun 2010, 14)<sup>14</sup>. There are four parts of this definition of sustainable development; the municipality's role in relation the nearby municipalities as well as the Øresund region, the population development and socio economic challenges,



Figure 2 Planning Strategies Helsingborg Figure by author

create the conditions for sustainble transportation, and lessen the burden on the environment (ibid. 12-13).

ÖP is centered around three themes, meetingplaces, neigbourhoods and logistics (Figure 2) Helsingborg is striving for one "Helsingborg identity", as today the municipality is one of Swedens most geographically segregated (ibid. 7, 18).

*Meeting places* is the strategy the muncipality have to create a socially sustainble municipality. By creating attractive meetingplaces people from all parts of the municipality will meet and the Helsingborg identity will be created. (ibid. 18). All parts of the municipality have do develop, and in order to do so the neighborhood centra and areas close to public transportation stations have to develop into places where people meet (ibid. 21-22).

The *neighborhoods* within Helsingborg are spatially divided by class and ethnicity. In order to create preconditions for people with different backgrounds to meet the neighborhoods have to develop. It is supposed to be easy to get to and from all neighborhoods by public transport as well as by safe walking and cycling infrastructure. Every neighborhood should also have basic services (ibid. 26, 30).

<sup>&</sup>lt;sup>14</sup> "Hållbar utveckling innebär att använda mänskliga och naturens resurser medvetet och balanserat genom att ta såväl sociala som miljömässiga och ekonomiska hänsyn. Hållbar utveckling utmärks av att de gemensamma resurserna används så effektivt som möjligt för att uppnå uppsatta mål." (Helsingborgs kommun 2010, 12)

A large part the neighborhoods strategy is related to mobility. In order to create attractive neighborhoods within a larger region the infrastructure connecting neighborhoods and the city center as well as important places outside the municipality (ibid. 28). 22 percent of the citizens of Helsingborg live in housing built in the years 1965-1975, as a part of "the million housing program"<sup>15</sup> (ibid. 30). Many of these neighborhoods are in dire need of renovation, and the modernistic infrastructure that surround creates barriers that are a large obstacle in the process of creating the city that the plan are striving for.

In order to create a city where people are able to meet, the municipality wants to make the *logistics* of people more effective. The mobility within the city has to be sustainable, as well as the infrastructure (ibid. 34). There is a large focus on developing a well-functioning public transport system and this should be done by reducing the travelling times and make the comfort higher. Every public transport decision should be made with the idea "think light railway, drive busses". In the long run the public transport should be railway. Another focus is to move people towards walking and biking, the distances to important places have to be shorter and the infrastructure facilitating walking and biking has to be improved (ibid. 38).

#### 5.3.1.2 THE LIGHT RAILWAY

The proposed first route of the light railway is coinciding with the renovation of one of the most at risk neighborhoods, Drottninghög a neighborhood where 73 percent of the population has a background as immigrants and all of the housing is apartments for rent. On the other side of the route another neighborhood would also be connected to the light railway. This area is not as vulnerable and the population is more diverse. The people from both of these neighborhoods would, if the light railway was constructed, travel together and the meetings that the municipality is trying to create would happen at the light railway station as well as on the train, and there would be a possibility to change the light railway stations into neighborhood centers (Strandberg 2013, 22-24).

#### 5.3.2 LUND

#### 5.3.2.1 ÖP LUND

To vision that the politicians in Lund has stated in its ÖP is long term sustainable development, and are referring to the sustainable development definition set by the UN's Brundtland Commission "sustainable development is the development that meets the needs of the present without

<sup>&</sup>lt;sup>15</sup> Miljonprogrammet

compromising the ability of future generations to meet their own needs" <sup>16</sup>. Ecological sustainability is, according to the land use plan, a framework necessary for all development (Lunds kommun 2010, 14).

In the ÖP for Lund it is clearly stated that the municipality is going to have 85 percent less carbon dioxide emissions by 2050. To make this possible the physical planning of the city of Lund, as well as the municipality as a whole has to make it possible to make everyday sustainable choices. Another focus in the plan is that the fertile agricultural land around the city of Lund has to be used in the most effective way possible (ibid. 10). The land that Lund is built on is of degree 7-8 on the 1-8 fertile soil scale and the plan states that it in the future it might become necessary to use the land surrounding the city to ensure the food security in the region. In order to protect the fertile agricultural land the municipality wants to facilitate a change towards less use of industrial fertilizers and pest controls (ibid.), as well as, when agricultural land has to be used for the development of the municipality, this has to be done in such a way the land use is as effective as possible (ibid. 16).

For a long time, Lund has been a municipality with high ambitions when it comes to the environment. In 1997 the municipality formulated a strategy policy document for how the municipality could work for a more sustainable transportation system. This plan, called LundaMaTs, was in the late 90's in the forefront in the work for sustainable urban mobility (Rydén, et al. 2005, 1). In LundaMaTs the focus is to change the mobility patterns and make walking, cycling, and travelling with the public transportation system the easy choice for the citizens, by making the city more accessible and attractive for these modes of transportation as well as working with mobility management (ibid. 35, 45, 51, 61, 99). At the moment LundaMats III being prepared and the process of minimizing the effect of the city on the environment is ongoing.

Transportation is in ÖP an important tool in order to develop the municipality. The future public transportation according to ÖP is based on railway. There are two projects named, Simrishamnsbanan, a new railway between Malmö and Simrishamn which will connect to the village Dalby, and Lundalänken light railway (Lunds kommun 2010, 25). Lundalänken is first in line within the light railway project as a whole.

<sup>&</sup>lt;sup>16</sup> "Visionen för översiktsplanen för Lunds kommun är en långsiktigt hållbar utveckling med utgångspunkt i Brundtlandkommissionens definition av hållbar utveckling, det vill säga en utveckling som tillgodoser dagens behov utan att äventyra kommande generationers möjligheter att tillgodose sina behov." (Lunds kommun 2010, 14)

#### LUNDALÄNKEN

In 2003 the municipality built Lundalänken from Lund central station to Lund NE. Lundalänken is built in a way that it will be easy to convert to light railway. Since 2003 the traffic on Lundalänken has been growing and the capacity roof is almost reached (Lunds kommun 2011, 3).

The first ideas of light railway was written down in 1989, and in January of 1999 a declaration of intent between Skånetrafiken and Lund municipality was signed, with the aim of building Lundalänken, in a first phase for bus traffic, but with a possibility to convert to light railway (ibid. 6). In 2008, five years after the opening of Lundalänken, the public transport travelling had doubled, and the development is faster than the prognoses in all ways. Most of the journeys to the area are today, despite this, made by private cars and there are large problems with congestion (ibid. 8). The traffic at Lundalänken today is a bus every 2.3 minutes in the most heavily trafficked part of the day (ibid. 26).

Lundalänken is supporting the many IT-companies, parts of Lund University as well as the x-ray lab MAX IV<sup>17</sup> and the planned science center ESS<sup>18</sup>. And the plans of light railway is coinciding with the development of a new neighborhood and even more business with a total mass of people of 50,000 (ibid. 8). In order to make this development possible the municipality sees that the transport system has to develop, more people have to travel with the public transport. The public transportation has to be more effective and attractive, as well as creating structure and reliability (ibid. 8).

#### 5.3.3 MALMÖ

#### 5.3.3.1 ÖP MALMÖ

In 2014 the Malmö politicians confirmed ÖP 2012. The city planning vision for Malmö is; "In the beginning of the 2030s Malmö is a city that have had the courage in order to reach high set sustainability goals. A brave city. It feels and shows – in the pulse and character of the city and the energy that is conveyed by the citizens of Malmö. Malmö is the most international city of Sweden. Streets and squares have an intense city life but at the same time the Malmö has become notably

<sup>&</sup>lt;sup>17</sup> MAX IV is a x-ray laboratory that is a national center for research. Every year about 1000 scientists visits MAX IV in order to do research (MAX IV 2014).

<sup>&</sup>lt;sup>18</sup> ESS stands for European Spallation Source, and is a multi-disciplinary research center based on the world's most powerful neutron source (Ekdahl 2014).

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cleaner and quieter. It is a city that is maintained by sustainable energy. Malmö is the place to be for the innovative and creative industry"<sup>19</sup> (Malmö Stad 2014, 7)

Malmö in 2030 will be "a socially, environmentally and economically sustainable city and an attractive place for living and work"<sup>20</sup>. The municipality is treating the three aspects of sustainability as equally important and states that none of the aspects can be met without the others (Figure 3) (ibid. 4).

The priority of the plan is to generate a robust city structure that is close and green and that heals the city – socially and physically. The structure should also contribute to good prerequisites for active businesses, and employment (ibid. 4-5). In order to contribute to the fulfillment of the environmental goals the development is going to promote saving of resources and energy efficiency. The city is going to promote renewable energy, and a traffic system that minimized the environmental effects (ibid. 5). The city will use 30 strategies to fulfill the overall goals and the prioritized focuses. These strategies are mutually reinforcing and are contributing in one or more ways to the sustainability goals (ibid.).



Figure 3 Attractive and sustainable city, Malmö Figure by author

#### 5.3.3.2 MALMÖ EXPRESS

Bus 5 in Malmö is the route with the most travelers in Skåne. In order to handle the demand the route is trafficked by articulated busses, 16 routes in hour during rush hours (Schiöth 2010, 7).

<sup>&</sup>lt;sup>19</sup> "I början av 2030-talet är Malmö en stad som har vågat ta krafttag för att uppnå högt uppställda mål om hållbarhet. En stad med mod. Det känns och syns – i stadens puls och karaktär och i den energi som malmöborna förmedlar. Malmö är Sveriges mest internationaliserade stad. Gator och torg har ett intensivt stadsliv men samtidigt har Malmö blivit märkbart tystare och renare. Det är en stad som helt försörjs med förnybar energi. Malmö är rätt plats att vara för ett innovativt och kreativt näringsliv."

<sup>&</sup>lt;sup>20</sup>"en socalt, miljömässigt och ekonomiskt hållbar stad och en attraktiv plats att bo och verka i. De tre hållbarhetsaspekterna samverkar och är ömsesidigt beroende av varandra".

In order to manage this situation Malmö is investing in a new bus fleet of super busses in form of double articulated busses that are 20 meters long with four doors. These busses will have characteristics of light rail vehicles such as that the driver will not be responsible for tickets and there will be entry/exitpassages through all of the doors (ibid. 13-14). There will also be infrastructure investments, the busses will be separated from the rest of the traffic, in order to make the new system more effective (ibid. 3). The Malmö



Picture 2 Construction of station for Malmö Express, Nobeltorget Photo by author

express' route will traffic between Hyllie and Stenkällan. The route coincides with a future light railway, with access to trains and to regional busses. In 2010 (Schiöth) the assessment was that the investment in super busses on line 5 would sustain the transport system to along the route for 8-12 years (ibid. 4). Malmö Express is not a permanent investment, it is a project to solve an acute problem and in doing so the municipality is planning according to the lines "think light railway, drive bus". It is also worth keeping in mind that the infrastructure that are invested in the Malmö Express is not suitable for the light railway that is planned, so when the demand exceeds the super busses' capacity new investments in the urban room has to be done (Horning 2014). However, within the investment in Malmö Express, urban space has been appropriated from private car use and converted into a space for public services, and this is changing the right to the public space.

# 5.4 SKÅNE REGION

The Regional transport infrastructure plan for Skåne, 2010-2021, names six priorities. (1) The regional enhancement and integration will continue in order to create better accessibility in Skåne as a whole. The plan is to have continuing population growth, a multi-nucleus structure, and better public transportation. (2) Develop a transport system that is sustainable and secure, it should be easier to travel with public transport and by bike. (3) The integration of the Øresund Region will continue. (4) The infrastructure in the growth areas of the region will develop. The accessibility will increase and the bottlenecks have to be minimized in a sustainable manor. (5) The transport system is designed for everyone and further social sustainability. (6) The connections between Skåne and the rest of the world have to be improved, through improved accessibility to airports and harbors, and investments

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in high speed railway (Region Skåne 2010, 2). The focus of the plan is to strengthen the whole region, and in order to do so focus on better public transport.

# 5.5 SWEDEN

# 5.5.1 THE GOVERNMENT

The government has two national transport policy goals, the function goal and the consideration goal. Their aim is to "secure a society economic effective and long term sustainable transport provision for the citizens and industry in the whole country"<sup>21</sup> (Näringsdepartementet 2009). The function goal is aiming at the accessibility and mobility of citizens and companies in the whole of Sweden. The consideration goal is concerning security, environment and health. All transport policy should contribute to that the Swedish environment quality goals are met. In the consideration goal it is stated that Sweden should have a vehicle fleet that is nondependent of fossil fuels by 2030 (ibid.).

# 5.5.2 NATIONAL TRANSPORT POLICY

The Swedish population is most dense around Stockholm, in Västra Götaland and Skåne. The northern part of Sweden has the lowest population density, especially in the mountainous regions in the northwest (map 3). The economic prerequisites differ between the 21 regions. Norrbotten, the most northern region has a high gross regional product (GRP), especially compared to the

Table 3 Division	of financing, nation	onal transport pla	n 2014-2025
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National inancing	Operation and management of roads Operation and management of railway Development of the transport system, including water ways	155 billion 86 billion 286 billion
Other inancing	Congestion taxes Stockholm and Gothenburg Co-financing by regions and municipalities	67 billion 18 billion
	Regerings	kansliet 2014 a

population density. This high GRP is based on the mineral and forest recourses that is in multitude in this part of the country. This region has the second highest GRP following the capital Stockholm (map 4).

The national transport plan 2014-2025 has a total investment of 522 billion SEK added to this is 86 billion kronor from congestion taxes and financing by the municipalities and/or regions (Table 3)

<sup>&</sup>lt;sup>21</sup> "säkerställa en sämhällsekonomiskt effektiv och långsiktigt hållbar transportförsörjning för medborgarna och näringslivet i hela landet." (Näringsdepartementet 2009)



Map design: Klara Strandberg Data: Department of Human Geography, Lund University 2014, Näringsdepartementet 2014, Regionfakta 2013, Statistiska centralbyrån 2013

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(Regeringskansliet a 2014, 1-2). Of these 522 billion SEK in national investments Region Skåne will get 4.235 billion SEK. The investment in tied to certain projects. In Skåne there are 13 railway projects where the investment is over 50 million SEK, and 6 railway project with less than 50 million kronor in investment in the plan. 8 projects over 50 million for road are also in the plan, as well as 5 projects under 50 million. One bike project is in the Scanian part of the plan, a coast line between Helsingborg and Gothenburg (ibid.).

The money is divided through the regions (map 5 & 6). Every region is dividing the money they are granted trough a regional transport infrastructure plan (RTI-plan) (Trafikverket 2013). The national infrastructure investments are clustered to Stockholm Region, Västra Götaland Region and Skåne Region, the regions surrounding the three largest cities in the country. When the national investments are calculated per capita the differences are not as large, however, Norrbotten and Skåne gets less than Stockholm and the sourrounding areas, but the sparsely populated areas in the middle of the country gets the most resources per capita.

In Stockholm there are two large investments in the national infrastructure plan. A subway investment is one of the parts in a 100 billion program in order to improve mobility in the region of Stockholm. In this program there are investments in a new highway that will cost approximately 90 million SEK to build, investments in the already existing light rail systems, and in bus traffic as well as the infrastructure for cycling (Trafikverket 2014).

An investment that can be compared with the light rail system in Skåne is the expansion of the subway in Stockholm. There are three new routes being proposed, and these will be co-financed by four municipalities and Stockholm region. The government part of this 25.7 billion SEK investment is 4.65 billion, congestion taxes will finance 9 billion and the municipalities are contributing with between 600 million and 2.95 billion kronor (Näringsdepartementet 2014).

National financing	4.65 billion
Congestion taxes	9 billion
Stockholm municipality	2.95 billion
Nacka municipality	850 million
Solna municipality	600 million
Järfälla municipality	800 million
Stockholm region	6.85 billion (mainly
-	
	vehicles and depots)

#### Table 4 Division of financing, Stockholm

Näringsdepartementet 2014

Stockholm region has over time had the possibility for trans-municipal public transport since there until 2012 was an exception in the law for the region (Riksdagen 2010), which made it possible for a more integrated public transport system to develop. This can be seen as one of the reasons for the regional subway system in the capital, the system that will integrate the region even more with the new extensions in the national transport infrastructure plan. Only one of the new extensions is passing a municipality border, the rest of the investments are within one municipality, but connecting to a already trans-municipal system and could be viewed as regional since it will be possible to travel over municipal borders when the system is connected (Näringsdepartementet 2014). In Stockholm there is also a capacity problem with the heavy railway system and this is being dealt with through a new train tunnel through the city, called Citybanan. This is a 16.8 billion infrastructure investment that is financed by the government and the regions in and around Stockholm (table 4) (Trafikverket 2014).

There are also projects in western Sweden in order to improve the infrastructure. The western link is a new heavy rail system in Gothenburg that will cost 20 billion SEK to build; it is a part of a 35 billion SEK project that includes a new passage under Göta Älv, the river going through Gothenburg. The western project is financed 50/50 between the government and "other sources", mostly congestion taxes (table 5) (ibid.)

l at	ole 5	Division o	f financing,	Västra	Götaland
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The government	17 billion
Congestion taxes	14 billion
Gothenburg municipality	1.25 billion
Västra Götaland Region	1 billion
& Halland region	
Realized land value	0.75 billion

Trafikverket 2012

The western link train project is comparable to the city tunnel in Malmö. The old Malmö C was, as the current Gothenburg C is, a terminus station, stations that are at the end of a railway line where the trains have to be reversed in order to leave the station.

The number of public transport journeys each year, per capita, is very different in the regions (map 7). In Stockholm the citizen, on avarage, make almost one public transport journey every day. In Västra Götaland and Skåne the number of journeys are not half as many. However, the three regions are standing out from all other regions in the country. The numbers of journeys are dependent on the public transport supplied. The distances that the public transport system are covering, per capita, also differ between the regions. Uppsala Region has the highest supply of public transport, followed



Map design: Klara Strandberg Data: Department of Human Geography, Lund University 2014 Trafikanalys 2013

by Stockholm with 114 kilometers public transport supply per citizen. Skåne and Västra Götaland are in a cluster together with a majority of the regions in the country with a supply of 73-86 kilometers per citizens (map 8). The current preconditions for public transport differ between the regions. It is easier to enhance already existing systems and reinforce earlier decisions. And the preconditions are decisive for future ventures.

The national government has allocated the national transport investments between the 21 regions. There are a few patterns that can be seen in the allocations. Stockholm has a high population density and a high GRP of 512 000 per capita, and also a large share of the resources; more than 15 percent of the total amount is earmarked for the capital area. However 22 percent of the Swedish population lives in Stockholm Region. Norrbotten, the region with the second highest GRP of Sweden with 415 000 SEK per capita (compared to the average 368 000) will receive 1,5 percent of the national investments. Skåne, will receive about 8 percent of the resources, this is in comparison to the

population of 13 percent of the national population, but a slightly lower GRP per capita that the average with 317 000 SEK. 17 percent of the Swedish population lives in Västra Götaland, a region with a GRP per capita very close to the average, 354 000 SEK per capita. The infrastructure resources allocated to Västra Götaland is 11.7 percent of the total national investments.

To add to this the data on the degree of journeys with the public transport system, and the kilometers of public transport provided, also shows patterns. At the moment, most of the journeys with public transport are made in Stockholm. 354 journeys are made each year on average. The public transport provided per capita is the second highest in the country, there are good prerequisites for a high degree of public transport. The number of journeys made each year in Västra Götaland is 163, not half as many as in Stockholm, and the distance of public transport provided is 86 kilometers per citizen and year. Skåne is even lower than this in both number of journeys, 126, and kilometers provided, 75. In Norrbotten, a large region with a very low population density, the numbers of journeys are 33 and the kilometers provided 66 per citizen.

The investments are clustered to the regions containing large urban areas, no matter the GRP. When the urban areas are compared Stockholm is allotted the most resources, no matter which parameters that are compared.

# 6. THE CHALLANGES

#### 6.1 THE ÖP'S

The three municipalities have chosen to outline the ÖP's in different ways. I have, however, identified two categories within the plans; overall aims, and strategies. Malmö is presenting 30 detailed strategies for the municipality. Helsingborg has three main strategies, meeting places, neighborhoods and logistics. Lund has divided the strategies by population density, the city, the villages and rural areas, and has a total of 20 strategies.

# 6.2 OVERALL AIMS

#### 6.2.1 OVERALL ENVIRONMENT AIMS

The overall aims in the ÖP of Malmö have a large section concerning the environment goals of the municipality. It says that "Malmö is going to be supported by locally produced, renewable energy and the emissions of climate change gasses will decrease; to build an ever more resource-saving city. [...] Mobility habits and transports will be adapted in order to, from an environment standpoint, better travelling patterns, locally and regionally"<sup>22</sup> (Malmö Stad 2014, 15). The aim is a dense city where the municipality will be able to regulate the strain on the environment, climate effects and resource use (ibid. 17). Lund has highly set goals for the municipality. Of the three headers in over all aims two are concerning the environment, "a climate neutral municipality" and "a long term sustainable municipality, well integrated into the region". Before 2050 the emissions of carbon dioxide is going to decrease with 85 percent according to the ÖP. As a basis for the ÖP the municipality has created an environmental framework. According to the framework, the physical planning can contribute to the decrease of emission, in the range of 10-20 percentages. In order to manage an even larger decrease other actions has to be done to, as lifestyle changes and new technology (Lunds kommun 2010, 10). The actions mentioned in Lund's overall aims are "locations with good accessibility to regional public transport have to be prioritized. [...] Well developed walking and biking connections are important as

<sup>&</sup>lt;sup>22</sup> "Malmö ska kunna försörjas med lokalt producerad förbybar energi och att utsläpp av växthusgaser ska minska; att bygga en allt mer rsurssnål stad. [...] Transporter och resvanor ska ställas om för ett ur miljösynpunkt bättre resande, lokalt och regionalt."

a complement to public transport<sup>"23</sup> (ibid.). In Lund's ÖP there is also a lengthy discussion on how the fertile soils around Lund are going to be considered in the development in the city. When the high rate soil is being exploited the municipality aims at doing so in a very dense manor, and in order to make this functional and sustainable the public transport system has to be effective (ibid. 10, 15). In the ÖP of Helsingborg the environmental section in the overall aims is not as dense or lengthy as in Malmö and Lund. The section can be summarized with the quote; "To decrease the environmental stress the city planning needs to be done in a way that is handles our resources effectively"<sup>24</sup> (Helsingborgs kommun 2010, 13).

The environment sections of the three ÖPs have different focuses. Helsingborg's ÖP has a focus on climate change and the effects this might have on the municipality, the risk of rising waters and how this will challenge the production of new housing. Malmö and Lund have a similar view on how physical planning can be used in order to mitigate environmental challenges. In Malmö the focus is put on how the dense growth of the city can be used as a way to decrease movement and protect the fertile soil in the city's hinterland. Lund is viewing the physical planning as one of the means that can be used in order to meet the high set goals of emission decreases. There is also the factor of effective usage of the hinterland. However, in order for the city to grow the fertile soil has to be used

#### 6.2.2 OVERALL MOBILITY AIMS

Mobility is an important aim of public transport investments. However, the mobility effects that might come from a more effective public transport system are not an important focus in either of the ÖPs. Malmö sees mobility in a wider perspective than solely public transport, "[b]y continuing a denser construction pattern within the existing city the conditions for the creation of a resource effective transport system that contributes to that more citizens choose a mode of transport will small environment effects and through this lessen the car dependency"<sup>25</sup> (Malmö Stad 2014, 17). The policy is aiming at making the sustainable choice the easy choice in Malmö, and through this change the mobility patterns (ibid.). The same idea is also important in Lund's ÖP. The physical planning has, according to ÖP, to be prioritizing locations with access to regional public transport in order to

<sup>&</sup>lt;sup>23</sup> "lägen med god tillgång till regional kollektivtrafik måste prioriteras. [...] Bra och utvecklade gång- och cykelförbindelser är viktiga som komplement till kollektivtrafiken"

<sup>&</sup>lt;sup>24</sup> "För att minska miljöpåverkan behöver stadsutvecklingen ske på ett sätt som hanterar våra resurser effektivt"

<sup>&</sup>lt;sup>25</sup> "Genom att fortsätta bygga tätare i den existerande staden förbättras förutsättningarna för att skapa ett resurseffektivt transportsystem som bidrar till att fler malmöbor väljer trafikslag med liten miljöpåverkan som att gå, cykla eller åka kollektivt och därmed till att minska bilberoendet."

contribute to decreasing the emissions of climate change gases, "the physical planning is making it possible for the inhabitants to do everyday sustainable choices."<sup>26</sup> (Lunds kommun 2010, 10). Helsingborg's ÖP is aiming at lessening the congestion, and improve the air quality within the city center, as well as make the citizens more mobile within the municipality as well as in the Øresund region. The focus in Helsingborg's ÖP is creating meeting places throughout the municipality, and in order to make meetings possible it has to be easier to move between the different parts of the municipality (Helsingborgs kommun 2010, 13).

Mobility is in the overall aims in the three ÖP's handled as a mean that is supposed to facilitate other changes in the urban space. Malmö wants to create a city with higher density, Helsingborg more meeting places, and Lund needs to focus the urban growth outside the current city. In order to make these aims possible, a change in mobility is necessary.

#### 6.2.3 OVERALL URBAN PLANNING AIMS

In Lund, the urban planning is aimed at urban growth. The predicted growth rate will, however, not be able to be met within the current urban area of Lund. The planned expansion of the city will be taking place around the science centers MAX IV and ESS (Lunds kommun 2013 b). In order to make it possible for an expansion of the magnitude that is expected to be needed, the municipality wants to build a dense city on the fertile soil east of the current city (Lunds kommun 2010, 12). The urban planning in Malmö is centered around the concept "to heal, structurally and socially" (Malmö Stad 2014, 14). The aim is to meet the social and physical challenges within Malmö through urban planning. The traffic planning is one of the means that the municipality is focusing on, as it can contribute to a closer city without barriers (ibid. 14). Helsingborg is aiming at a multi-nodal pattern within the municipality where "public transport in an easy way ties together the different parts of the city"<sup>27</sup> (Helsingborgs kommun 2010, 11). One of the focuses in Helsingborg's ÖP is to create meetings; public transport is one of the means used to fulfill this foci. Helsingborg is a municipality with social challenges, the city is geographically segregated as a result of the modernistic city planning of the 1960s and 1970s (Strandberg 2013, 15).

Both Malmö and Helsingborg is aiming at using a restructured urban space to meet social challenges within the municipalities. Malmö wants to heal the city, structurally and socially, and Helsingborg want to tie the city together. Lund has a different focus in their plan. The prognosis of continued

<sup>&</sup>lt;sup>26</sup> "Den fysiska planeringen ska göra det möjligt för invånarna att göra hållbara val i vardagen"

<sup>&</sup>lt;sup>27</sup> "knyter kollektivtrafiken smidigt ihop stadens delar"

population growth is the biggest challenge, and since the city has to grow east from the current urban area out on the fertile soils it is important to create dense urban spaces.

#### 6.2.4 OVERALL REGIONAL COOPERATION & GROWTH AIMS

In the overall aims the regional cooperation and growth is discussed in an intertwined manor. In order to be as clear as possible, these two themes are discussed at the same time in this section.

The region is supposed to be a motor for green growth according to Malmö's ÖP. Malmö is dividing the regional cooperation in two different groupings, Copenhagen-Malmö and MalmöLund. The Copenhagen-Malmö region is a cohesive metropolitan area that is a driving force for the economic growth within the Øresund region, Sweden and Denmark. In order to make the Øresund cooperation more integrated Malmö wants a new permanent connection between Malmö and Copenhagen, it might be in the form of an Øresund Metro. The next step in the regional integration with the continent is through high speed rail road, which will tie Malmö closer to Hamburg (Malmö Stad 2014, 19). In the plan for Lund the section about the regional growth is beginning with a text on the history of Lund, with a focus on the church, the university and the large international companies that have had their basis in Lund in one time or another. The theme of the section is innovations, and how MAX IV and ESS are going to consolidate Lund on the academic map. This aim is going to be met through the growth of the city, if the construction goals in the plan are met the housing increase in Lund would be 18 percent of the total amount planned in Skåne as a whole (Lunds kommun 2010, 19). Helsingborg's ÖP is having a focus on mobility, and how the city will grow if a number of large infrastructure investments will be done. The possibilities for work outside the city are requiring a effective transport system, and the municipality are arguing for a permanent HH-connection<sup>28</sup>. The municipality is quite passive and ends the regional cooperation section with "[l]arge national infrastructure investments will also entail local and regional investments as a consequence. The city of Helsingborg and the region, in cooperation with local and regional industry, will probably, to greater extent finance parts of these investments"<sup>29</sup> (Helsingborgs kommun 2010, 13).

Malmö and Lund have clear visions of the future and the texts concerning the development of the region and their role within the region. The identities of these two municipalities seem to be based

<sup>&</sup>lt;sup>28</sup> The HH-connection is the working title of the permanent connection between Helsingborg and Helsingør.

<sup>&</sup>lt;sup>29</sup> "Stora nationella infrastruktursatsningar kommer också att innebära lokala och regionala följdinvesteringar. Helsingborgs stad och regionen, i samverkan med ett lokalt och regionalt näringsliv, får sannolikt i större utsträckning själva stå för dela av dessa investeringar."

on a tradition of large projects that are being followed through, Helsingborg seem more hesitant in the text. As the last quote shows. Instead of clearly stating the vision, there is a hesitation.

Lund is discussing regional development and growth from the viewpoint of a regional growth catalyst. The city's history is important in the ÖP and the traditions that are the basis of the city's existence is treated as important factors for the future of the municipality. The city is seen as the motor for regional growth and the transport has to be effective in order to make it possible to travel to the city in order for the city to prosper. Malmö is instead discussing the municipality's role within different regions. And how the municipality can use these region cooperations in order to grow and prosper. Helsingborg is above all discussing large networks of national infrastructure. In order to grow Helsingborg wants to be better integrated into the Øresund region and this will be done through large infrastructural investments.

# **6.3 THE STRATEGIES**

#### 6.3.1 ENVIRONMENT STRATEGIES

Among the 30 strategies that are presented in Malmö's ÖP environment is discussed in relation to transport in three (Malmö Stad 2014, 26, 40, 43).. Within the strategy *Malmö-Copenhagen*, sustainability is discussed in the same sentence as the labor market, and how the regional cooperation should develop. Under the header *Public transport* the investments that are needed have to be done in order to "secure that the public transport is able to further sustainable growth at the same time as city environment, noise levels, and air quality is improved as well as the fulfillment of energy and climate goals"<sup>30</sup> (ibid. 43). In order to meet the emission goal Lund's ÖP argues that there are many actions that have to operate together, "[i]t is about expanded district heating, transition to renewable energy, development of the public transport and biking paths, utilization of new technology, but also about explicit goals and substantial and continuous measures to create more work places in larger villages [...] in order to, among other things, lower the need for commuting"<sup>31</sup> (Lunds kommun 2010, 14). The first specified strategy named in Lund's ÖP is "Economize with the good soil". The soil around Lund is the most fertile in Sweden and the conflicts of space that occurs when the city is expanding has to pervade through all planning, especially when

<sup>&</sup>lt;sup>30</sup> "[Investeringar för att] säkerställa att kollektivtrafiken kan främja hållbar tillväxt samtidigt som stadsmiljö, bullernivåer och luftkvalitet förbättras samt energi- och klimatmål uppnås"

<sup>&</sup>lt;sup>31</sup> "Det handlar om utbyggd fjärvärme, övergång till förnyelsebar energi, utbyggnad av kollektivtrafik och cykelvägar, användning av ny teknik men också om tydliga mål och konkreta och kontinuerliga åtgärder för att skapa fler arbetsplatser i större tätorter [...] för att blan annat minska pendlingen."

developments requiring large areas of land are being built, as MAX IV and ESS (ibid. 16). Helsingborg is also "having a conflict between the growth of the city and the fertile soil around the city. The construction has to be dense and have to be durable over time (Helsingborgs kommun 2010, 14, 28). The strategy that the municipality wants to use is to build close to stations and make these areas more dense (ibid. 14). The city structure is going to be resource effective; the municipality will use the "land, water [and] energy in an effective way. In this context is concentration an important strategy" (ibid. 28). However, in the central part of the city the environment quality standards is not fulfilled, as a result of the large amount of car traffic, and the "[a]ccessibility for the car traffic has to be weighed against the need for other modes of transport, the city life and the effects that it have on the surroundings"<sup>32</sup>

Environment is not a large focus within the strategies in Malmö's ÖP. The discussion of environment and transport are in relation to the labor market and the regional development, both in a context of growth. The concept "sustainable growth" is used as describing the aim of the transport system in the municipality. Helsingborg is framing environment within the context of land use, and how the urban areas are going to develop close to the railway stations. The most important concept is concentration, of housing and services. Lund has a much more comprehensive discussion of the environment with the decreased emission goal as a direction for everything else in the plan. Public transport is discussed in the same sentence as many other actions that have to be taken in order to meet this goal and all of these are seen as components acting together in the planning.

#### 6.3.2 MOBILITY STRATEGIES

Helsingborg is discussing the change of mobility as a method to change the city center as well as the neighborhoods into good meeting places. In order to facilitate this, the "city, Helsingborg's neighborhoods and the region will be easy to reach by public transport and by safe and secure walk and bike paths"<sup>33</sup> (Helsingborgs kommun 2010, 26). The city is seen as having potential to be an attractive meeting place; this will be done through development with walking people in mind (ibid. 22). The city of Helsingborg is aiming resources at walking, biking and public transport, "if more people choose to walk, bike and travel with public transport we will have better air in the city, a lower level of noise, less congestion, more well-being, more space for city life, more safety and a

<sup>&</sup>lt;sup>32</sup> "Tillgängligheten för biltrafiken måste avvägas mot behovern för andra trafikslag, stadslivet och den påerkan som uppkommer på omgivningen."

<sup>&</sup>lt;sup>33</sup> "City, Helsingborgs stadsdelar och regionen ska vara lätta att nå via kollektivtrafik och via trygga och säkra gång- och cykelvägar."

better public health"<sup>34</sup> (ibid. 38). It is also important to have good mobility in the rural areas of the municipality in order to develop the municipality as a whole (ibid.). Malmö covers three modes of transport; walking, biking, and public transport. Walking is viewed as a "positive traffic" as it creates a lower tempo within the city, which is a way to make the city more lively. The city need be denser in order to make walking an attractive mode of transportation. In order to support walking there has to be measures made within the dense city, concerning security, comfort, maintenance and structure. The municipality is arguing the importance of prioritizing walking ahead of other modes of transportation (Malmö Stad 2014, 41). There is a vision set by Malmö, as a city where "everyone" rides a bike. In order to make this true the municipality wants to invest in infrastructure that makes biking and walking the easy choice for mobility. Bikes has to be prioritized over motorized transport and the combination of walking, biking and public transport has to be facilitated (ibid. 42). In order to tie the city closer together, to heal it, the municipality wants to invest in better, more effective and attractive public transport. The "[n]eed for the capacity of light railway is, in some routes, evident today [in 2010], and the need will be heightened in step with growing population and more travelling<sup>35</sup> (ibid. 43). In order to make these changes in mobility the municipality also wants to influence how people choose to move, through different forms of mobility management in combination with other instruments (ibid. 42-44). Lund is today a municipality with a high degree of biking, especially in the city where the structure has hindered cars from moving. Walking and biking is going to be prioritized even more in the future, "walkers and bikers will be prioritized among others things through the development of fast and attractive bike paths, especially along the main street system<sup>36</sup>" (Lunds kommun 2010, 19). Lund wants to make it possible to move within all parts of the city using the public transport system or by bike. It is important that these connections fast and cuts across the city in an effective way (ibid. 17). When new neighborhoods are built the transportation system, walk and bike lanes will be constructed before the first people move in, and public transport system will be able to manage the demand, in order to make sustainable choices the easy ones. The municipality wants to change the behavior of the travelers through changes in the city in combination with mobility management (ibid. 15, 19).

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<sup>&</sup>lt;sup>34</sup> "Om fler väljer att gå, cykla och resa kollektivt får vi bättre luft i staden, behagligare ljudniv, mindre trängsel, ökad trängsel, ökad trivsel, mer utrymme för stadsliv, ökad säkerhet och en bättre folkhälsa."

<sup>&</sup>lt;sup>35</sup> "Behov av spårvagnskapacitet är påtagligt på vissa stråk redan idag och behovet kommer att accentueras i takt med ökande befolkning och resande"

<sup>&</sup>lt;sup>36</sup> "Gång- och cykeltrafikanter ska prioriteras bland annat genom att snabba och attraktiva cykelstråk utvecklas ytterligare, särskilt längs huvudgatunätet."

Helsingborg is aiming its mobility strategies towards creating good meeting places. In order for people to meet they have to travel together and meet in public spaces. This will be done through a dense city where walking and biking is easy, and the public transport system creates new places for meetings. Malmö wants to become denser, but in order to make this possible the transport within the urban area has to be change. More people have to move within the same amount of space. This will be done through mobility management in interplay with changes in the infrastructure in order to prioritize walking and biking the urban space. In order to make all parts of Malmö integrated in the dense city new, more effective, public transport is needed. In Lund biking and public transport is very important. Walking and biking is today prioritized within the city center, but these modes of transport and public transport has to be the easiest way to move in the whole municipality. The infrastructure for walking, biking and public transport has to cut across the city in a way that makes them attractive.

#### 6.3.3 URBAN PLANNING STRATEGIES

The traffic spaces in the future Malmö have to be planned so as many people as possible can travel as effective as possible (Malmö Stad 2014, 40). The public transport system and the nodes will be the basis of the city's urban structure. And if the plan is made into practice the transport system will contribute to faster and easier transports, which will tie the city together (Malmö Stad 2014, 43). In the major public transportation routes the public transport will be prioritized, and the busses will get passage with the same quality as light railway, with its own lanes and prioritized traffic lights (Malmö Stad 2014, 43). The city will make walking and biking easier and more convenient through investments in infrastructure such as walk and bike paths as well as making the large approaches into the city into city streets (ibid. 41-42). Helsingborg's ÖP is focusing on developing the multi-nodal character of the municipality, in order to create meeting places in many locations in the city (Helsingborgs kommun 2010, 14). Helsingborg is going to utilize the advantages that are associated with a dense city (ibid. 37), beneficial for walking, biking and, effective public transportation (ibid. 22). The development is going to take place in the city of Helsingborg as well as close to the train stations (ibid. 14). The public transport system is important in order to make meeting places outside the city center, this will be done through the localization of public services, grocery stores, and other attractive activities in the neighborhoods around the stations and outside the city center (ibid. 22). The city will through good urban planning "heal" and the municipality will become a place with good urban qualities (ibid.31). In Lund the foci in the urban planning is around the current and planned rail stations, as well as along the large public transport routes. This will create a sustainable urban structure (Lunds kommun 2010, 15, 17). The first 20 years of the plan is centered around the city

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center and Lundalänken (ibid. 24). New neighborhoods is going to have at least 2000-2500 apartments, this will make it possible to have a school and a grocery store within the area, as well as the amount of possible travelers in order to sustain a light railway system (ibid. 17, 25).

All the three municipalities want to use the public transport system as the frame for the urban space. The future development of housing and work is going to be centered around train stations, large public transport nodes and along light railway; Helsingborg in order to create meeting places and use the land in a responsible way; Lund in order to build a dense city on the fertile soil and make the current urban area denser as well; Malmö in order to transport more people in the same space, and create fundament for the city to become denser.

#### 6.3.4 REGIONAL DEVELOPMENT STRATEGIES

Malmö is highly dependent on the geographical location. The municipality wants to deepen the cooperation between Malmö and Copenhagen as well as the Malmö-Lund region (Malmö Stad 2014, 24, 26). This will make it possible for the city to grow, and for people to commute (ibid. 26). Malmö are aiming at an additional connection between Malmö and Copenhagen in form of an Øresund Metro, and the city also want to work for the further development of the Danish airport Kastrup (ibid. 24, 43). Within Skåne the development is rail bound, and the light rail is an important investment in order to tie the whole city to the regional transportation system. In the long run Malmö also want rail bound traffic to the neighboring municipality Vellinge and Svedala (ibid. 26, 43). Helsingborg wants to strengthen its role within the Øresund region. The municipality is aiming at doing this through the HH-connection. The municipality wants the fast railway that is being planned between Oslo and Hamburg, as well as the fast rail from Stockholm to makes stops in Helsingborg (Helsingborgs kommun 2010, 36). Lund also sees the need for rail bound traffic, the "future public transport is to a high degree based on rail services where the [national rail system] is the most important for long distance, as well as regional traffic."<sup>37</sup> (Lunds kommun 2010, 14). In order for the region to function, Lund seem to think that this is important. However, the regional cooperation in not as developed in the ÖP for Lund.

Malmö is aiming at more commuting across Øresund. In order to make this possible people have to be able to connect to the current heavy rail system, and in the long run a new connection between Malmö and Copenhagen is in the plans. Helsingborg wants to strengthen the role of the municipality within the Øresund region, the main focus is a permanent HH-connection. This is suppose to change

<sup>&</sup>lt;sup>37</sup> "Framtida kollektivrraiken bygger i hög grad på språrburen trafik där [det nationella tågsystemet] är viktigast såväl för fjärrtrafik som för den regionala trafiken"

the city and the role within the region and create more growth. Lund's approach to transport in relation to regional development is the workplaces, university and research going on in the municipality, and making the city attractive for future investments and project through integration in the Øresund reigon.

#### 6.3.5 GROWTH STRATEGIES

In order to support the growth of the city Malmö is aiming to reserve land around the stops for the public transport for shopping and offices. Malmö also argue for the importance to develop the motorized traffic in order to support the industry, but the conditions for cars will be different from today (Malmö Stad 2014, 31, 44). "If planning before often was about adapting and rebuilding the city according to the needs of the car, it is now about finding nuanced solutions where urban planning and traffic is operating together<sup>38</sup>" (ibid.) Lund argues that it is "important to secure the accessibility for all modes of transport, including the car, in order to give the grocery stores reasonably conditions<sup>39</sup>" (Lunds kommun 2010, 17), but through dense urban planning the need for care use will be minimized as "the more complete the supply of grocery stores and services are in a neighborhood, the less is the need of using the car everyday"<sup>40</sup> (ibid. 24). Helsingborg's ÖP focuses on how the economic growth of the city can be strengthen if the city's role within the region is changing, through large infrastructure investments such as the HH-connection. In order to make the structure within the city functioning this involve developments of the regional transport system (Helsingborgs kommun 2010, 24). To manage the growth the city will have to be denser and the land resources have to be utilized in an effective way "space for more housing, more greenery, work and services, which will create added value for the areas in question"<sup>41</sup> (ibid. 14). The growth has to be divided throughout the municipality. This will be done through the support of the center of the neighborhoods, by "refurbishment of the public space or through efforts for increase the number of costumers in form of supplemental housing construction"<sup>42</sup> (ibid. 28).

<sup>&</sup>lt;sup>38</sup> "Om planering tidigare ofta handlade om att anpassa och bygga om staden efter bilismens behov, så handlar det nu om att hitta nyanserade lösningar där stasutveckling och trafik samverkar"

<sup>&</sup>lt;sup>39</sup> "viktigt att säkerställa tillgängligheten för alla transportslag, även för bilen, om dagligvaruhandeln ska ges rumliga förutsättningar."

<sup>&</sup>lt;sup>40</sup> Ju mer komplett utbudet av dagligvaruhandel och service är i en stadsdel, desto mindre blir behovet av att använda bilen till vardags."

<sup>&</sup>lt;sup>41</sup> "plats för fler bostäder, fler grönytor, verksamheter och service, vilket skapar mervärde för områden i fråga."

<sup>&</sup>lt;sup>42</sup> "upprustning av den offentliga miljön eller genom insatser för att öka kndunderlaget i form av kompletterande bebyggelse."

The role of the private care becomes highlighted in the context of growth, shopping and the labor market. Malmö is taking the strongest stand against private cars, with the discussion of "nuanced solutions", in the planning of the city structure. Lund wants to secure the demand for the grocery stores and other service through securing "accessibility for all modes of transportation, including the car". Helsingborg is not discussing private cars in the same way. Instead the focus on transport and growth is about regional cooperation, regional infrastructure and the need for the whole municipality to grow.

#### 7.1 DIFFERENCES & SIMILARITIES

All of the three municipalities are viewing transport as means to reach overall aims, strategic for the development of the municipalities. There are a number of differences and similarities in how public transport is discussed in the policy documents. In all three of the documents the public transport is discussed as an addition to the existing infrastructure, and not as a separate technology.

In both Malmö and Helsingborg the light railway is viewed as an investment that will contribute to a more equal access to the urban space for all the citizens of the municipality. The light railway is a collective investment in the urban space that has the possibility to redistribute resources and power within the society. The routes of the three light railway systems are passing through areas with different social and geographical structure; the effects of the investment will not be the same in Helsingborg, Lund and Malmö. In Lund the light railway will not redistribute resources in the same way as in Helsingborg and Malmö.

The awareness of the municipality as a socio-ecological metabolism as well as a political system is clear in all three ÖP's. The municipalities are seen as shaped by the citizens in relation to the urban space, and that the urban space influence how the role of the citizen is constructed. There are discussions of mobility management as well as changing the roadscape and the housing density and how this is going to create the desired outcome. However, development and a linear view of progress is visible in all three plans.

In Malmö the light railway will be put into a context of social exclusion and large class differences, in a dense urban space. In Helsingborg the geographic segregation is the most difficult challenge. In Lund the problem is transport capacity and city expansion. These urban scapes will be changed by the introduction of a new mode of transport. And the effects might include change in pricing of housing as well as gentrification and other effects such as more inclusive or exclusive spaces. The idea is that a more attractive public transport system is going to attract people and contribute to more sustainable choices. However, people with less resources do not have the same degree of choices.

The urban space within the cities Malmö and Helsingborg is today constructed for the car, for private mobility. Especially Malmö is discussing the importance of creating a city that is made for human beings. By shifting the public room from privatized mobility (car) to collective mobility (public

transport) the municipality changes the power balance. In Malmö, the route of Malmö Express is connecting one of the most at risk neighborhoods of the municipality with the city center. This large investment in high quality public transport will through this reach the citizens living in this part of Malmö. Public resources will be transferred within the municipality and reach citizens living at risk neighborhoods. In Helsingborg the first route of light railway would have similar effects. The areas that are reached are socially vulnerable, and will get a greater access to the municipality services as well as the city center.

Lund is a city that to a large extent is well suited for walking and biking since the city center is medieval with restrictions for car traffic. The light railway will not pass through the city center; it will transport people to and from the central station. In Lund the people that will use the light railway will be more privileged. The proposed route is connecting the central station with the university and the planned neighborhood east of the current city. The people living, working and studying in the different places along the route are, and will be, people with resources, economic (since they afford living in the new housing, or work in the knowledge intense sector present in the area) or in knowledge, as active within the university as students or personnel.

#### 7.2 THE AIMS

Malmö and Lund have grand visions for the future of the municipalities. Lund wants to be in the forefront of urban mobility and sustainability. Malmö aims at being the economic motor within the Øresund Region. Helsingborg has over time lost its identity, and this is evident in the plan. The language is not as radical as in the other two ÖP's and the plans for the city are not as grand. The large demands are aiming at reclaiming the city's role as an important actor within the region. Since the problems in Helsingborg are social, and the transport crisis within the city not is the most acute of the city's challenges the discussion is more about how the city as a whole should move forward and find a new identity.

The ÖP's for Malmö and Helsingborg has as an overall aim to tie the municipality together. This focus is a move away from the privatized or semi-privatized urban areas that are evolving in other part of the world. As well as it is an appropriation of space for the collective use of the urban space. Strengthening the public transport system is one way to strengthen the collectivity within society as the access to the urban space becomes more equal. The light railway in Lund will not redistribute resources within the municipality. It will create a higher degree of mobility in order to make it possible to develop the city eastward.

At the moment there are acute problems in the public transport system in Malmö, the investment in Malmö Express is a reaction to the problems that are apparent within the transport system in Malmö. In Lund the capacity roof of the current structure is almost reached. However, there is no panic yet, and the municipalities are in the ÖP's proactive. However, this is not usual within urban planning of infrastructure. Since the systems are naturalized within the city scape as a whole, there is usually not a discussion until the situation becomes critical. This is evident in how the government in handling the situation in the three municipalities. As long as things are functioning reasonably well, there is no need for change, according to the government. It was not until the congestion put Gothenburg in a standstill that the infrastructure package for western Sweden became a reality. The investments proposed by the government in the latest national transport plan is, since it is directing twice as much resources towards building and maintenance of roads, reinforcing the path we are on, with private car traffic as the main mode of private transport.

All three municipalities see the intra-municipal public transport system as strengthening the regional connections. The view is that the neighborhood, cities and municipalities are dependent on the surrounding municipalities and the Øresund region. And in order to use the previous investments, such as Citytunneln and the Øresund Bridge, in such an effective way as possible there is a need to develop the local public transport systems. The municipalities are not viewed as singular entities, but as a part of a number of other contexts, such as Skåne Region, Sweden, Øresund Region and Northern Europe.

The popular discussions in Lund concerning the light railway have been focusing on the mode of transport as such. But in the ÖP's, especially in Malmö and Lund, the discussion of change of mobility is very complex and takes many aspects into account. The focus are on the challenges that the municipalities are going to have, and the discussion is not depolitized, or trapped within one academic discipline in either of the ÖP's. The technology is not the focus, the challenges are. However, the idea of light railway has been in the minds of the politicians for a quarter of a century, and the decision to go forward with the light railway as the mode of transport for the future is always there if one reads between the lines. In Lund there has been a lot of debate within the civil society, and in the upcoming election the light railway will probably become a question in the local political debate.

#### 7.3 NATIONAL POLICY

The government has goals for a more sustainable transport system. However the national government infrastructure investments are in two thirds aimed at maintaining, renovating and

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constructing infrastructure for cars, the roads. The transport system can through this reinforce the car dependency. The infrastructure investments are also clustered to the three large urban regions, Stockholm, Västra Götaland and Skåne. Stockholm have the highest level of national infrastructure investments, and the notion of regional in Stockholm is somewhat different from the rest of Sweden, since the public transport system in Stockholm is well developed and has had this opportunity because of the exception from the legislation. The existing subway system will be developed in the plan. But there will also be a new, large, highway investment. This investment is the largest in Sweden and the national investment are a very high part of the total amount of resources in the plan.

Skåne and Västra Götaland have a less public transport journeys per citizen that Stockholm. The systems in the rest of the country are not as well developed, and the urban areas around especially Gothenburg and Malmö/Lund have the potential to rely more on public transportation. This can be seen as there is a possibility to change the mobility patterns in these regions. However, in both these regions the national investments are focused on roads of different kinds, as well and transport of goods on rail. The transport of people on rail in regional systems is not a focus in the national plan. In Lund, the resources that are put towards on two new traffic junctions close to Lund NE, is comparable to the amount of money that was required to make the light railway project between Lund C and Lund NE into reality. The government is prioritizing the need for a higher accessibility for people using private cars, and the collective travelling system is down-prioritized. And the dependence on an unsustainable system continues. Railway is a more attractive mode of public transportation than busses. And the hesitance from the government to change the mode of transportation can be viewed as passive, when the municipalities have a will to be proactive.

There is also a focus on urban areas in the plan, and regions such as Norrbotten, with a low population density but very high GRP, are not a priority within the national plan. When comparing the urban areas there is a pattern of clustering of investments to Stockholm, and no matter what the other regions are doing, Stockholm, as the capital, is somewhat ahead of the others. One explanation to this outcome could be that the problems in Stockholm are more obvious for the national politicians than in other part of the country. Stockholm also has the advantage of an already existing regional rail system, subway. This makes it possible for the government to allocate national money to an extended subway system, even though it does not cross any municipal borders, since it will connect to a regional system.

#### 7.4 CONCLUSION

The ÖP's are aiming at changing the structure of the municipalities, the density of the urban space and the mobility patterns. The aims of the municipalities are visionary, especially in Lund and Malmö. But there is a struggle of resources between the different levels of administrations. And the national plan, even though it should be aiming at a more sustainable system, does not promote new modes of transport but reinforces the systems already in place. In Skåne this results in a focus on rail investments for transport of goods, and roads for transport of people.

The three municipalities have different aims with the investment in light railway. In Malmö and Helsingborg the focus is a closer city, in different ways. And this vision will be realized through a change of mobility within the city that is going to affect citizens with less resources to a higher degree. There will be a redistribution of resources, in form of urban space as well as tax incomes, from people travelling by car to public transportation and the collective urban space. In Lund, the people that will be travelling with the new system have resources and the choice to use different modes of transport. The focus is to build a dense city and let the city grow, not to change the structure of the power within the municipality.

Lund is using the public transport system as one of the tools to meet the ambitious emission decrease goal. The discussion of the human effect on nature and environment is elaborate. In Malmö the level of discussion is on almost the same level. In Helsingborg however, the environment is not a large part of the plan, and the discussion is more aimed at identity within the region than on how the municipality is going to develop on its own.

# 8. **REFLECTIONS**

During the process of doing the research I have realized that this project could take many routes. There is a multitude of threads that could be followed, and I suspect that there are many areas that I have not encountered in this project.

Some areas of interest I have found are depending on method. From the beginning I was planning to do a study based on interviews, for several reasons, mainly the size of the project, this was not put into practice. However, I still believe that it would be interesting to interview public officers in order to uncover the unspoken structures in the Swedish transport policy implementation.

Another interesting project would be to do a national comparisation. There is very little data gathered on the division of national infrastructure investments and how it is allocated on a regional level. This data had to be assembled throughout the process of the research. I believe there is a lack of knowledge on the allocation of resources and the reasons for the divisions made, and how these contribute to the fulfillment, or lack of fulfillment of the environmental goals. A larger study could give knowledge on how the process works and the parameters that are important in order to make large projects into reality.

ÖP is a political document, another way of approaching the theme of local public transport planning would be to focus on the politicians, the elected bodies or individuals, and see if there are differences in the way of discussing private versus public, and the involvement of the state, depending on the ideology behind the politics in the three municipalities, and if different policies majorities could be one explanation to the lack of action outside Stockholm.

My lifelong interest in public transport has a number of future areas to investigate, and there are many areas to research still.

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# THEMES - AND THE CONCEPTS INCLUDED IN THEM

Region

HH

Rail

Environment Climate EQS - air Sustainabilit Reduce emissions Natural resources Fertile soil Space efficency

**Regional cooperation** Regional development Recreation

Urban Planning Conflicts of space Attractive city space Security Priorities Density Easy swaps Link together Station development Structural framework "Think rail" Rail Nodes for transport Closeness Structure **Develop stations** Density Meetings Strengthen neighborhoods **Urban Planning** Enable middle class leakage

Link together

Growth Growth Air travel Work Industry Shopping Population growth More travellers Cars Attractive public transport Cars Construction of housing Shopping Added value Industry Growth Air travel Work Housing Attractive public transport Shopping

No external malls

Mobility Safety Change mobility Mobility management Walk Biking Simple choices Reduced travel times Changes in behaviur Priorities Density Walk Mobility Biking Priorities Rural

Blue – Malmö Green – Lund Red - Helsingborg

# **APPENDIX 2**

Sustainable transportation	Sustainable land and water usage	Consideration for the sea, lakes and rivers	Protection of the nature and culture environments	Sustainable development
The transport sector is clearly affected by globalization and urbanization. The transportation needs, mobility patterns and freight transports are changing, and more people and goods have gotten a higher degree of mobility. The increase in travel on a global level has effects on the local level such as emissions of climate change gasses, air pollution, congestion, and large costs in infrastructure investments.	The population growth in Skåne creates a higher degree of pressure on the natural resources. In the south western part of the region, where the agricultural land is the most fertile the population increase is the highest, the conflict over the land resources are most obvious.	Protect the biological diversity. The nature is as noted above, in conflict with the population growth. And there is also the leisure factor	The high population density and occurrence of commercial agriculture have large effect on the nature in Skåne. As an example, Skåne has the highest number of species in Sweden, but also the highest number of species that have died out.	One fifth of the climate change gas emissions are created by consumption is from food consumption.
A sustainable transport system is about changing into a resource effective and fossil fuel free society, This could be begun if all of the good ideas and projects that have been tested into the norm, in order to change the direction of the society.	This is a public interest that the ÖPs is taking into consideration (Trafikverket 2014 d).	There are different efforts taking place in order to protect the waters, such as water cleaning, creation of wet lands and inspection of the extended beach protection	One way that the diversity is preserved is by protected areas. In Skåne there are 3 national parks, 237 nature reserves and one cultural reserve which is 3.6 percent of the land surface and 7 percent of the water <sup>43</sup>	This could be changed if the food habits are changed, through more vegetarian, season based diet, food that is produced in close proximity to consumption and changes in the production with less fertilizers and different vehicles

Source: (Puch and Åberg 2013, 7-9)

<sup>&</sup>lt;sup>43</sup> The global conservation goal is at least 17 percent of the land surface and 10 percent of the water (Puch and Åberg 2013, 8)