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Green growth and spatial planning in the Nordic city regions: An overview of concepts and policies

Aslı Tepecik Diş ed.

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Christian Dymén, Christian Fredricsson, Veronique Larsson,
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Nordregio
P.O. Box 1658
SE-111 86 Stockholm, Sweden
nordregio@nordregio.se
www.nordregio.se
www.norden.org

Editor: Aslı Tepecik Diş
Christian Dymén, Christian Fredricsson, Veronique Larsson, Liisa Perjo, Lukas Smas and Ryan Weber.
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Stockholm, Sweden, 2014

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Preface

This working paper has been produced within the scope of the Nordic Council of Ministers' activities as part of the initiative by Working Group 4 under the Nordic Committee of Senior Officials for Regional Policy: Green growth – Planning and sustainability in urban regions (2013–2016). The purpose of the working group is to develop policies, strategies, planning tools and models for sustainable development in close cooperation with the Nordic city regions in order to support planners working with urban development on a regional and local level. This involves bringing together business and economic development, social well-being, spatial planning, demographic changes, climate and environmental perspectives – which, when considered together, represent the complexity involved in govern-

ing urban development.

This working paper also serves as an important framework for future research that will be conducted by Working Group 4 in 2014–2016.

The authors would like to thank the representatives of the Working Group who have commented and provided valuable input concerning draft versions of this working paper.

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Aslı Tepecik Diş
Research Fellow
Stockholm, November 2014

Executive summary

Green growth is a policy concept that offers a strategic approach to the promotion of economic growth by adding an environmental quality to existing economic processes, while creating new jobs with lower emissions. Green growth has been developed as a policy response to the economic crisis, energy challenges and climate change. The concept highlights the growth opportunities offered by a greener economy as a way to mobilise green investments in the hope that they pave the way for economic and environmental recovery, stimulating the green growth required by the economy and society. The necessity of a transition toward green growth has been acknowledged as key to unlocking sustainable development. It involves, at all levels of government, developing green public policy tools that stimulate investment in businesses and innovations with a reduced environmental impact. What makes a policy green is often not precisely defined, but what is usually being referred to are policies that focus on protecting the environment and conserving natural resources, while simultaneously fostering economic growth and enhancing profitability.

Green growth is defined internationally by notable institutions such as the OECD, World Bank and UNEP. The OECD's definition of green growth – “Green growth means fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies. To do this it must catalyse investment and innovation which will underpin sustained growth and give rise to new economic opportunities” – has been the guiding perspective used by the Nordic countries in their green growth policies.

Green growth is not a replacement for sustainable development. It is instead a policy term encapsulated within or complementary to the concept of sustainable development; a term that integrates a policy package that promotes sustainable development. Accordingly, the Nordic countries' green growth policies focus on decoupling economic growth from environmental degradation in their individual national contexts. For instance, Denmark targets investments towards the energy and cleantech sectors and has developed policy initiatives that focus on the energy efficiency of the

building stock, electrification of energy systems and vehicles and increased use of wind energy, as well as investments in research and development. In Norway, the focus is on areas such as solar energy and photovoltaic materials, carbon dioxide management, hydropower, environmentally friendly marine engineering and oil and gas production, waste management and recycling. Iceland prioritises the promotion of links between a green economy and social sustainability, with a strong connection to social development and improving quality of life while reducing environmental risks and the disruption of ecosystems. In Sweden, green growth, as a concept, is not widely used in national policy documents; instead, sustainable growth is reflected in policy priorities and defined as economic growth coupled to the development of human resources and the preservation of environmental values. There is an emphasis on allocating funds to support the business environment for cleantech companies, as well as exports of cleantech goods, R&D and the commercialisation of this sector. Finland defines green growth in relation to safeguarding the functional capacity of ecosystems through low-carbon and resource-efficient economic growth, while promoting well-being and social justice. Similar to the situation in Sweden, Finnish national documents concerning green growth do not explicitly take green growth as a point of departure; instead this is integrated into several national policies and programmes that focus on decreasing emissions through sustainable production and consumption. Nordic national sectoral policies include a framework of growth plans that defines the policy measures relevant to promoting a 'green transition' to a fossil-free energy system and investments are thus targeted at the energy and cleantech sectors.

Overall, green growth is a normative concept within the notion of sustainability – one which is narrower in scope and emphasises the importance of a comprehensive green public policy agenda that facilitates a new engine of growth through investment in, and the development of, clean technologies. This reflects the concept's origin in the economic crisis and therefore the economic rationales behind it. With Finland and Iceland being the exception, it is still hard to neglect

the fact that the emphasis on the social dimensions of prosperity – the, so to speak, softer criteria of ‘growth’ – has been significantly toned down, at least compared to its acknowledgement within the concept of sustainable development.

Defining green growth in an urban context

Defining green growth in an urban context is central to the discussions concerning green growth because urban form makes the most explicit connection between spatial planning and green growth. This is due to the fact that the way in which the components of urban space are planned and designed has a direct impact on how green growth policies will be implemented. Urban policy has an important role to play in reducing resource consumption, thereby increasing efficiency, while simultaneously promoting growth and development by making cities more economically competitive. The ways in which land is used (e.g. for transport and housing) and developed have important implications for the reduction of emissions that cause environmental degradation. Thus, key issues for the spatial planning of city regions – land use and transport planning – are key dimensions of green growth in cities, both in terms of the problem (urban sprawl) and the solution (e.g. compact city planning approaches). Urban form, while contributing to social, economic and environmental challenges, is also a key contributor to promoting urban sustainability in the long-term.

Urban growth needs to be managed in a sustainable way and policies promoting a more compact city have been proposed as one way to lower greenhouse gas emissions by reducing the need for transport. This also has the potential to reduce energy costs through the use of district heating systems. Compact city urban growth can lead to economic, environmental and social benefits, including increased labour productivity (i.e. density of employment and economic activity is linked to the variation in productivity), reduced infrastructure costs, more efficient use of land and resources, lower air pollution, reduced energy consumption, conservation of farmland, greater access to services and improved health. The use of resources and mobility behaviours are however influenced by many factors, including the available technologies, land regulatory mechanisms, the investment strategies of both public and private institutions, and public policy (concerning planning, environment, transport, housing and taxation).

The importance of city-regional planning

Cities are the key locations of future economic growth and social well-being. They illustrate the key role spatial planning has in contributing to green growth. In

terms of their socio-economic and commuting structure, cities are not fixed entities; they are constantly involved in a dynamic process of development and experience rapid change. Therefore, it is important to understand cities beyond their traditional boundaries and plan for cities in functional terms. This emphasises the importance of an integrated approach to spatial planning in a city-regional context in which the urban core or cores constitute important spaces, along with semi-urban areas and the urban periphery.

Urban policies reflect the scale at which many patterns emerge and interact in an urban context. Not least, this includes the social, economic, political and mobility patterns that emerge in cities. As a result, the concept of city regions is used to describe a functional interpretation of how cities operate. Thus, from the perspective of individual city regions, a definition central to our work is that of a governmental and institutional perspective that shapes cooperation and policy-making at a strategic level and transcends administrative or political boundaries. A city region is formed by the socio-economic dynamics of a core area containing a substantial population nucleus, together with adjacent communities that have an extensive social and economic integration with the core.

A number of institutions, including the OECD, ESPON and Nordregio, have worked to define city regions in terms of their population density and commuting patterns. It is interesting to note that, while city regions are defined using spatial data such as density and commuting patterns, administrative units remain the fundamental building blocks of city regions. This reflects the fact that this type of spatial logic still has to accommodate the reality of political boundaries within which policies and investments in businesses are devised and implemented.

The next discussion in this section is about understanding the role of spatial planning in relation to city-regional planning. This discussion indicates that the spatial planning of city regions involves the development of broad but also strategic visions and initiatives. The essence of spatial planning in city regions is that it has elements that promote an approach to planning urban development that are both strategic and comprehensive. While this incorporates issues such as land use and transport, social and economic issues across different sectors are considered factors that can also be integrated.

The extent to which green growth strategies, as strategic visions, can be integrated with sustainability concerns has become a key question for planners and other relevant stakeholders. Accordingly, the integration of strategic planning with comprehensive planning might

be a key paradoxical challenge for the future as strategic planning refers to a focus on selected priorities (i.e. green growth), while comprehensive planning refers to the inclusion of all aspects of planning without being selective (i.e. integrative).

Green growth policies in the Nordic countries

This section provides an overview of the growth strategies adopted in each of the Nordic countries to identify green growth-related policies and is followed by an overview of each country's planning system. By reviewing the green growth policies in Denmark, Finland, Iceland, Norway and Sweden, the section identifies the main growth strategies and details their economic, environmental, social and spatial dimensions. Most notably, Nordic municipalities play a significant role in spatial planning and shoulder the bulk of the responsibility for planning sustainable cities. The role of regional authorities on the other hand varies substantially – from having a significant responsibility for spatial planning in Finland, to being restricted to policies regarding regional growth in Sweden – as depicted in the strategies identified. Responses to the environmental, economic and social challenges are context-specific and are dependent on settlement patterns, regional disparities and the planning system. Green growth policies in the Nordic context are primarily promoted by national authorities and implemented at the regional level, and they are not explicitly emphasised in local plans and policies. However, many implicit links to green growth strategies can be identified in local plans as spatial planning is carried out at the local level.

It is clear from the overview that the OECD's definition of green growth has been adopted in the Nordic countries; Nordic green growth policies are usually oriented towards environmental technology and job creation and also have a specific territorial focus. The main factor motivating the Nordic countries to reach the overall goal of sustainability is that by working towards green growth they can secure access to energy, reduce their environmental impact and create employment, especially in the cleantech sector. This is encapsulated in the term 'green transition' which reflects a broad approach towards transitioning the entire economy into the cleantech market.

Accordingly, Norway, Sweden and Denmark also point out their comparative advantages and their leadership of the cleantech market as strong arguments in favour of the prioritisation of green growth policies. In Nordic city regions, spatial planning's role in urban green growth is being attributed to wider notions of urban sustainability and the promotion of sustainable

development, rather than green growth explicitly.

Following on from the OECD's promotion of compact city development, all of the Nordic countries strongly encourage sustainable urban development through compact city policies by focusing on densification and mixed-used development. Consequently, there are explicit links between sustainable urban development and spatial planning when it comes to compact city policies, whereas the links between spatial planning and green growth are instead implicit and embodied in compact city development. Sweden, Denmark and Finland imply there is a link between green growth and spatial planning by emphasising the role of city-regional planning in the promotion of sustainable urban development. Norway and Iceland share the same strategies as the other countries, yet indirectly link green growth with spatial planning through the development of a compact city. Hence the assumption is that, by promoting the compact city development, spatial planning will lead to green growth which will in turn contribute to the overall goal of sustainability.

Considering spatial planning policies more specifically, a recurring policy objective is the promotion of cooperation between municipalities, as well as between administrative levels. The high level of interdependence between Danish municipalities is one example demonstrating the need to consider developments occurring beyond municipal boundaries in a cooperative manner. Another is Finnish policy, which strongly encourages the integration of regional and municipal spatial planning policies. One further example of this cooperative trend is the national central government initiatives in Sweden that promote cooperation between regional authorities on regional growth and those that encourage municipalities to work together with respect to physical planning. A key way to achieve this is to coordinate the development of the comprehensive plan and the regional development plan. The aims of this increased cooperation include the creation of a common view of the development of the various regions. The challenges presented by growing cities and population loss in smaller municipalities need to be tackled by considering development as something which transcends municipal boundaries, as advocated by Swedish and Danish policies. Norway, however, encourages the development of regional growth centres in order to reduce the pressure on major urban areas and achieve more balanced growth. Sectoral policies, such as those dealing with land use and transportation, are also targeted by efforts that aim to increase integration.

One main conclusion is that green growth policies and strategies in the Nordic countries – prioritising the economy – are consistent with the international

discourse (i.e. the OECD), and another is that urban sustainability perspectives are, to some extent, implicit in green growth strategies through the development of compact city policy. However, Iceland and Finland have a more inclusive and broader interpretation of green growth that integrates social aspects into their green growth policies, with their main policy documents making explicit reference to the importance of ensuring good quality of life.

Green growth strategies in Denmark, Sweden and Norway have a significant focus on economic development that is environmentally sustainable, but rarely make detailed reference to social dimensions. For instance, the different users of the city and people's movements and their role in the formation of city regions are not explicitly addressed. This can be explained by the strategic focus of the green growth strategies because focusing on selected priorities such as the economy, energy, etc. might threaten the very notion of an inclusive approach to planning. Similarly, the everyday life perspective has consistently been absent from the reports studied, while the importance of encouraging green growth in the business sector is highlighted. This might be problematic when it is put into the context of cities because cities are complex social entities and having a strategic focus could lead to misguided strategies and may result in other important aspects of green growth in cities being missed out. Furthermore, institutional traditions, social norms, cultures and individual lifestyle choices are other factors that have important impacts on the use of resources and the use of city. Therefore, urban policies need to go beyond green growth and become integrated in a way that improves the quality of life in cities.

A way forward: Discussing the everyday life perspective

Adopting an everyday life perspective and asking critical questions in order to understand how and why certain spatial structures are favoured over others in spatial planning practice has the potential to create openness to new perspectives on sustainability. The everyday life perspective can help highlight the dominant approaches to spatial planning, which draws attention to the fact that green growth strategies (i.e. compact city policy) tend to reflect the needs of only a small portion of the urban population. The everyday life perspective questions whether green growth and specifically the compact city are 'good enough' approaches to achieving sustainability by critically reviewing dominant and top-down approaches to plan-

ning. This reveals that the idea of the compact city mainly reflects the norms of the inner-city by prioritising certain lifestyles. The idea is for the everyday life perspective to be a means by which to reflect on the manner in which our daily experiences of the urban environment are shaped by diverse groups of people who, by their spatial distribution (socio-economic movements), form city regions. The implications of an everyday life perspective are numerous; the use of the city, the division of labour with respect to the responsibilities of family members, and the spatial distribution of the activities of different groups and classes in society, to name but a few.

Urban spaces, travel patterns, work locations and the way we use the city are gendered in the sense that much of it is constructed in accordance with the dominant norms of white middle-aged men, leaving little room for alternative ways of developing cities. The result is a city that is planned and adapted in a way that is in stark contrast to one that acknowledges the fact that women and men with different backgrounds tend to use public space differently. By questioning green growth strategies through the analysis of an everyday life perspective, the use of public space can be one of the issues to consider in order to reveal how spatial planning reflects the way we live (i.e. shapes the density, determines where the transport systems are built, what kind of recreational systems are provided or not, etc.).

Consequently, there is a connection between how the experiences of different groups of people (in terms of gender, age, ethnicity, socio-economic factors, etc.) have shaped the design of our built environment, the spatial distribution of places to which we ascribe meaning, and the ways we organise our daily routines, work and travel. If we were to take the city region as a key spatial scale at which to perceive the meaning of everyday life spaces, this would allow us to see if and how the city region is shaped by the movements of people and how the city region is experienced, gendered and constituted in the ways we live, work and travel. With key social issues missing from the discourse on green growth, the everyday life perspective can contribute to a truly inclusive approach to urban spatial planning. The important task now for policy-makers, relevant stakeholders and researchers is to identify the right planning tools, strategic frameworks, additional good practices and analytics that can support spatial planning and urban sustainability policy that integrates many elements of green growth in order to promote sustainable development.

1. Introduction

Green growth has become a key priority of Nordic co-operation. ‘The Nordic Region – leading in green growth’ is the Nordic Prime Ministers’ joint initiative under the auspices of the Nordic Council of Ministers. Nordic cooperation on green growth is important if we are to improve common infrastructure for coping with shared economic and climate challenges, and we are to move research and innovation forward in order to create a more environmentally friendly Nordic region.

This working paper aims to provide planners, relevant stakeholders and policy-makers with a useful reference document on the potential interactions between spatial planning and green growth in Nordic city regions. More specifically, the intention of this study is to reveal and provide a better understanding of the key concepts inherent to the spatial planning of green growth in a Nordic context.

Green growth seems to have appeared as a policy response to the economic and environmental crisis and it can be found in political discourses all around the world. The Nordic Council of Ministers sees the role of the concept as that of a guiding vision for the collective utilisation of Nordic strengths in various areas including energy, waste treatment, housing, education, research, green technology and green investments in the public and private sectors. There is, however, still a lack of a common understanding regarding what green growth means and how it differs from concepts such as green economy and sustainable development.

At the same time, it is important to acknowledge the sustainability concerns associated with rapidly increasing urbanisation around the world. Cities have become the main engines of rapidly globalising production and consumption systems, which entails significant environmental impacts occurring on local and global scales simultaneously. Consequently, it is important to the broader goal of sustainable development that green growth addresses the questions of how and to what extent it can contribute to sustainable urban development. This need also implies a requirement to understand how city-regional planning can contribute to the policy goals of green growth. As we will establish, this is due to the important impacts that urban spatial structure (urban form) has on urban sustainability.

This working paper addresses these issues by identifying the conceptual, political, spatial, economic and societal aspects that can be taken into consideration when designing planning and policy strategies for green growth in cities. It also reviews selected Nordic urban development plans and green growth-related strategies in order to understand how the possible connections are made between green growth and spatial planning and what green growth means in a Nordic urban context.

The working paper has been compiled by a team of Nordregio researchers and is edited by Aslı Tepecik Diş. The paper contains four main parts, grouped into 9 sections. In the first part under Section 2, written by Ryan Weber, the concept of green growth is comprehensively unpacked and discussed by reviewing the definitions provided by internationally notable institutions. The guiding vision of each institution is presented in order to illuminate a discussion of their similarities and differences. The study then provides an overview of recent trends seen in the urban development literature in order to gain an understanding of the relationship between the concept of green growth and the spatial planning of cities. Spatial planning is identified as making a crucial contribution to green growth by promoting certain urban forms such as the compact city.

Due to the focus this study places on spatial issues, its second part continues by discussing the spatial context of cities in Section 3, written by Lukas Smas. This section details what spatial planning means, while providing a brief overview of the Nordic planning systems. It also examines the functions of urban areas, which are increasingly considered an appropriate scale on which to implement urban growth and development policies. This promotes the role of spatial planning in a city-regional context, where the urban core or cores constitute important spaces, along with semi-urban areas and the urban periphery. The shift toward a city-regional perspective entails a transition from policy-making that is predominantly sectoral, to one that emphasises a more integrated approach to urban development. However, this means that existing sustainable urban development and green growth strategies may

have to be adjusted to widely varying contexts, leading to greater policy diversity and innovation. Much of this has to do with the more complex governance structures that characterise the horizontal and vertical coordination of the numerous public and private actors involved in a participatory planning process at the city-regional scale.

The third part, presented in Sections 4, 5, 6, 7 and 8, provides an overview of each of the Nordic planning systems and national policies dealing with the intersection between green growth-related strategies and spatial planning in the Nordic countries. This overview is written by Christian Fredricsson, Veronique Larsson and Liisa Perjo and provides an understanding of how Nordic countries perceive green growth and how they have integrated this interpretation into their spatial planning policies for city regions.

The final part, Section 9, written by Christian Dymén and Aslı Tepecik Diş, contains a discussion that helps

bring together the main concepts identified in the paper: city regions, spatial planning and the compact city; an urban dimension of green growth. This section questions the promotion of certain spatial structures such as the compact city as a means of achieving green growth, and observes that wider notions of sustainability (especially concerning social aspects of people's everyday lives and the use of the city by diverse groups) are seemingly neglected by the discourse concerning green growth. These wider notions of sustainability can be incorporated into holistic policy packages for urban sustainability by integrating an everyday life perspective. As a result, the everyday life perspective problematizes the current interpretation of green growth and implies that social and cultural values and a focus on local context may be a way forward as part of the policy discourse on green growth and spatial planning for promoting urban sustainability.

2. Unpacking Green Growth

Green growth is a normative concept denoting the policies and processes public institutions implement in order to support growth that has a reduced environmental impact.

However, more detailed notions of what constitutes “green” and “growth” can be interpreted very differently within the spectrum of public policy. This is due to the fact that green growth policies always interact with the unique and complex economic, social, cultural and political foundations of individual urban areas, as well as their distinct spatial structures and morphologies. Within this perspective, policies emanate from different political levels (from the local to the global) and affect a diverse array of stakeholders (from individuals, grassroots organisations and private firms, to local government etc.) in very different ways. Thus, no single definition can represent the views of all the policy-making institutions, nor the diverse stakeholders that become the target of green growth policies.

While the importance of context makes a detailed conceptual discussion difficult, an open and inherently vague description of green growth allows it to be useful as a policy approach in different contexts (cf. the EU policy approach territorial cohesion). The preferences, priorities and local conditions will always differ based on the context and, therefore, so will the green growth strategies deployed. In this respect, green growth is a unifying policy concept – framing the actions of all types of policy, at all levels, with a common vision of policy-led growth that simultaneously drives our response to climate change and environmental degradation. This is why green growth is framed as a general discourse rather than being riddled with absolutes such as targets or deadlines.

2.1 Background

Two fundamental issues underpin the spread of green growth as a policy concept. First is the long-term (un)sustainability of global natural resource consumption patterns. The Intergovernmental Panel on Climate Change (IPCC) released its Climate Change Assessment in 2007, in which it concluded unequivocally that climate change is real. It was stressed that most of the rise in global average temperatures is ‘very likely’ a re-

sult of anthropogenic increases in greenhouse gases (GHG), which has since been increased to ‘extremely likely’ in the 2013 assessment. Global average temperatures are estimated to have increased by between 1.8 °C and 4.0 °C by 2090–2099, depending on the scale of policy intervention (IPCC, 2007). To limit the effects of climate change to manageable levels, global carbon dioxide emissions must be reduced by 50–80 per cent over the course of the 21st century. According to the IPCC (2007), the primary way of doing this will be to reduce global dependence on fossil fuels through investments in constructive policies that promote low-carbon technologies. Furthermore, time is of the utmost importance; the sooner we can reverse the trend of increasing global GHG emissions, the better chance we have of limiting the potentially irreversible effects of climate change (IPCC, 2007).

The second fundamental issue underpinning green growth is the recent economic crisis; where green growth is an internationally rooted policy response to crises that have unfolded over the past six years. As stated by the United Nations Environmental Programme (UNEP), “The causes of these crises vary, but at a fundamental level they all share the common feature: the gross misallocation of capital. During the last two decades much capital was poured into property, fossil fuels and structured financial assets with embedded derivatives” (UNEP, 2011, p. 14). This quote reflects how short-term economic planning has led to growth that has been dependant on accumulation, consumption and the exploitation of finite resources, thus bedevilling the development of a greener economy (UNEP, 2011). In addition to the UN’s framing of the structural economic problem, the OECD argues that the economic crisis not only highlights the interface between the economy and the environment, but also provides an opportunity to turn environmental challenges into a driving force of economic resurrection:

...we have to look to the future and devise new ways of ensuring that the growth and progress we have come to take for granted are assured in years to come. A return to “business as usual” would be unwise and ultimately unsustainable, involv-

ing risks that could impose human costs and constraints on economic growth and development. (OECD, 2011b, p. 3)

Supporting the OECD, a recent study concluded that all economic sectors could benefit from a more ambitious European emissions reduction target (Jaeger et al., 2011). According to the economic models used in the study, policies in response to an ambitious climate target could support higher levels of GDP and employment than business as usual, regardless of whether there is a global agreement on climate change mitigation (Jaeger et al., 2011). Furthermore, like the importance of time in responding to environmental challenges, an economic rationale also suggests a need for swift action; we either invest in green production and consumption of goods, services and processes now or wait until we are forced to by the impact of depleted stocks fossil fuels and their rising prices.

2.2 Conceptual foundations of green growth

As a general policy concept, green growth is defined internationally by notable institutions such as the OECD, World Bank and UNEP. The guiding perspective of each institution is presented below to permit a discussion of their similarities and differences.

The OECD has produced a series of policy documents entitled ‘Towards Green Growth’ that elaborates on the need for a clearly defined green growth strategy and policy framework in order to promote the transition towards a new development paradigm. This includes a main report (OECD, 2011a), along with supplementary reports focusing on policy tools (OECD, 2011b) and monitoring indicators (OECD, 2011c). The OECD defines green growth through these reports:

Green growth means fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies. To do this it must catalyse investment and innovation which will underpin sustained growth and give rise to new economic opportunities. (OECD, 2011b, p. 9)

The World Bank has an equally broad and all-encompassing view of green growth:

...growth that is efficient in its use of natural resources, clean in that it minimises pollution and environmental impacts, and resilient in that it ac-

counts for natural hazards and the role of environmental management and natural capital in preventing physical disasters. And this growth needs to be inclusive. (World Bank, 2012, p. 2)

The UNEP uses the term ‘green economy’ rather than ‘green growth’ and defines this as:

...one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities” (UNEP, 2011, p. 2). In a green economy, “growth in income and employment should be driven by investments that reduce carbon emissions and pollution, enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services. (UNEP, 2011, p. 2)

An obvious distinction is notable between the OECD and World Bank’s use of ‘green growth’ versus the UNEP’s use of ‘green economy’. While the UNEP’s definition of green economy seems to present this as a “vision” for a future economic state, the OECD’s definition of green growth (and, to a lesser extent, that of the World Bank) takes our current state as a point of departure and explains what types of policy interventions are needed to achieve green growth.

In addition, the use of terms such as ‘fostering economic growth’, ‘catalyse investment and innovation’ and ‘new economic opportunities’ makes it clear that the OECD’s focus is centred on policies that support the economic productivity of new and existing economic activities. This is in contrast to the UNEP’s definition, which appears superficially to emphasise human well-being and social equity and thus promote social components and democracy. This is corroborated, from a specifically urban perspective, by Davidson and Gleeson (2014), whose research applied an urban political ecology approach to critically investigate the urban sustainability concepts of the OECD, World Bank and UNEP. They highlight green growth as being at the forefront of the OECD’s and the World Bank’s urban sustainability agendas, and how both approaches are extensions of neoliberal urbanism, which regards growth as “necessary and potentially sustainable” (Davidson & Gleeson, 2014, p. 189). For instance, the OECD’s view of climate change policy focuses on market-based mechanisms (carbon taxes, congestion charges, the development of a global carbon market, etc.), reflecting the influence of the current dominant economic discourse (Davidson & Gleeson, 2014). Similarly, the urban green growth agenda to deliver sustainability the World Bank puts forward is also entrenched

in a neoliberal framework of economic development – hinging on necessity, efficiency and cost-effectiveness (Davidson & Gleeson, 2014). In contrast to those of the OECD and World Bank, Davidson and Gleeson (2014) stress that the UN’s approach does not widely support the political economy of neoliberal urbanism, even emphasising how it questions whether growth is necessary and potentially sustainable.

The discussion above also points to evidence of a distinction between ‘growth’ and ‘development’. According to the OECD, growth is predominantly an economic perspective, defined as a change in output where value creation is normally measured by changes in GDP per capita or per worker (Hammer et al., 2011). In contrast, development is often seen in qualitative terms – as changes in the functional capacity that generates new resources for growth (Chapple, 2008). Thus, inspired by the work of Davidson and Gleeson, we conclude that that a neoliberal approach, centred on the economy as the main policy field, is at the heart of the OECD’s and the World Bank’s green growth agendas. Seemingly paradoxical to the UN’s use of the word ‘economy’ in the term green economy, its focus seems more aligned with traditional sustainable development policy discourses in which balanced development between the social, economic and environmental spheres is asserted. Nevertheless, the UNEP (along with the OECD) makes it clear that the intention is not for green economy (and green growth) to replace sustainable development, but to be incorporated into it (UNEP, 2011; OECD, 2011b). This is explicitly highlighted by the UN: “The concept of green economy does not replace sustainable development; but there is a growing recognition that achieving sustainability rests almost entirely on getting the economy right” (UNEP, 2011, p. 16).

All in all, we find an expansive, complex and at times contradictory discourse on green growth and green economy taking place among and between the key international policy institutions. While this likely reflects the developments in knowledge and analysis currently taking place within each institution, we ultimately see green growth as being a policy concept embedded within the notion of sustainable development – one which is narrower in scope and emphasises the importance of a comprehensive policy agenda that facilitates economic growth through investments in clean technologies. Furthermore, while appreciating the heightened economic rationales, particularly to the extent that they reflect how economic rationales also define urban development projects in European cities, we find it hard to neglect the fact that there is a significant reduction in the emphasis on social dimensions of prosperity compared to sustainable development.

Troublingly, this could in turn lead to the focus straying from urban development policies that, while perhaps not rooted in an economic rationale, contribute indirectly by enhancing the attractiveness of the urban area for its many users

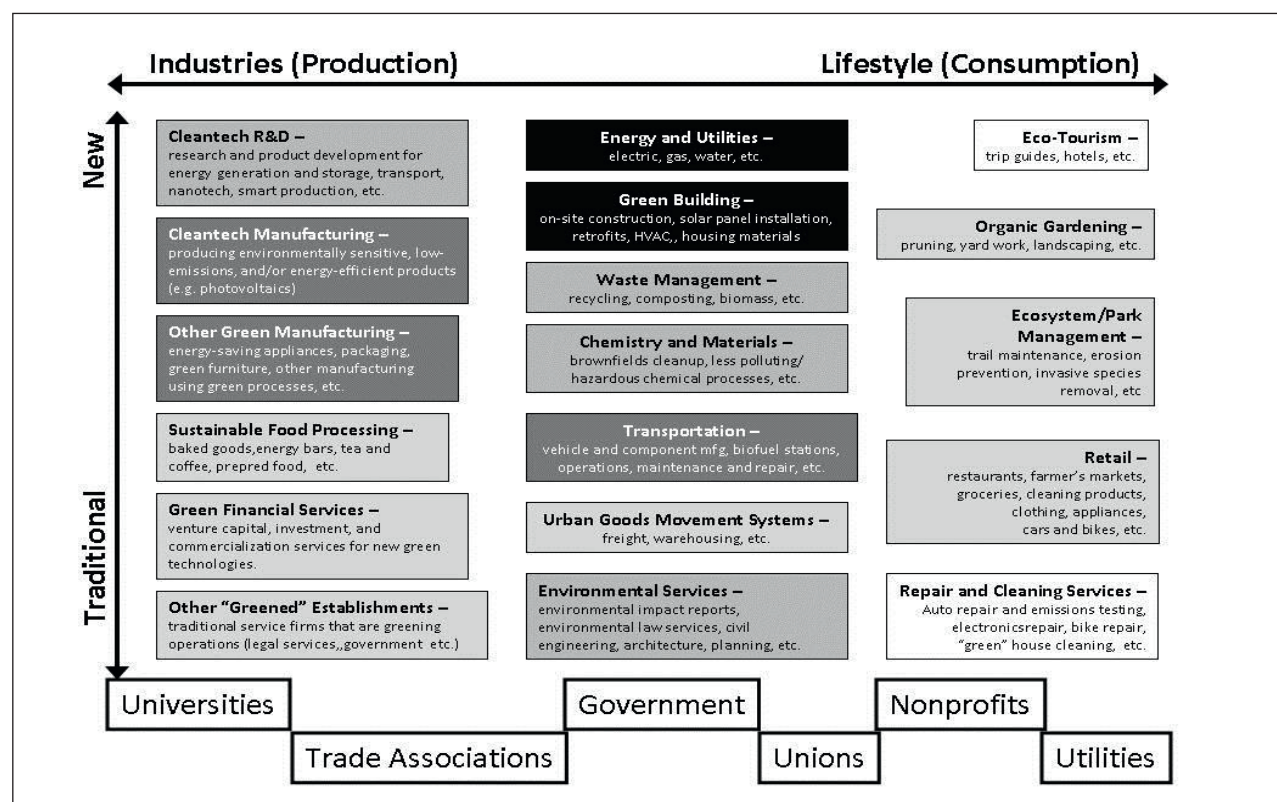
2.3 Green growth: what’s on the agenda?

While the conceptual discussion above generally highlights the need to find ways in which growth and the mitigation of human impacts on the natural world can complement one another, the discussion is in reference to overall growth trends, rather than growth in relation to certain economic sectors. However, Chapple (2008) also describes the green economy in narrower terms that we will use as a starting point: “the clean energy economy, consisting primarily of four sectors: renewable energy (e.g. solar, wind, geothermal); green building and energy efficiency technology; energy-efficient infrastructure and transportation; and recycling and waste-to-energy” (p. 1).

This definition primarily highlights what ‘green’ entails in green growth/green economy. It makes reference to general sectors such as waste management, transport and buildings and reflects the need to differentiate green(er) technologies, systems and practices from brown(er) ones. This means that the line between ‘green’ and ‘brown’ is a dynamic, context-specific and reflexive concept (Martinez-Fernandez, et al. 2011); what is green today may not be green in the future as behaviours, technologies or our understanding of sustainable thresholds continue to evolve. Furthermore, industries regarded as brown today (i.e. mining, heavy industry, etc.) can become greener thanks to new technologies or production/consumption practices (Martinez-Fernandez et al., 2011). Thus, ‘green’ activities and practices can be seen as a collective term for activities or practices that emphasise certain core aspects; resource efficiency (balancing consumption of different resources with nature’s ability to replenishing them) and the need to protect natural systems on which humans and other species depend (Carly, et al. 2011).

Chapple’s (2008) research also presents a sector-based framework for interpreting the green economy based on an analysis of research articles (see Figure 2.1). Those sectors depicted in the darkest tone (i.e. energy and utilities, and green building) are those most frequently referenced. In characterising the sectors, Chapple notes how sectors in the middle column intersect the spheres of production and spheres of consumption and, similarly, are activities that most likely

Figure 2.1 Sectors of the green economy according to recent studies (Chapple, 2008)



involve government action. Likewise, all of the sectors listed in the central column fall under the domain of spatial planning, focusing on coordinating land use, development activity and infrastructure investment across urban areas in order to achieve green public policy goals.

2.4 Urban dimensions of green growth

In the report *Green Growth in Cities*, the OECD (2013a) defines urban green growth as “Fostering economic growth and development through urban activities that reduce negative environmental externalities and the impact on natural resources and environmental services” (p. 15). In an effort to combine an overarching definition with concrete activities, the report identifies examples of six sectors and corresponding activities where urban policy can most effectively reduce resource use and/or improve environmental quality (see Figure 2.2): i) land-use planning, ii) transport, iii) buildings, iv) energy, v) waste and vi) water. Each of these sectors highlights the fact that while reducing the resource intensity of production matters most at the international level (where market conditions are crucial), the resource intensity of consumption is most effectively tackled at the local level.

Urban policy has an important role in reducing resource consumption, thereby increasing efficiency, while simultaneously promoting growth and development by making cities more economically competitive. Here, land use and transport are two of the key connections between spatial planning and green growth. The ways in which land is used (e.g. for transport and housing) and developed have important implications for the reduction of emissions that cause environmental degradation.

2.4.1 Urban sprawl and its environmental impacts

The negative environmental impacts of cities reflect the concentration of resource consumption and environmental pressure that goes hand-in-hand with the sheer magnitude of the concentration of people in them. On a global scale, about two-thirds of final energy demand arises in urban areas (EC, 2011), the vast majority of which is accounted for by the energy consumed in buildings and by private car transport (OECD, 2013b). However, an important aspect of planning research (and practice) relates to the fact that cities necessitate an urban form – a morphological spatial structure that contributes toward determining their environmental performance. These structures, in which transportation networks can be seen as the skeletal frame around which cities develop (Batty, 2013), evolve over time and

Figure 2.2 Urban activities that can reduce cities' environmental impact (OECD, 2013a)

Sector	Activities
Land-use planning	• Zoning that allows for a mix of land uses so as to reduce travel distances between homes and other activities • Tax reform to encourage the development of underused lands in urban cores and to encourage urbanisation of undeveloped land in the urban fringe
Transport	• Expanding and/or improving public transport • Physical improvements to encourage walking and cycling • Attaching a price to personal vehicle travel (e.g. congestion charges)
Buildings	• Retrofitting existing building stock to increase energy efficiency • Minimum energy efficiency standards for new buildings
Energy	• Installing distributed renewable energy generation (e.g. solar panels) • District heating and cooling systems • Fees that discourage peak energy use
Waste	• Recycling household and industrial waste • Waste-to-energy and landfill methane-to-energy systems • Fees that discourage waste generation
Water	• Fees that encourage water conservation • Governance mechanisms to improve efficiency of water delivery

can be affected both positively and negatively by strategic planning measures.

One of the key challenges in relation to urban form is urban sprawl (also called suburban sprawl). Urban sprawl is characterised by the incremental and leap-frog development of low-density land uses at the urban fringe. This is explained largely by a market driven process, propagated by the rapid growth of private cars as a symbol of wealth and an affordable means of transport (EEA, 2006). Urban sprawl began in North America and, despite European cities having traditionally been much more compact than those on the other side of the Atlantic, this process has largely been replicated in Europe since the 1950s. Urban sprawl is now a common phenomenon throughout Europe (EEA, 2006), and has been explicitly emphasised by the European Commission:

Urban sprawl and the spread of low density settlements is one of the main threats to sustainable urban development; public services are more costly and difficult to provide, natural resources are over-exploited, public transport networks are insufficient and car reliance and congestion in and around cities are heavy. (EC, 2011, p. VI)

Some of the most important environmental consequences of urban sprawl include the negative impacts of land consumption and higher energy demand. Data from the European Environment Agency shows that urban land take, primarily in the form of suburban sprawl for residential and economic land uses, remains and will continue to be the dominant land-use change

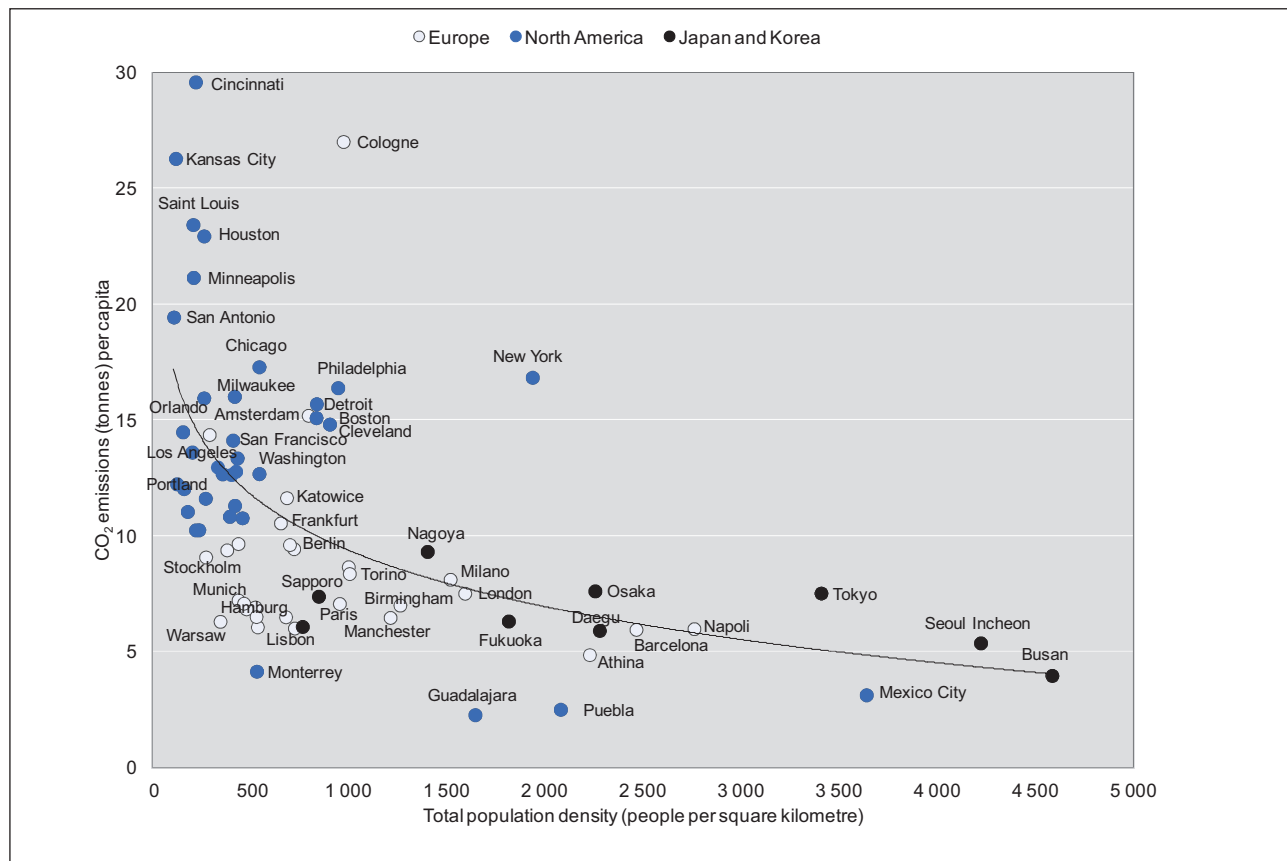
taking place in Europe (EEA, 2010; Nilsson et al., 2014). The rate of soil sealing of land within urban areas is often between 50 and 80 per cent, which has a number of negative local impacts on local climate, biodiversity and ecosystem services. In particular, soil sealing reduces production from local agricultural activities which predominantly take place in peri-urban areas in Europe (EEA, 2010).

In terms of energy resources, changes in lifestyle associated with urban sprawl result in higher per capita energy consumption due to larger living spaces, the inability to provide low-carbon district heating and CHP (combined heat and power) solutions and, in particular, increased car dependence. There is ample research showing a consistent link between population density and both energy consumption and carbon dioxide emissions, as shown in Figure 2.3 (e.g. Dantzig & Saaty, 1973; Krier 1998; Duany, et al. 2001; Ambiente Italia, 2003; EEA, 2006; Newton, 2010).

2.4.2 Impact of cities on attractiveness and sustainability – socio-economic dimensions

Cities generate through their 'agglomeration effects', whereby economies of scale and network effects inherent with concentrations of consumers, firms and their employees, together with other formal and informal institutions, public services and recreational opportunities provide the basis for attracting even more firms and employees. (e.g. Begg, 2002; European Commission, 2011). This is particularly the case for knowledge-intensive service-sector jobs, as cities are centres of knowledge creation that in turn supplies a highly educated labour force to the local economy. In

Figure 2.3 Population density and CO₂ emissions per capita in 73 large OECD metropolitan areas, 2006 (OECD, 2013a)



addition, agglomeration effects reflect how urban growth is also a result of cities' attractiveness and desirability for individuals. The increased focus on creative and knowledge-intensive jobs has gone hand-in-hand with a shift in how the attractiveness of cities is perceived. Here, cities are seen not only as providing economic opportunities for individuals, but also as providing the social and cultural opportunities that individuals desire (Florida, 2002).

However, while discussion of the impacts of urban form often relate to environmental implications, it is surprising that the potential social and economic impacts are given less attention (Stead, 2011). At the same time, research by urban theorists such as Jacobs (1963) and Florida (2010), as well as urban morphologists such as Batty (2013), Hillier (2014) and Stähle (2008) provides extensive knowledge about impacts, analytical approaches and planning measures relating to the connection between urban form and the socio-economic attractiveness of cities. Their work focuses on what makes cities attractive (or unattractive) places to live and work; primarily dealing with how people move through cities and pursue their recreational activities in their own ways. However, one consistent aspect is that each of them enhances an 'everyday life' understanding of how people function in cities.

One example of the negative socio-economic impacts of urban sprawl is associated with planning responses that attempt to transform suburbs into more vibrant urban communities. Newton (2010) uses the term 'greyfields' in reference to ageing, occupied residential tracts of suburbs which are physically, technologically and environmentally obsolescent and which represent economically outdated, failing or undercapitalised real estate assets. Similarly, as housing preferences change within urban areas, sprawl can intensify social and spatial segregation in a number of ways. For example, in some cities this has included the marginalisation of the poor in low-quality housing as the middle and upper classes take up residence in the suburban periphery (EEA, 2006). This phenomenon is highly evident in larger European cities such as Stockholm, where modern apartment blocks constructed in the 1960s provide a built form that has contributed to extreme segregation because the attractiveness of these areas decreased and they now house disadvantaged communities.

Another social impact of sprawl is connected to private car dependence in low-density urban areas. Suburban areas reduce the level of social interaction of all groups, especially the young, old and poor who lack mobility resources (EEA, 2006). Cities are also seen as

centres of social segregation, unemployment and poverty. These challenges are exacerbated in cities due to the high cost of accommodation and the polarising effect of the wealthy and the poor both being concentrated within the city (EC, 2011). As a result of these challenges, even the richest cities in Europe face “fundamentally hostile attitudes” among social groups and increasing problems associated with social and spatial segregation (EC, 2011).

2.5 Urban form as a solution

Urban form has a significant role in fostering green growth and development. Spatial planning can help reduce negative environmental impacts by conducting innovative analytical approaches and suggesting planning measures that can create more environmentally sustainable and socio-economically attractive urban forms. According to the OECD, urban form affects national green growth:

Urban form matters to environmental outcomes. The layout of cities is one of several critical factors influencing energy demand and greenhouse gas emission levels. In OECD metropolitan areas, CO₂ emissions from transport are likely to be greater in less densely populated areas than in more densely populated ones. A comparison of the 73 largest OECD metropolitan areas, using the comparable definition of functional metropolitan areas developed by the OECD, reveals an inverse relationship between population density and per capita CO₂ emissions. (OECD, 2012, pp. 30–31)

The “compact city” planning perspective is specifically highlighted as a means by which to develop more resource-efficient and attractive urban areas (OECD, 2012). The compact city was first proposed as a strategic land use concept by Dantzig and Saaty (1973). Their work, along with more recent research, suggests how strategically located urban districts with relatively high-density, controlled mixed-use development of housing services and transport can promote a more sustainable urban form (e.g. Krier 1998; Duany et al. 2001; or Neuman, 2005 and Burton, 2000 for critique). Most importantly, research suggests that linkages between urban forms associated with the compact city concept are an influential factor in promoting more sustainable mobility behaviours. In particular, this includes reduced private car dependence when public transport, cycling and walking become viable alternatives for everyday travel needs (Dempsey, 2010). Com-

mentary concerning the compact city also suggests that energy consumption can also be reduced in higher-density developments through the ability to implement more energy-efficient energy distribution infrastructure (Burton, 2000). The OECD (2012) maintains, on the basis of all the existing research, that compact city urban growth is associated with economic, environmental and social benefits, including increased labour productivity, reduced infrastructure costs, more efficient use of land and resources, lower air pollution, reduced energy consumption, conservation of farmland, greater access to services and improved health.

At the same time, policies associated with compact city planning perspectives also acknowledge the importance of where buildings are built and of redeveloping and integrating vacant or underused areas of cities into attractive, mixed-use, well-connected communities. In this regard, important land-use planning strategies for the implementation of compact city policies include:

- infilling, i.e. construction on vacant land within an existing built environment;
- transport-oriented development, i.e. community development that ensures proximity to public transport, thus promoting it as an efficient means of urban mobility
- greyfield development, i.e. the strategic densification of ageing, occupied residential tracts of suburbs which are physically, technologically, and environmentally obsolescent; and
- brownfield development, i.e. a process of regeneration in parts of cities that have outlived their previous functions, e.g. industrial areas, military holdings among others.

While a more compact city design might foster resource sustainability and attractiveness in a number of ways, we must conclude that the research is inconclusive with regard to the benefits and constraints associated with compact-city policies (e.g. Burton, 2000; Elle et al., 2004; Neuman, 2005). For instance, some studies have even shown negative correlations between higher population densities and the energy efficiency of buildings (Holden et al., 2005; Naess et al., 1996). These findings indicate that differences in energy consumption behaviours, primarily those driven by cultural norms, differences in wealth and a need for international travel to overcome a lack of access to nature appear to trump the potential benefits of higher-density living. Research also suggests that this implies a challenge for climate change adaptation measures. Potential conflicts primarily relate to the balance between soil sealing and

the provision of green space and open space. For instance, an area lacking green space and with a large amount of concrete surfaces is more vulnerable to the flooding associated with storm water run-off than a less densely populated area with penetrable ground (Rosenzweig et al., 2011). Similarly, increasing the density of cities may also intensify the urban heat island effect (Oliveira et al., 2012; Shaw et al., 2007; Laukkonen et al., 2009), which in turn increases energy consumption due to demand for air conditioning (Dulal & Akbar, 2013).

To be clear, in finding that compact city planning

perspectives are not conclusively linked to improved urban sustainability, and may even have negative consequences, we are not suggesting that there is no connection between urban form and sustainability. In fact, we are suggesting the opposite; that urban form and sustainability are closely connected. Place-based spatial dimensions involving underlying social, economic and environmental conditions, rather than the compact city ideal, must be considered in order to achieve balanced, long-term success when developing the urban form. This is very much one of the current missions of urban morphology research and urban spatial analytics.

3. Planning city regions

Urbanisation processes are concentrating people and capital in ever-expanding city regions, challenging traditional planning and policy strategies (cf. Scott, 2001; Soja, 2005). City regions are seen as the economic hubs of a globalised world and it is increasingly emphasised that city regions are the “adequate” scale for urban and regional policy and governance (Rodríguez-Pose, 2008). Much attention has been devoted to global city regions such as London, New York and Tokyo (cf. Sassen, 2001), but also to emerging megacity-regional formations such as Guangzhou and Hangzhou (Wu & Zhang, 2007). In Europe, much of the focus has been on city regions such as South East England, Randstad Holland, Central Belgium, Rhine-Ruhr, Rhine-Main, the Paris Region and Greater Dublin (e.g. Hall & Pain, 2006). The discussion of city regions is often based on globalisation and regionalisation processes, with debates concerning global city regions (Scott, 2001; Soja, 2005) and/or megacity regions (Hall & Pain, 2006; Hoyler, Kloosterman, & Sokol, 2008), as well as metropolitanisation and urban agglomeration processes more generally (e.g. Krätke, 2007). However, the rise of city regions should be understood not just in terms of shifting economic geographies, but also in relation to changing political imperatives and new ways to conceptualise the term ‘city region’. A lot of research has also focused on how to conceptualise city regions (Ellingsen & Leknes, 2012; Jonas, 2012a, 2012b; Neuman & Hull, 2009; Parr, 2005; Scott, 2001) and on the planning and development of city regions (Healey, 2009; Rodríguez-Pose, 2008; Tewdwr-Jones & McNeill, 2000).

A city region is, as are regions in general, a social construct that is collectively defined (Paasi, 1986, 2011) and can be understood as a conceptualised object formed through practices (Ellingsen & Leknes, 2012). The conceptual understanding of a region refers to the narratives or spatial representations of a region often emanating from a top-down perspective, i.e. from researchers, planners and politicians, and is directly related to the process of regionalism. The region as an object refers to the physical territory of the region and its material content in the form of population, infrastructure, resources, etc. A region acquires meaning

through practices (through regionalisation); both the institutionalised organisation of the region and the everyday practices of people. Even if there are many different types of regions that exist on different scales, a region is most often defined as a subnational spatial arrangement between the state and the local (Harrison & Growe, 2012), a territory such as a county (in the Nordic countries: län, fylke, region, landskap) or a functional city region which often transcends administrative (territorial) boundaries.

3.1 Approaching city regions

One way of approaching the city region as a concept is to distinguish between the analytical concept and the political concept, where the former refers to the city region as a functional economic space, while the latter is concerned with the city region as a political-administrative space (Davoudi, 2009). Global city region is a concept that tries to capture the importance of particular city regions within the global cultural economy. In the context of globalisation, city region has, from this economic geographical perspective, been defined as follows:

From a geographic point of view, global city regions constitute dense polarized masses of capital, labour, and social life that are bound up in intricate ways in intensifying and far-flung extra-national relationships. As such, they represent an outgrowth of large metropolitan areas – or contiguous sets of metropolitan areas – together with surrounding hinterlands of variable extent which may themselves be sites of scattered urban settlements. (Scott, 2001, p. 814)

Global city theory has however been critiqued for focusing too much on the external and internal relationships of cities and for neglecting the political and territorial dimensions. Even if we are currently living in a globalising world, it is still a world of nation-states where territorial boundaries are fundamental to our political system. If city regions are approached from a territorial perspective they can be defined in terms of governance and institutions as:

...a strategic and political level of administration and policy making, extending beyond the administrative boundaries of single urban local government authorities to include urban and/or semi-urban hinterlands. This definition includes a range of institutions and agencies representing local and regional governance that possess an interest in urban and/or economic development matters that, together, form a strategic level of policy making intended to formulate or implement policies on a broader metropolitan scale. (Tewdwr-Jones & McNeill, 2000, p. 131)

The gap between the economic interpretation and political understanding of a city region is also at the heart of the academic debate between a territorial approach and relational perspectives on regions (Jonas, 2012a; Jones & Paasi, 2013). However, this might be a ‘non-debate’ because of a misunderstanding between “relationality as a fundamental condition of being of any object, on the one hand, has become confused with relationality in terms of actually existing relations, on the other hand” (Varró & Legendijk, 2013, p. 26). What may be more problematic is that city regions are still most often approached in terms of centre-periphery, and not in relational terms.

There are three common elements in the various definitions of city regions; the core(s), the hinterland(s) and the linkage(s) (Rodríguez-Pose, 2008). However, there are three factors that need to be taken into account. Firstly, a city region can have multiple cores of varying function and importance, as in the case of polycentric city regions. Secondly, even if the hinterland is often conceived of in terms of continuous contiguous territories, it is also formed through, for example, business networks, which, thirdly, raises the question of which linkages between the core(s) and the hinterland(s) are the most relevant. Is it cultural influence that defines a city region, is it how the city region is situated in the

global economy or is it the city region’s labour market in terms of commuting distances?

In practice, city regions are often demarcated (or reduced) to functional urban areas; which makes comparative analysis possible (Knapp & Schmitt, 2006). In functional terms they are understood analytically as economically driven and based on a notion of core-periphery, i.e. that there is a city core surrounded by a hinterland area that together form functional economic geographical unit (Davoudi, 2009). In some studies (e.g. Andersen, Hansen, Isaksen, & Raunio, 2010) functional city regions are simply perceived as economic regions/sub-regions, i.e. local administrative units (LAU1), formerly Nomenclature of Units for Territorial Statistics (NUTS 4) regions. It is, however, difficult to compare even this simplified conceptualisation of city regions based on these territorial units since they differ significantly between the individual Nordic countries (see Table 3.1). For example, Danish municipalities are LAU1 areas, while there are no LAU1 areas in Sweden

Applied research projects, statistical analysis and empirical studies are still very much focused on defining city regions in terms of core and hinterland (periphery), for example the OECD and the ESPON programme (see Table 3.2). However, these empirical attempts at defining city regions and delimiting functional urban areas are also all different, with no common general definition of city regions uniting these studies. In an attempt to redefine the urban, the OECD uses grid data to identify ‘urban cores’ and commuting data to demarcate the ‘hinterlands’, but the geographical building block is still municipalities (LAU2). Within the ESPON programme there have been similar attempts to capture city regions using the terms ‘morphological urban areas’ and ‘functional urban areas’. Morphological urban areas (MUA) are defined primarily by the density (650 inhabitants/km²) and population size (over 20,000) of a municipality (LAU2).

Table 3.1 Administrative divisions and statistical territorial units in the Nordic countries

	Denmark	Finland	Iceland	Norway	Sweden
NUTS 1					3 supra-regions
NUTS 2	5 regions (region)	5 major regions		7 regions	8 regions
NUTS 3	11 sub-regions	19 regions (maakunnat)	2 main territorial units	19 counties (fylker)	21 counties (län/landsting/region)
LAU 1	99 municipalities (kommuner)	70 sub-regions	8 statistical units	89 sub-counties	
LAU 2	2143 parishes	336 municipalities (kunnat)	79 municipalities (sveitarfélög)	428 municipalities (kommuner)	290 municipalities (kommuner)

Table 3.2 Statistical definitions of city regions in terms of functional urban areas (ESPON M4D, 2013 OECD, 2012; Schmitt & Smas, 2012)

	OECD Functional urban area	ESPON Functional urban area (FUA)	Nordregio Functional urban region (FUR)
Core	> 50,000 inhabitants (urban cluster)	> 20,000 inhabitants (LAU2)	> 25,000 inhabitants (Local labour market LLM)
	1500 inhabitants/km ²	650 inhabitants/km ²	200 jobs/km ² (or > 20,000 jobs)
Hinterland	15% commuting to economic core	10% commuting to economic core	20% commuting to economic core (or 2000 workers/day)

MUAs constitute the core of functional urban areas (FUA). An FUA is delimited by commuting patterns towards, with few exceptions, a single urban core area (MUA) from the hinterlands, i.e. “the municipalities (LAU2) where more than 10% of the economically active population works in MUA” (ESPON M4D, 2013). The OECD distinguishes between four classes of functional urban area (OECD, 2012):

- Small urban areas, with a population of between 50,000 and 200,000
- Medium-sized urban areas, with a population between 200,000 and 500,000
- Metropolitan areas, with a population between 500,000 and 1,5 million
- Large metropolitan areas, with a population above 1,5 million

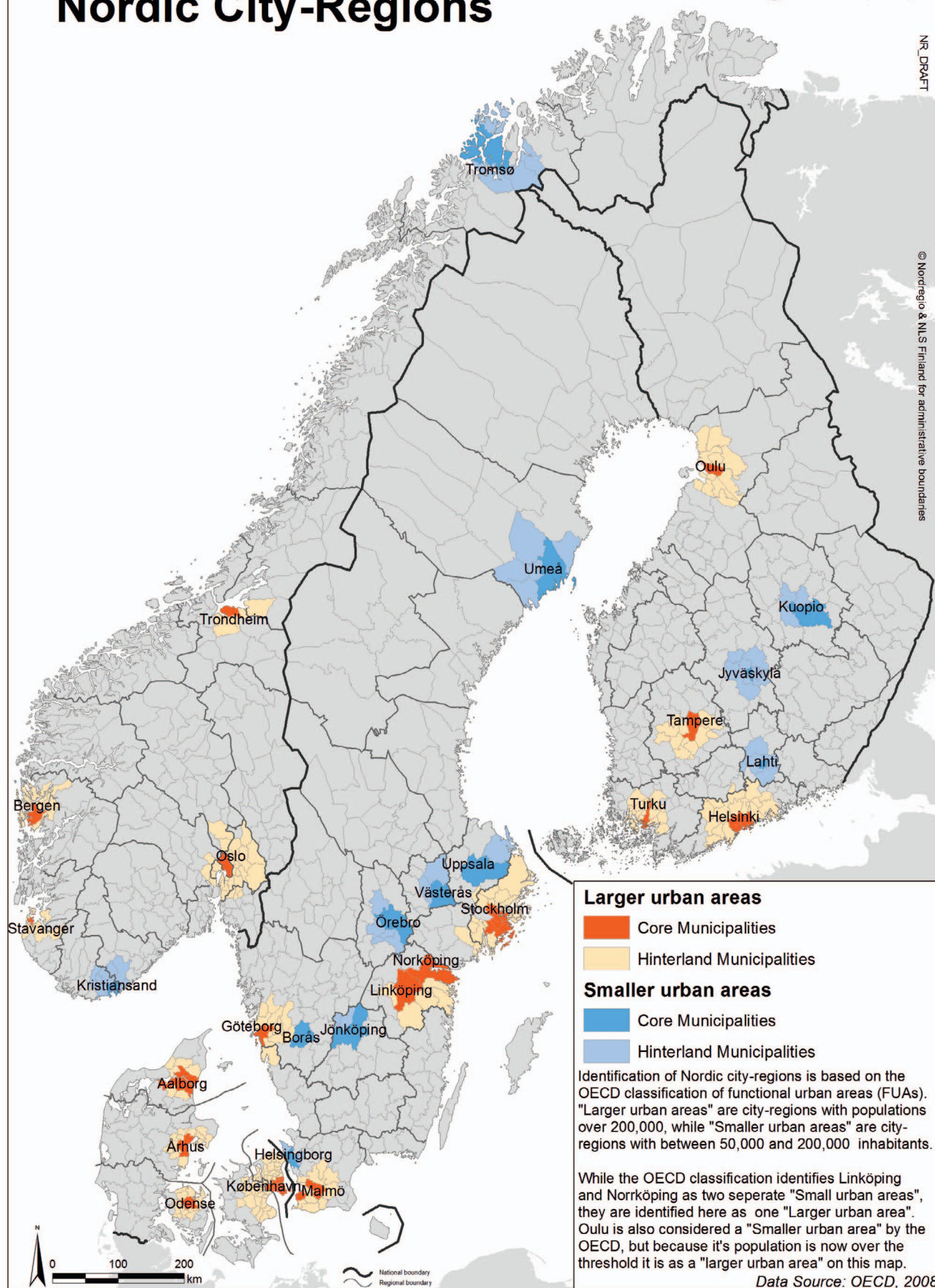
If the OECD classification is applied on the Nordic countries, there are 17 metropolitan areas or city regions, as shown in Map 3.1. These areas also correspond with the areas where there has been population growth in the past decade, as shown in Map 3.2, with a few exceptions, for example, in Denmark, where not all city regions have experienced population growth.

Nordregio has defined functional urban regions within the Nordic countries in various projects and has developed a ‘Nordic urban typology’ based on local labour markets (LLM) (Nordregio, 2006; Roto, 2012). The project to map the intercity connectivities of the Nordic capital regions used a functional and political definition (Schmitt & Smas, 2012). Functionally, this focuses on economic activity in terms of jobs and commuting

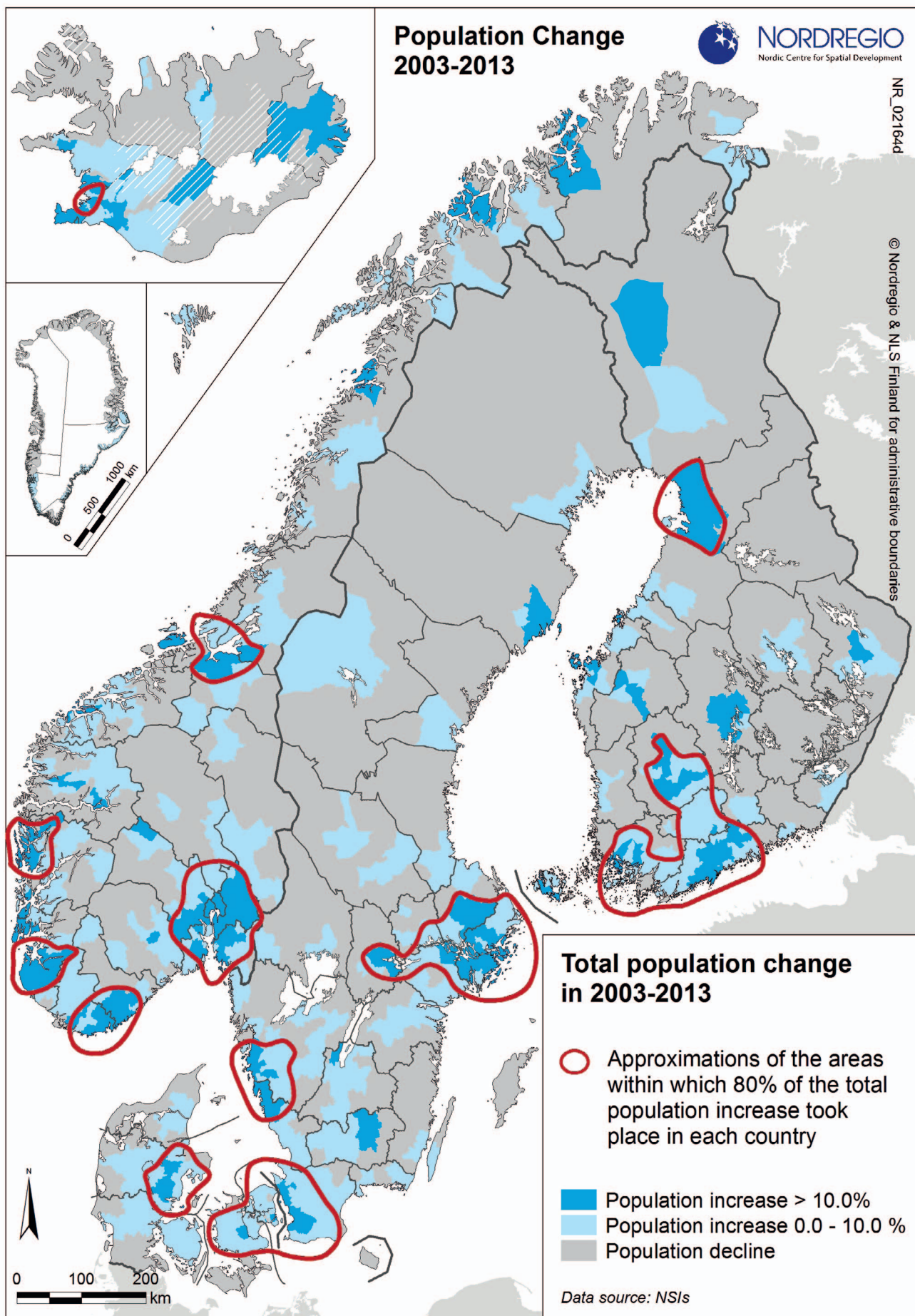
patterns to and from work, but defining the number (20,000 jobs), spatial intensity (200 jobs/km²) or level of commuting (2000 workers/day to the economic core) is essentially a normative question. It is important to recognise that almost all so-called functional definitions also have a political dimension, at least in terms of the territorial and jurisdictional boundaries such as those of municipalities and nation-states, if for no other reason than because the statistical data is gathered and produced within these parameters. For example, the demarcation of Greater Copenhagen (see Map 3.3), in the above-mentioned study of intercity connectivities not only includes (and excludes) different Danish municipalities within the administrative region of Copenhagen (Region Hovedstaden), but also includes the Swedish city of Malmö (but does not include Burlöv, for example, which is part of Malmö’s morphological urban area according to the ESPON definition).

Defining a city region is thus dependent both on which functions are being considered and on the political landscape. However, it is not sufficient to conceive of city regions simply in terms of core and periphery, as has often been the case, i.e. a central urban area surrounded by a peripheral hinterland. City regions should be seen not as an “institutional fix”, but as a “focusing device” for place-based development ; one which simultaneously opens up narrow policy agendas towards the social, economic and environmental diversity and complexity of places (Healey, 2009). And it is as such that city regions might constitute an “adequate” scale for urban and regional governance and policy-making and spatial planning.

Nordic City-Regions

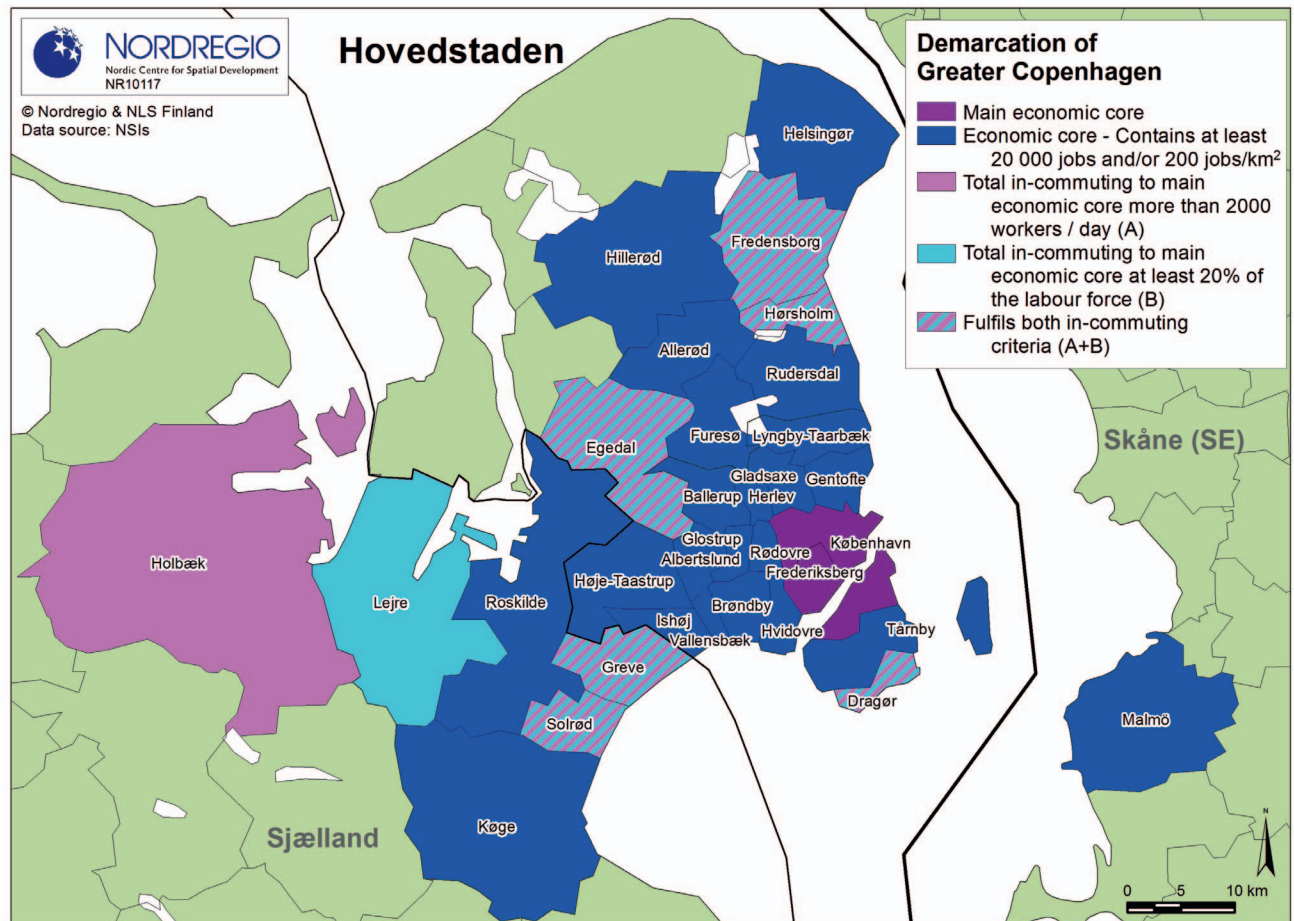


Map 3.1 Nordic city regions according to the OECD's typology



Map 3.2 Population change in the Nordic countries 2003–2013

Map 3.3 Demarcation of the Greater Copenhagen city region



3.2 Spatial planning

The different European countries have a variety of planning traditions that conceptualise planning in various ways. Within the EU, ‘spatial planning’ has become a widely accepted and used concept since the adoption of the European Spatial Development Plan from 1999, which often refers to strategic forms of planning approaches (Albrechts, Healey, & Kunzmann, 2003; Healy, 2004). One of the initial definitions of spatial (regional) planning can be found in the European Regional/Spatial Planning Charter from 1983:

Regional/spatial planning gives geographical expression to the economic, social, cultural and ecological policies of society. It is at the same time a scientific discipline, an administrative technique and a policy developed as an interdisciplinary and comprehensive approach directed towards a balanced regional development and the physical organisation of space according to an overall strategy. (CoE, 1983, p. 13)

Accordingly, spatial planning is a very broad term and “encompasses elements of national and transnational

planning, regional policy, regional planning and detailed land-use planning”(CEC, 1997, p. 24). Regional policy and regional planning are sometimes used interchangeably, but the former is often undertaken by national governments to manage uneven development. Regional policies could also be formulated at an international level, e.g. the EU’s territorial cohesion policy. Compared to land use or physical planning, regional planning is often strategic (abstract) rather than specific (concrete), and is concerned with planning on the intermediate level in between the national and municipal levels, i.e. regional or city-regional level. On the other hand, land-use planning is specific and judicial with respect to land regulation and property. However, even if spatial planning has a distinct regional dimension, it is also very similar to what is usually conceptualised as urban planning, as shown in this encyclopaedic definition of urban planning:

State-related policies and programs for neighbourhood, local and metropolitan areas, aiming to: effect broad-scale allocation of land uses to areas; order boundaries between them; manage on-going uses of land, the spatial aspects of economic and

social activities and connections between them; and ensure the optimal functioning of urban economic processes and social interactions. (Huxley, 2009, p. 193)

The Nordic planning systems are oriented towards urban development and municipal regulation (Harvold & Kristensen, 2008), both of which are partly disconnected from regional and national development policies. However, in terms of the broad concept of spatial planning, it is possible to distinguish between different planning instruments connected to different administrative levels; national policy and perspectives, regional strategies, and local frameworks and regulations (CEC, 1997). In general, there seems to be a hierarchical logic to this, i.e. more abstract on a higher administrative level and more concrete on a lower administrative level, meaning that the regional level is more focused on strategic issues and policies while the local level is more concerned with formal and legal regulatory plans. However, regulatory land-use planning can be done at the regional level (e.g. Finland's regional land use plan (landskapsplan)), and central government can be directly involved in the regulation of municipal land use. For example, in Denmark, planning for Greater Copenhagen is of national concern and, in Norway, it is possible for central government to develop its own plans (e.g. the development of an international airport).

There is no formal city-regional planning within the Nordic planning systems, but there are various initiatives and strategies at the city-regional level. In an international context, Nordic planning is often described as comprehensive planning focused on the "horizontal and vertical integration of policies across sectors and jurisdictions" (Nadin & Stead, 2008, p. 39), which is very much in line with spatial planning on a city-regional scale as outlined above. It should, however, be recognised that the term city-regional (spatial) planning includes an internal tension between, on the one hand, regional social and economic policies and, on the other, comprehensive transport and land-use city planning. It includes both formal, legal planning procedures and informal decision-making and governance. There are thus two strains of city-regional planning; spatial (strategic) planning and comprehensive land-use planning (cf. Albrechts, 2004).

In recent decades there has been a reorientation towards more strategic forms of spatial planning, a

general shift away from land-use-oriented planning towards more strategic forms of planning; from planning by rules to planning by goals (Castells, 2002). In the Nordic countries, this tendency towards a greater focus on strategic spatial planning is clearly evident in the recent reforms and ongoing experiments with new forms of planning, not least at the city-regional level.

Spatial planning in Denmark has in recent decades been given a more strategic role (e.g. Galland, 2012; Olesen & Richardson, 2012). Since 2000, the Danish planning system has required each municipality to produce an obligatory municipal planning strategy to complement the legally comprehensive plan. The comprehensive plan should cover the entire municipality and is legally binding for local plans and permits.

In 2009, Norway adopted a new planning act that also emphasises more strategic spatial planning, as well as harmonisation of the national, regional and municipal levels. According to the new act, regions must develop strategic plans and regional plans, and the municipalities also need to develop strategic plans and comprehensive plans. The new system seems to be rather well integrated, but there are no strict judicial hierarchies, instead the Norwegian system could be regarded as a "power-positioning system" in which the regional level has the right to intervene, but the local municipality has the power to decide (Harvold & Nordahl, 2012). In the Norwegian system, the comprehensive plan includes both a strategic plan and a land-use plan, with only the latter being legally binding for local plans. A key issue with the newly introduced strategic plans at the municipal and regional level is that they have to be updated regularly, every new mandate period.

Strategic planning was also emphasised in Sweden in the revised planning act of 2011. The main argument in favour of this was that it would create a more efficient planning system. In Finland there are various, more strategic spatial planning initiatives at the city-regional level. However these new strategic forms of planning in the Nordic countries often clash with more traditional regulatory frameworks (Olesen & Richardson, 2012), and there seems to be increased tension between, on the one hand, a transparent, inclusive and democratic planning processes, and efficiency and new forms of market oriented management on the other (Mäntysalo, Jarenko, Nilsson, & Saglie, 2014; Mäntysalo, Saglie, & Cars, 2011).

4. Denmark

Denmark has a twofold national policy agenda on green growth; focused partly on national sectoral growth policies on specific areas such as energy efficiency and clean technology (cleantech) and partly on spatial policies promoting city regions as engines of sustainable economic growth in a competitive global market (Danish Ministry of the Environment, 2013).

The national sectoral policies include a framework of growth plans defining those policy measures rele-

vant to the promotion of a 'green transition' to a fossil-free energy system. Accordingly, investments are targeted at the energy and cleantech sectors. In addition to the national growth plans and directives, the Danish Government has given the regions responsibility for regional growth and development strategies to support business development and sustainable growth in the Danish regions.

In contrast to the national and regional policies on

Table 4.1 *Green growth policies in Denmark*

Strategies and programmes	Policy institutions	Focus areas
Denmark out of the crisis – businesses in growth 2014	Danish Government	Key national strategy for stimulating growth, including eight sectoral growth plans.
Denmark at work: plan for growth in the energy and climate area	Danish Ministry of Business and Growth	• Green transition of the energy system – a more flexible and coherent energy system • Export promotion – onto the global markets • Buildings – a more energy-efficient and sustainable building stock • Research, development, market maturation and education – Denmark as a green test and demonstration country • Utilisation of resources - efficient extraction of the fossil energy resources in the North Sea
Energy strategy 2050 – from coal, oil and gas to green energy (2011)	Danish Ministry of Climate, Energy and Building	Fossil fuel independency by 2050
State of Green (2011)	Public-private partnership founded by the Government and key industry associations	The official green brand for Denmark to support the goal to be independent of fossil fuels by 2050 as the first country in the world. It gathers leading players in the fields of energy, climate, water and environment and fosters relations with international stakeholders
Green Transition Fund (2013-2016)	Danish Business Authority	Product innovation; new business models; sustainable materials in product design; sustainable transition in fashion and textile; less food waste; sustainable bio-based products based on non-food biomass
Programme for Green Technology (2013)	Danish Ministry of the Environment	Water and climate adaptation; resources and waste; resource efficiency of companies; ecological construction; clean air and less noise; chemicals; documentation of environmental potential of technologies; international cooperation on environmental technology development

green growth, spatial planning is primarily implemented by the municipalities and directed by national planning instruments (planning reports, national planning directives and stated national planning interests). In 2007, regional responsibility for spatial planning was withdrawn and the regions were given the responsibility of developing regional growth strategies. There is thus a formal division of responsibility between the municipal level, which undertakes land-use regulation planning, and the regional level, where growth-oriented strategies should be implemented.

However, even if the city-regional dimension is not formally included in the planning system, it is stressed in government policies and considered important by authorities at the national level, such as the Ministry of the Environment. The larger city regions are at the heart of the national growth strategy and spatial planning. Several national policies stress that the formation of city regions is needed in order to ensure Denmark's global competitiveness and overall national economic growth (Danish Ministry of the Environment, 2013.). This accentuates an integral aspect of Danish green growth policy, namely that regional economic growth is to be promoted by the development of attractive and sustainable city regions.

4.1 Green growth policies

The Danish Energy Agency has adopted OECD's definition of green growth, but in Denmark the concept has primarily been conceptualised using the notion of

'green transition'; policies have been targeted at bringing about a shift from a fossil-fuel-dependent energy system to investments in green technologies and reducing greenhouse gas emissions, with the aim of being entirely independent of fossil fuels by 2050. The importance of a green transition in the energy system is outlined in 'Energy Strategy 2050 – from coal, oil and gas to green energy'. This includes specific policy measures in four areas, with the focus being placed on the energy efficiency of the building stock, electrification of energy systems and vehicles, increased use of renewable energy (mainly wind) and investments in research and development (Danish Ministry of Climate, Energy and Building, 2011a).

A number of national policies and programmes have been presented and the current government is allocating resources to support the transition to renewable energy and to cleantech development (see Table 4.1). The Green Transition Fund is an initiative established in 2013 that provides support to businesses in order to increase their energy efficiency, develop environmental innovations and generate green employment opportunities (Danish Ministry of Business and Growth, 2014). In 2013, a specific policy initiative was presented by the Danish Government that aimed to increase Denmark's global competitiveness and the Ministry of Finance launched a new national strategy for growth in 2014 – 'Denmark out of the crisis – businesses in growth 2014' – that is to be a key strategy for stimulating growth

Box 4.1 The city region of Copenhagen

Planning in the city region of Copenhagen follows what is known as the Finger Plan. The Finger Plan was published in 2013 by the Ministry of the Environment, sets out mandatory planning guidelines for the municipalities and has a clear environmental focus. Its name reflects the finger-like structure of desired developments in the Copenhagen area (see Figure 4.2), radiating from the centre along the commuter rail lines and separated by green wedges that are to be protected (Danish Ministry of the Environment, 2013; Danish Nature Agency, 2007). In addition, Copenhagen's climate plan offers an interesting example of both environmentally sustainable planning and green growth in planning. It is an ambitious plan encompassing over sixty initiatives covering four different areas and with the goal of a carbon-neutral city by 2025. Partnerships involving private and public actors are expected to ensure green growth through the development of new technologies, services and expertise within the environmental and climate sector; nevertheless, public investments provided by the City of Copenhagen are key to the transition towards a green economy (City of Copenhagen, 2013).

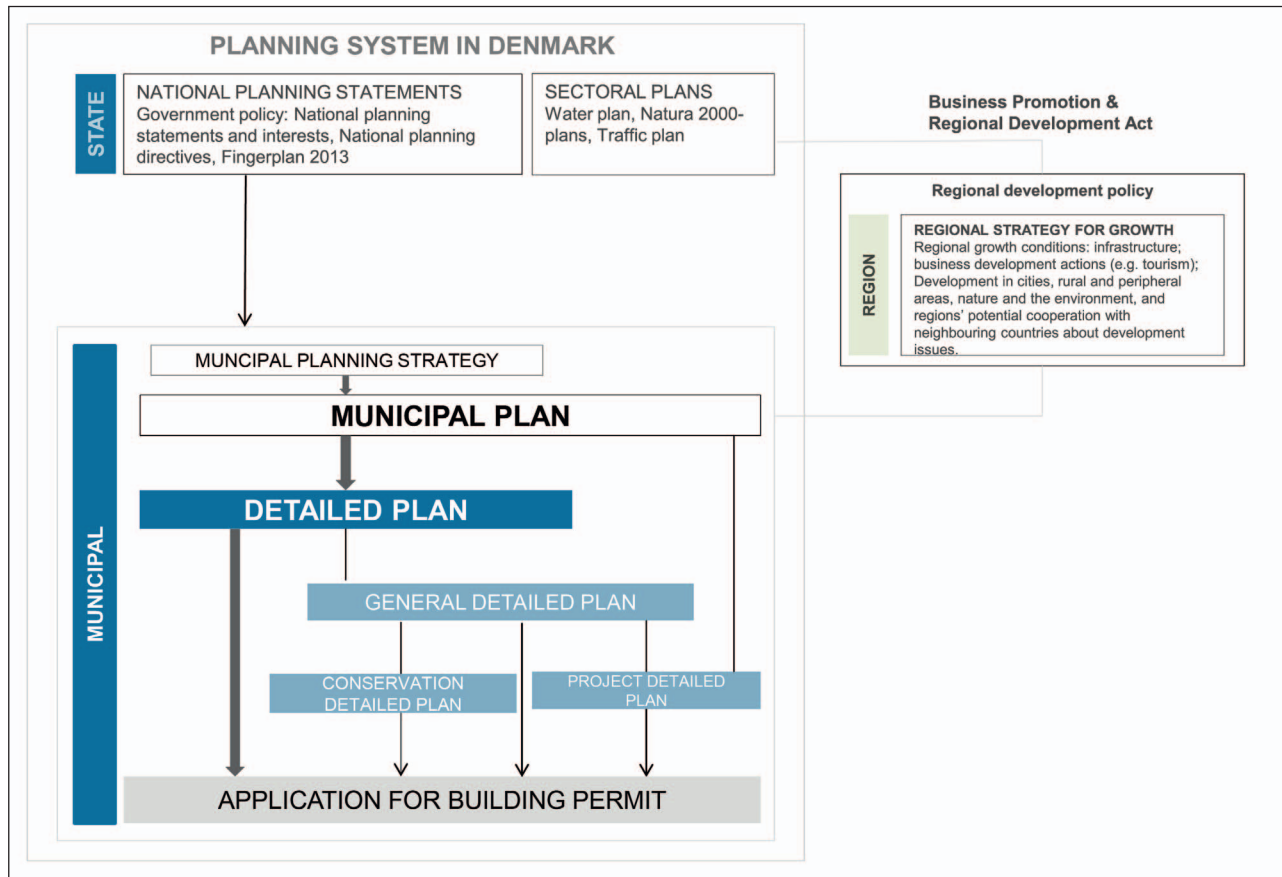
Box 4.2 The city region of Fyn

Fyn is an interesting example of city-regional planning and collaboration. At the request of the Mayor of Fyn and following the national planning report (*landsplanredigørelse*) 2010, the Ministry for the Environment formed a partnership with the municipalities of Fyn and Region Syddanmark. The objective was to develop a common physical structure for Fyn and the surrounding islands that would take into account associated cooperation and projects. Research was conducted into whether a joint planning strategy could enhance a common agenda for growth by creating optimal conditions for the island's development.

Fyn views itself as one city region and its nine municipalities have decided to cooperate in a number of areas, including business development, housing and accessibility, which constitute key themes for the project. One of the challenges of this collaboration has been to ensure that the developments taking place in the core city of Odense benefit the entire city region.

In 2014, the municipalities adopted a joint planning strategy for Fyn. Strategy Fyn describes how Fyn is to achieve its goals for growth and development across the whole region by focusing on its particular strengths and potential (Byregion Fyn, 2014).

Figure 4.1 The Danish planning system, with a focus on the local level



and focuses on measures for eight sub-sectoral growth plans (Danish Government, 2014).

One sub-sectoral plan is entitled ‘Denmark at work: plan for growth in the energy and climate area’ and sets out the government’s vision for increased growth in the energy sector, acknowledging that a green transition is needed towards a renewable energy system. The green transition of the energy system is to be implemented through 16 different policy measures and aims to ensure a more flexible, coherent and green energy system. Important policy measures include the development of a smart grid strategy in order to support an intelligent electricity system and the development of opportunities to utilise the synergies between district heating and district cooling systems (Danish Ministry of Business and Growth, 2013).

Furthermore, the cleantech sector is seen as a key contributor to a green transition and to Denmark’s global competitiveness. The cleantech industry in Denmark has been one of fastest-growing sectors in terms of exports in recent years and there are policy initiatives prioritising cleantech firms working with wind-power solutions, bioenergy technologies and smart grid solutions (Invest in Denmark, 2014; Danish Ministry of Climate, Energy and Building, 2011b). In general, the Government places a strong emphasis on

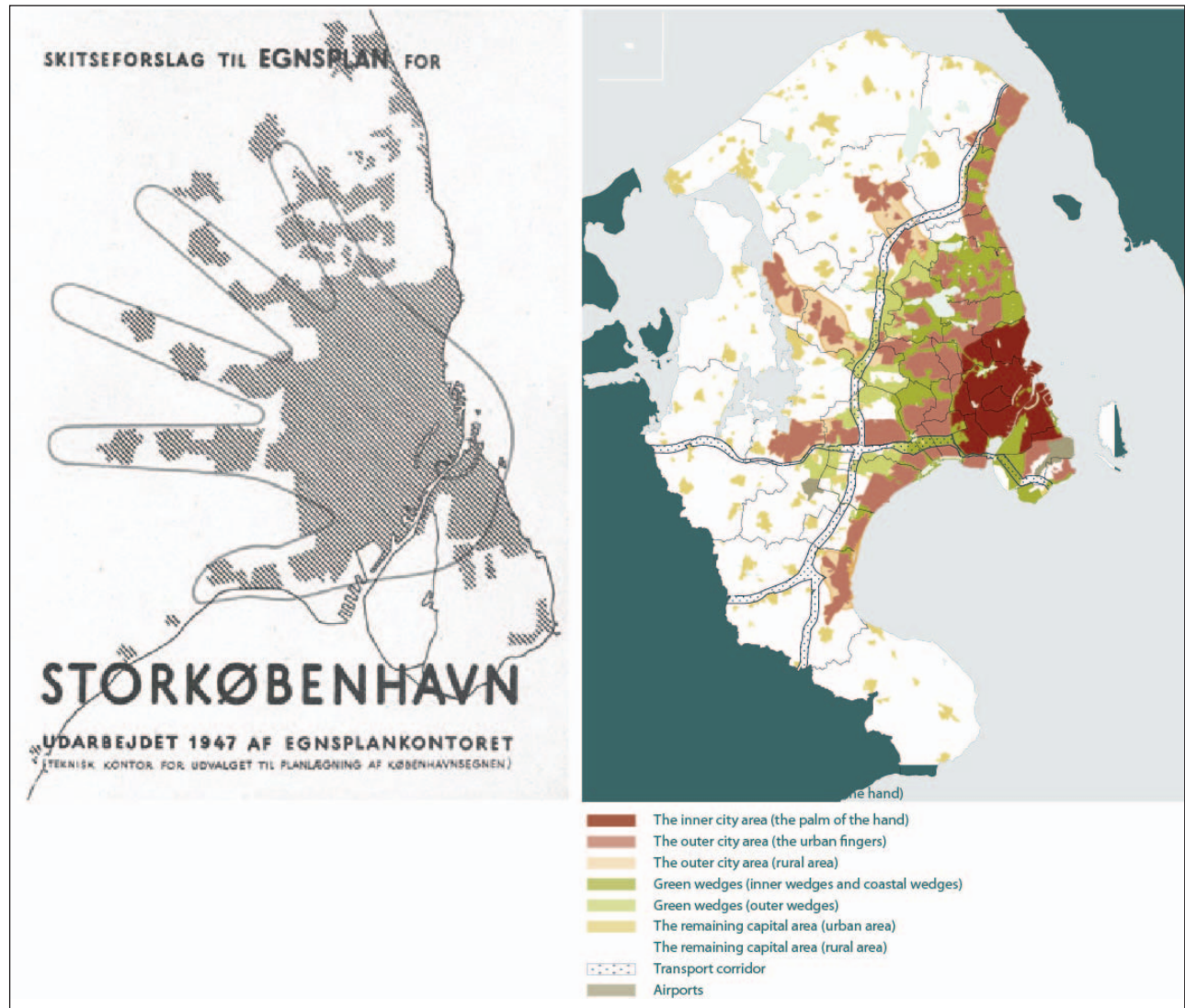
rural areas and has initiated a dialogue with municipalities regarding locations for renewable energy plants and wind farms (Danish Ministry of the Interior and Health, 2011). Biogas production is one priority area for public investments in creating greener growth in rural areas. Here, one of the policy measures is to require municipalities to include biogas plants in their local plans (Danish Ministry of the Environment, 2013).

4.2 Planning system

The Danish Planning Act is the legal framework of the planning system. It regulates buildings’ compliance with national objectives and governs municipal and detailed plans, regional directives, public participation and the general administration of the Act (Danish Ministry of the Environment, 2012). The overall objective is to ensure that planning adheres to core planning principles such as sustainable development, the protection of natural resources and the environment, the preservation of an open coastline and a clear separation between urban and rural areas to prevent sprawl.

As part of the municipal reform in 2007, substantial changes were made to the Danish planning system which meant that the regional planning mandate was removed while the mandate of the municipalities and

Figure 4.2 Local authority planning is based on the finger-like urban structure created with the first Finger Plan. (Danish Nature Agency 2007)



the national level was strengthened. Denmark now has a two-tier planning system, with the Ministry of the Environment responsible for protecting national interests through national planning and municipalities responsible for land-use regulation at the local level (Danish Ministry of the Environment, 2007).

National planning directives serve as policy tools for promoting specific projects or development directions such as the directive for the capital region of Copenhagen and specific policies regarding coastal areas and retail trade (Danish Ministry of the Environment, 2012). The main goals and visions for the coming mandate period are set out in the summary of national interests and the national planning report, which the Ministry of the Environment publishes every four years. It serves to clarify the national interests in municipal planning, to facilitate the local development of plans in accordance with the Government's priorities and requirements. These are the requirements warranted by the

Planning Act, other statutory legislation, parliamentary decisions or that stem from political agreements between the Government and Local Government Denmark (Danish Ministry of the Environment, 2012).

Municipalities have the main responsibility for planning and produce two legally binding planning documents: municipal plans (*kommuneplan*) and detailed plans (*lokalplan*). Since 2000 each municipality has also been obliged to produce a municipal planning strategy (see Figure 4.1). The Danish Ministry of the Environment is required by the Planning Act to ensure that municipal plans comply with national interests and to demand amendments if they do not.

4.3 Policy instruments

In 2014, the Danish Parliament passed an amendment to the Business Promotion Act (*Erhvervsfremmeloven*), combining the regional development plan and the re-

gional business development strategies in a new regional strategy for growth and development (Vækst- og udviklingsstrategi). The regional strategies had previously been regulated by the Planning Act. The intention of this change was to create a new and consistent focus on growth and development at the regional level, under the responsibility of the five elected regional councils. The regional councils appoint growth forums, whose main purpose is to develop the region's growth and development strategy, taking into account the national planning report. The intention of the amendment is thus to facilitate the interaction between the regional development strategies and planning at local, regional and national levels. Consequently, policies enacted at the local level and that have an impact on both growth and spatial planning should reinforce the regional growth and development strategies (Danish Ministry of the Environment, 2014).

In 2013, the six largest city regions (Copenhagen, Aarhus, Odense, Aalborg, Esbjerg and Randers) presented an appeal to the national level that focused on city-regional cooperation and competitiveness. The reason behind this initiative was the greater demands placed on municipal planning by the need to meet requirements for an attractive urban and industrial area

with efficient and environmentally friendly transport as a result of increased global competition. The six city regions are crucial for overall national growth and the responsible ministries stress that these regions should collaborate in order to meet current global challenges (Vækst og byregioner, 2013).

In addition to the formal land-use-oriented national policies (e.g. National Planning Reports/Directive & Sectoral Report), municipalities are required to cooperate with neighbouring municipalities in order to promote cohesive physical planning throughout Denmark, and several informal initiatives have been implemented to support spatial planning across different administrative levels (Danish Ministry of the Environment, 2012). As stressed by the recent change affecting the regional strategies for growth and development, the growth dimension is of great concern in current policies. At the same time, spatial planning and collaboration across municipal boundaries is highlighted as a potential solution for achieving higher local and regional competitiveness and attractiveness. Several initiatives have been implemented by municipalities, as well as national authorities, in order to develop the coordination of spatial planning across municipal boundaries.

5. Finland

In Finland there are a number of national programmes related to green growth and cities, for example the Carbon Neutral Municipalities Project (HINKU), the Innovative Cities Programme (INKA) and the Programme to Promote Sustainable Consumption and Production (KULTU). The relationship between sustainable development and spatial planning is mainly discussed in terms of avoiding sprawl and creating a more cohesive settlement structure as a way to respond to environmental concerns.

There are four key planning instruments in Finland; national land use guidelines (valtakunnalliset alueidenkäyttötavoitteet), regional land use plans (maakuntakaava), local master plans (yleiskaava) and local detailed plans (asemakaava). The planning system is hierarchical, with lower level plans required to be consistent with those of higher planning levels. The local master plan is the most important planning instrument, dictating the local detailed plans that regulate what can be built and the functions of buildings. Besides the formal plans, policy in Finland is to promote integration between different administrative levels and inter-sectoral integration between land use, housing and transport on a city-regional scale; the intention being to support and promote city-regional land use strategies that transcend municipal boundaries.

5.1 Green growth policies

The Finnish Prime Minister's Office defines green growth as "low-carbon, resource-efficient economic growth based on safeguarding the functional capacity of ecosystems while promoting wellbeing and social justice" (Finnish Prime Minister's Office, 2013, p.5). However, Finland has no single national policy explicitly taking green growth as a point of departure; instead green growth is integrated into several national policies and programmes that deal with green growth-related issues (see Table 5.1). In 2013, for example, the Finnish Government published a 'decision-in-principle' (policy document) on sustainable production and consumption where it outlines its goals and measures for decreasing GHG emissions, improving quality of life and the environment and finding new opportunities for the green economy. This document also in-

cludes spatial planning as a method for promoting sustainable mobility through compact settlement structures that encourage walking, cycling and the use of public transport. In addition, it includes an initiative concerning the establishment of national guidelines on, for example, how planning can promote local energy solutions (Finnish Government, 2013). The role of spatial planning is also included in other policies such as the National Energy and Climate Strategy.

There are also several important national programmes in which municipalities, city regions and regions can interact with other local and regional authorities, different state actors and various stakeholders (see Table 5.1). The national programmes can be used as a way to anchor national objectives at the local level among different stakeholders. One example is the national programme for an energy-smart built environment (ERA17), the aim of which is to find new ways to increase energy efficiency through spatial planning and decentralised energy production. Another is the Carbon Neutral Municipalities Project (HINKU), focusing on factors such as spatial planning and mobility and emphasising close cooperation between various stakeholders at different levels that represent different sectors (HINKU-foorumi, 2013).

Other national policy programmes include the national programme on energy and the built environment that aims to find new ways to increase energy efficiency and decentralise energy production through spatial planning. The Ministry of the Environment also coordinates the Programme to Promote Sustainable Consumption and Production (KULTU), which focuses on energy smart housing, high-quality food, reducing food waste and functional, low-carbon mobility (Finnish Ministry of the Environment, 2013a). (Please see Table 5.1. for an overview of relevant green growth programmes.)

In 2014, the Ministry of Employment and the Economy initiated the Innovative Cities Programme (INKA). The aim of this programme is to generate new business activity and new companies, with a focus on creating synergies between science, education, companies and government. The Ministry has identified five national themes and tasked city regions with responsibility for

them. The programme is funded by the Ministry itself (EUR 10 million annually), but the urban regions provide an equal amount of co-financing (Finnish Ministry of Employment and the Economy, 2013).

The role of the city regions is emphasised in policy discussions concerning climate change and energy-related issues. The new Finnish energy and climate strategy from 2013 states that city regions make a key contribution to climate change and thus also have a central role to play in its mitigation. Changes to urban structure in response to climate change are needed as a way to take global responsibility and to secure the vitality and well-being of city regions in a sustainable manner (Finnish Ministry of Employment and the Economy, 2013a). The Finnish Government also encourages co-operation between municipalities in city regions in terms of the coordination of land-use, housing and transport planning through the system of “letters of intent for land use, housing and transport” (read more below).

Green growth is seldom explicitly mentioned in municipal spatial planning even though spatial planning in many municipalities includes elements of it, especially as the municipalities explicitly discuss sustainable development and climate change issues. For example, in Helsinki, Lahti and Turku, municipal strategies take into account the sustainable urban environment by promoting resource-efficient building and more efficient use of space (Hatakka, 2013). In cooperation with other actors in their territories, those municipalities have also been active in developing pilot projects in which sustainable building, energy and transport are specifically prioritised (e.g. Henna in Lahti, Östersundom in Helsinki and Skanssi in Turku).

5.2 Planning system

There is an ongoing municipal reform in Finland that aims to create fewer and larger municipalities. The reform is driven at the national level and its aims include

Table 5.1 *Green growth policies in Finland*

Strategies and programmes	Policy institutions	Focus areas
Innovative Cities Programme (2014-2020)	Finnish Ministry of Employment and the Economy	Partly replaces the Centre of Expertise Programme, greater focus on larger cities as drivers of innovation. The city regions in the programme relevant to green growth chosen so far include the Joensuu city region, focusing on bioeconomy, the Vaasa city region, focusing on renewable energy, and the Tampere city region, focusing on issues related to smart cities.
National Energy and Climate Strategy (2013)	Finnish Government	Aims to ensure that the national climate and energy goals for 2020 are reached. Emphasises the role of the largest city regions and the importance of changes in the urban structure.
Decision-in-principle on sustainable production and consumption (2013)	Finnish Government	Promoting green growth, encouraging energy conservation in housing, encouraging sustainable mobility using financial incentives, creating prerequisites for a sustainable food chain.
Energy smart built environment programme (ERA17)	Finnish Ministry of the Environment, TEKES, RAKLI, the Confederation of Finnish Construction Industries RT, Sitra, the Finnish Real Estate Federation, the Association of Finnish Local and Regional Authorities	Finding new ways to, for example, increase energy efficiency in spatial planning and promote decentralised energy production
Programme to Promote Sustainable Production and Consumption (KULTU)	Finnish Ministry of the Environment	Comfortable, energy-smart housing, functional low-carbon mobility, high-quality food.
Carbon Neutral Municipalities Programme (HINKU)	Finnish Ministry of the Environment	Spatial planning and mobility included as factors that the participating municipalities shall work on in order to reach their goal of cutting 80% of their emissions by 2030.

improving Finland's response to the challenges of a spread out urban structure and climate change. One of the rationales behind the reform is that larger municipalities would also be able to respond more efficiently to the need to integrate land use, housing and transport (e.g. by locating housing near good transport connections) (O Maijala 2014, Finnish Ministry of Environment, pers.comm., 24 September).

In general, the Finnish spatial planning system aims to promote environmentally, economically, socially and culturally sustainable development and also aims to organise land use and building in order to create the prerequisites for good living environments (Finnish Ministry of the Environment, 2014).

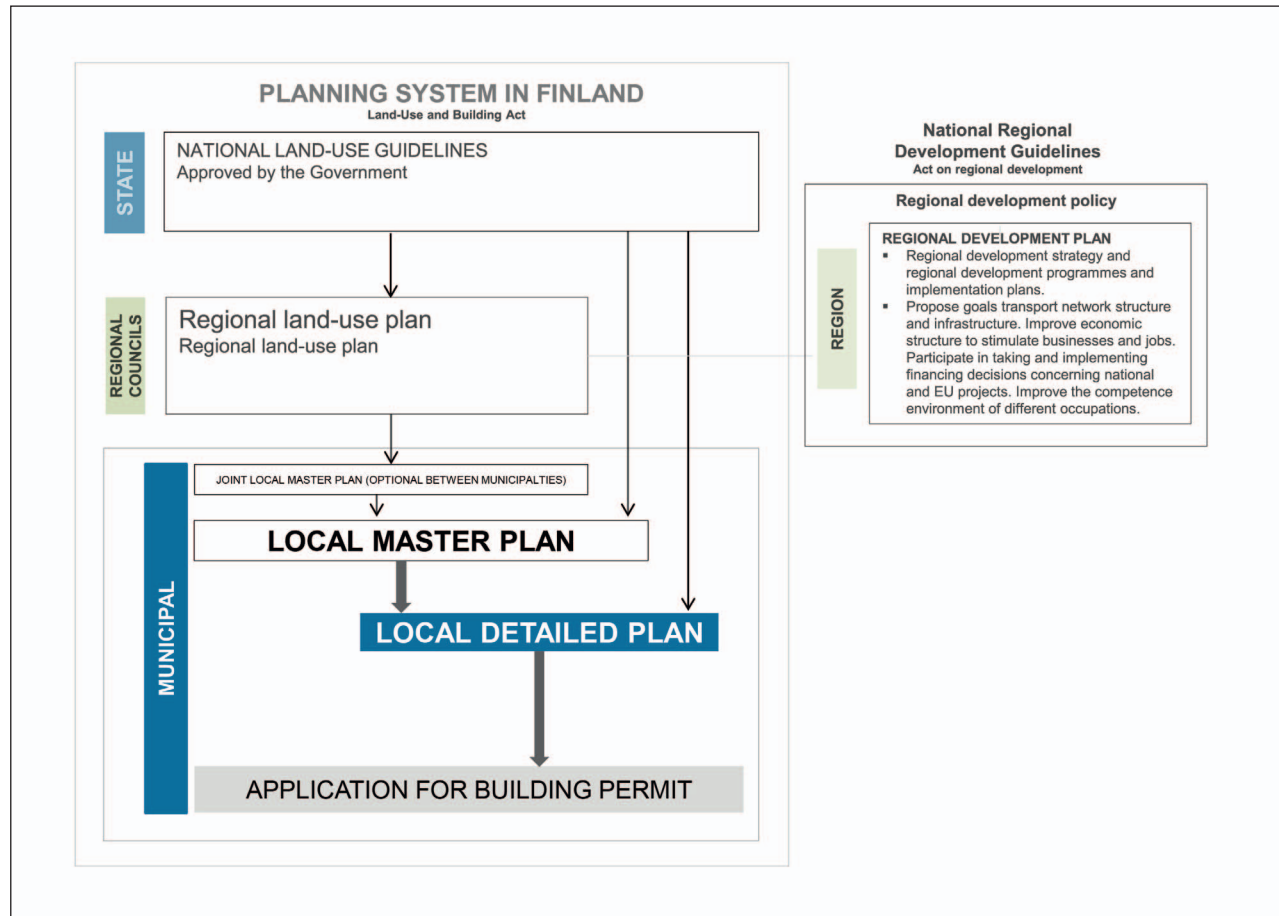
The planning system is governed by the Land Use and Building Act and the Ministry of the Environment is responsible for developing binding national land-use guidelines and approving regional land-use plans (see Figure 5.1). Compact and cohesive urban structure and quality of the living environment are among the focus areas in the current national land-use guidelines. This places an emphasis on locating services near residential areas, while planning and locating business activities within the existing urban structures. It also includes a

statement on the role of land-use planning in creating the prerequisites for climate change adaptation (Finnish Ministry of the Environment, 2009).

At the regional level, the regional councils (made up of all the municipalities in each region) are responsible for developing land-use plans; these guide local plans and policies, and need to be approved by the Ministry of the Environment. However, according to Ahonen and Nuorkivi (2013), regional plans do not sufficiently contribute to more sustainable urban structure, traffic, technical services (e.g. energy production from alternative energy sources) and service networks, and should thus include clearer energy efficiency visions that they in turn would pass on to the municipal level.

The local master plan is primarily a land-use plan allocating different areas for different land-use purposes such as housing, traffic, services and recreation. The local master plan should comply with the principal land-use guidelines outlined in the regional land-use plan. This in turn steers the local detailed plan, regulating what can be built and the functions of buildings. Local planning is supervised by the centres for economic development, transport and the environment, which are central government authorities present in each of the

Figure 5.1 Overview of the Finnish planning system



regions (Finnish Ministry of the Environment, 2013b).

5.3 Policy instruments

In addition to the formal planning instruments, there are a number of other policies that influence spatial planning, such as city-regional planning and regional development policies. For example, the regional councils develop and implement regional development strategies and programmes. This means that regional councils draw up strategies and programmes jointly with relevant stakeholders, including local authorities, central government, businesses and associations. The regional council has to develop objectives and strategies, business policy objectives and the environmental impact of the programmes into their policies (Association of Finnish Local and Regional Authorities, 2014).

At the city-regional level there is collaboration between municipalities regarding strategic spatial planning in form of city-regional structural land-use strategies. At the present time, nineteen city regions have initiated strategic planning collaboration efforts in order to further strengthen the coordination between land use, housing and transport across municipal boundaries. In this context, one of the key policy instruments to further support city-regional collaboration is the system of 'letters of intent for land use (M), housing (A) and transport (L)' (MAL). A 'letter of intent' or 'MAL agreement' is an agreement between the larger city regions and the Government. The aim of the

Box 5.1 Metropolitan governance for the Helsinki region

Within the framework of the more overarching municipal reform, a new type of metropolitan governance for the Helsinki region is also being developed to respond to the specific challenges of developing the only metropolitan region in Finland. A working group has been appointed to draft legislation for a specific new metropolitan governance policy. The intention is to have a directly-elected metropolitan council that will be responsible for several common functions of the metropolitan region. This will specifically include land use with a new element in the statutory land-use planning system, namely a specific "metropolitan plan" that will replace the regional land-use plan and all local master plans in terms of housing and transportation, competitiveness issues and segregation issues. The proposal is expected to be presented by end of 2014. Meanwhile, there is an ongoing investigation, also established by the Finnish Government, into the possibilities for municipal mergers between the cities of Helsinki, Espoo and Vantaa and some of their smaller, neighbouring municipalities (O Maijala 2014, Finnish Ministry of Environment, pers. comm., 24 September).

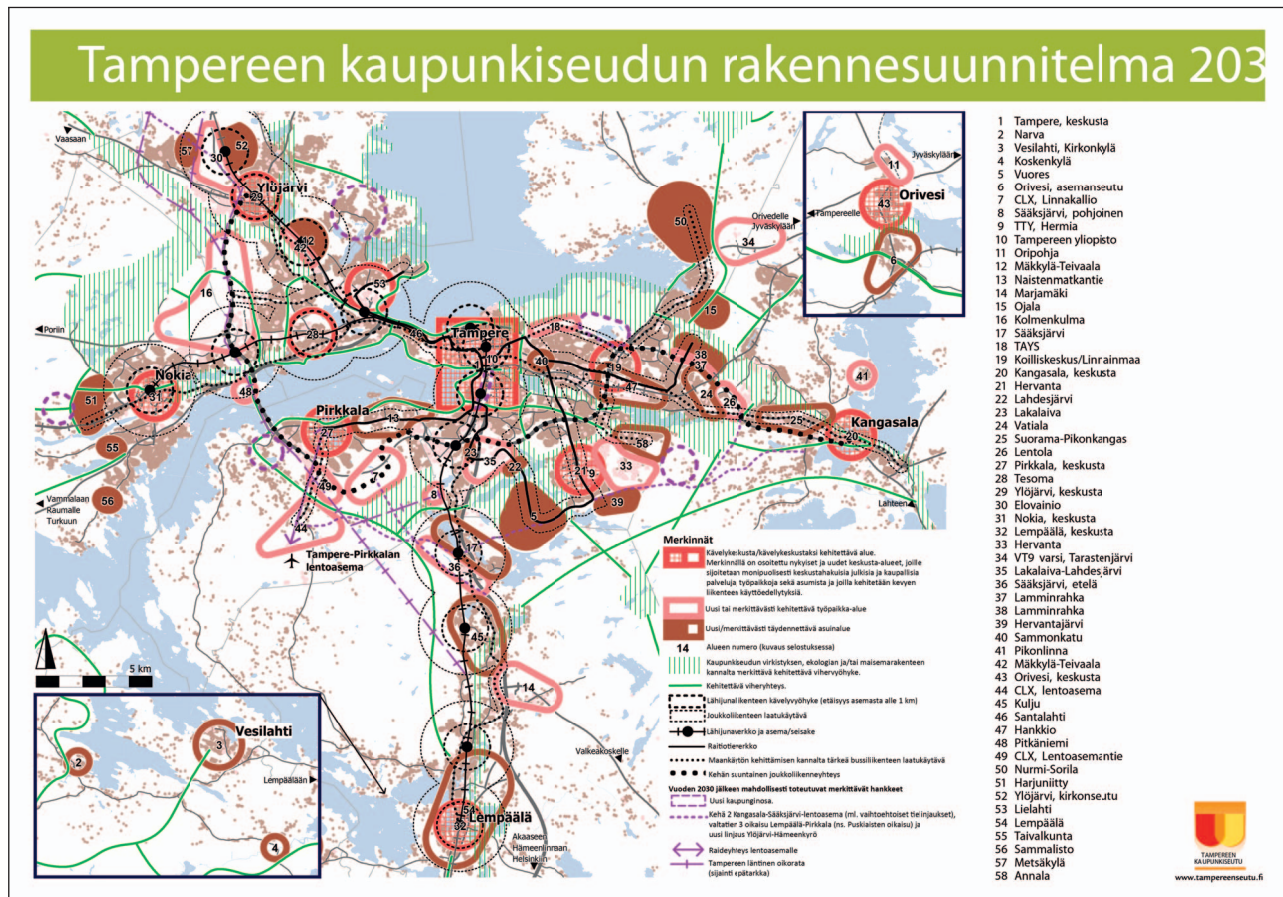
system is to create more integrated, efficient and competitive city regions and to intensify the cooperation between government agencies and the municipalities. More specifically, the goals are to develop new policy tools for overcoming administrative boundaries and integrate the development needs of land use, housing and transport into one single process (Finnish Ministry of Transport, 2014). Letters of intent were signed between the Finnish Government and the four largest city regions in late 2013, covering Helsinki, Tampere, Turku and Oulu. These MAL agreements are seen as a key spatial planning instrument between the national and local levels and will also undergo further development. This could be seen as new type of contractual urban policy for central government that increases the effectiveness of national programmes as well as local political commitment.

The MAL agreements have led explicitly to the creation of structural land-use strategies at city-regional level. These are not legally binding, but set out the common outlines for the shared long-term land-use approaches of the participating municipalities. Municipalities in a city region can also work together to draft shared land-use policy principles or common housing policy programmes, but this may be done independently of the MAL system.

Box 5.2 The city region of Tampere

Tampere City Region is seen as forerunner when it comes to political and operational collaboration between municipalities (Joint Authority of Tampere City Region, 2014). Tampere City Region started drafting a city-regional structural land-use strategy as early as 2009, but the Joint Authority of Tampere City Region approved the first letter of intent with the Government in 2011–2012. A second agreement has been established for the period 2013–2015, which will further develop the collaboration within the city region with continue support from government agencies. A structural plan has been drafted for the city region and although the structural plan is not legally binding, it has been widely accepted among stakeholders and there seems to be an increasing political commitment and an accelerating pace of implementation among the municipalities in the city region. Among other policy measures, up-coming collaboration efforts in the city region will focus on renewing the structural plan (see Figure 5.2), focusing primarily on integrating the rail network with public and private services, as well as implementing a densification strategy to prevent sprawl (Kurunmäki, 2014).

Figure 5.2 Structural Plan 2030 for Tampere City Region (Joint Authority of Tampere City Region, 2014)



6. Norway

Green growth policies in Norway primarily focus on business development and environmental technology, with the spatial perspective often being implicit rather than explicit. However, rural and regional development policies and urban planning policies, as well as climate policy, are important in order to gain an understanding of green growth in Norway. Regional development policy in Norway has traditionally concentrated on balancing development within and between regions and cities throughout the whole of Norway, with a specific focus on rural areas. This is still evident in the latest regional policy white paper; the Norwegian Government still aims “to preserve the distinctive features of the settlement patterns” (Norwegian Ministry of Local Government and Regional Development, 2013a, p.2). However, over the course of the past decade there has also been a shift towards sustainable urban development and policies for city regions (Norwegian Ministry of the Environment, 2013a).

National and regional spatial planning policies are seen as important to the development of sustainable cities and regions. National urban planning policies aim to help cities and regions to manage urban growth and related challenges using a variety of programmes and initiatives. Government policy supports cooperation between municipalities in order to promote the formation of functional urban regions. For example, the Norwegian Ministry of Local Government and Modernisation is supporting planning cooperation in Oslo and Akershus. Policies specifically target integration between municipal land-use planning and regional transport plans, mixed-use land-use planning and the promotion of densification within already existing urban areas. Another key issue with respect to urban growth is rural and regional development policy, which presents a wider approach to the relationship between medium-sized cities and the major urban areas. This stresses the importance of creating attractive medium-sized cities in order to ease the pressure on major urban areas and create more “balanced” urban growth.

6.1 Green growth policies

Green growth policies in Norway are governed by the national strategy ‘Business Development and Green

Growth – the Government’s environmental technology strategy’ developed by the Ministry of Trade and Industry in collaboration with the Ministry of the Environment (see Table 6.1). Green growth is seen as a central aspect of both environmental and industrial policy if the overall objective is to achieve sustainable development. The strategy focuses on areas in which Norway has a comparative advantage such as environmental technology involving solar energy and photovoltaic materials, carbon dioxide management, hydropower, environmentally friendly marine engineering and oil and gas production, as well as Norway’s strong expertise in waste management, recycling and environmental monitoring (Norwegian Ministry of the Environment and Ministry of Trade and Industry, 2011). To further support this, the Government launched over course of period 2011-2013 a specific programme of grants for the development of environmental technology 2011–2013. Innovation Norway has been given overall responsibility for administering the programme, but its implementation involves a number of organisations such as the Research Council of Norway, Enova and Transnova. Innovation Norway has allocated NOK 500 million to promoting environmental technology with this programme (Norwegian Ministry of the Environment and Ministry of Trade and Industry, 2011).

The climate policy presented in 2007 by the Ministry of the Environment is also an essential part of achieving the overall goal of sustainable development in Norway, in particular for the cities through the Cities of the Future Programme (see Box 5). It includes a number of policy instruments for reducing negative environmental impact (Norwegian Ministry of the Environment, 2007). This policy has been complemented with a white paper on measures for climate mitigation that includes regulations obliging municipalities and regional bodies to integrate climate adaptation measures into spatial planning strategies and land-use plans (Norwegian Ministry of the Environment, 2013b).

Figure 6.1 Overview of the Norwegian planning system, with a focus on the local level

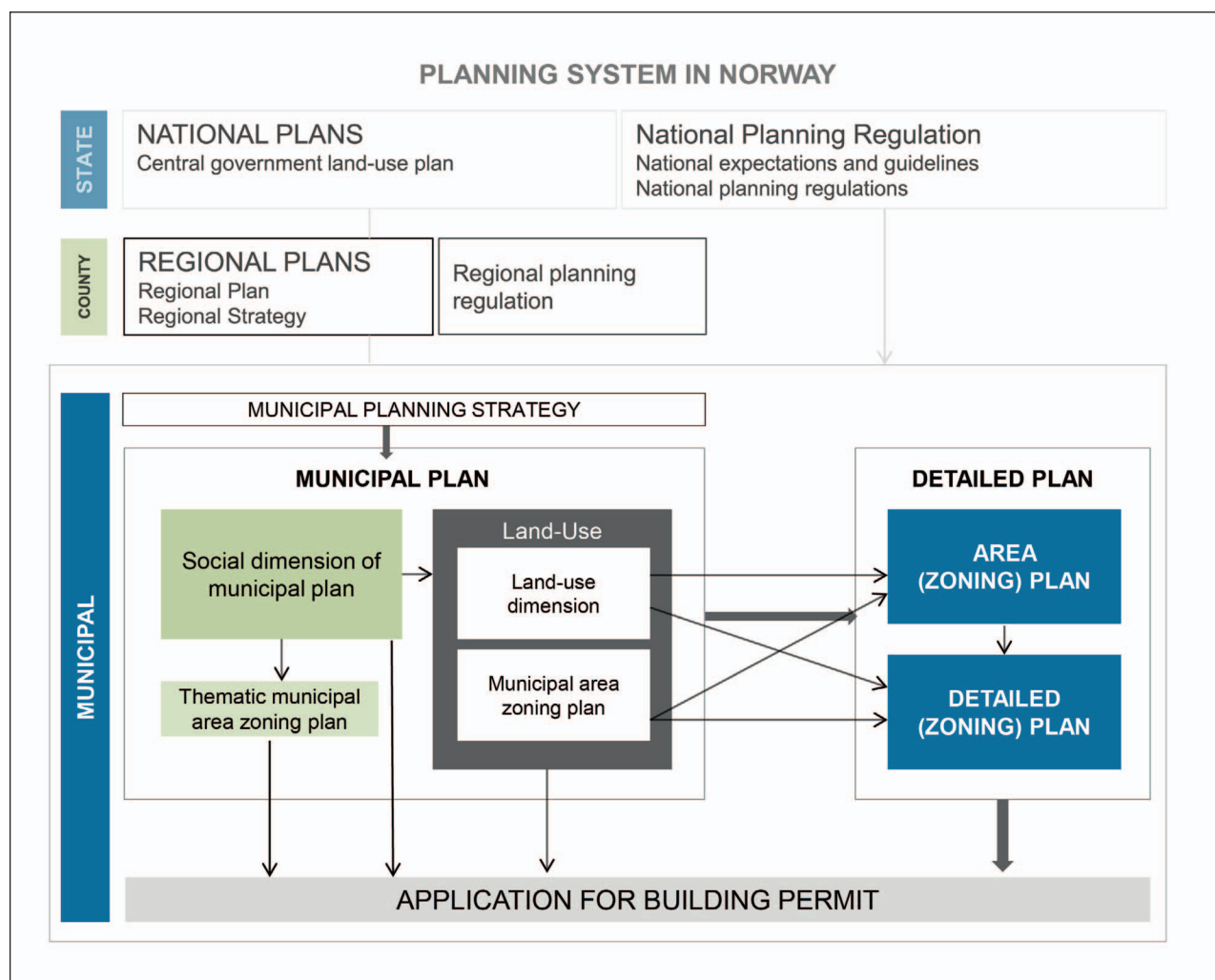


Table 6.1 Green growth policies in Norway

Strategies and programmes	Policy institutions	Focus areas
Norwegian Climate Policy 2007 & 2012	Norwegian Ministry of the Environment	Includes recommendations for the Government's climate policy goals; the Government's international climate change strategy; the Government's domestic climate policy; research and monitoring; and sectoral climate action plans.
Business Development and Green Growth – the Norwegian Government's strategy for environmental technology (2011–2014)	Norwegian Ministry of the Environment; Norwegian Ministry of Trade and Industry	Solar energy/materials, CO2 management, hydro-power, environmentally friendly ship technology, and environmentally friendly oil and gas production
Grants for the development of environmental technology	Innovation Norway, the Research Council of Norway, Enova, Transnova	Eco-innovation, renewable energy (sea and wind)

6.2 Planning system

Norway's planning and building legislation was reformed in 2008. The new Norwegian Planning and Building Act aims to promote sustainable development; facilitates the coordination of national, regional and municipal functions; provides a basis for administrative decisions regarding the use and conservation of resources; and also sets out the process for planning and building applications. The reform resulted in an increased emphasis on strategic planning and the synchronisation of, and coordination between, the national, regional and municipal levels.

The Ministry of Local Government and Modernisation is responsible for matters relating to housing and building policy, city, rural and regional policy, local administration, local and government finances, and for physical planning and land-use policies (Norwegian Ministry of Local Government and Modernisation, 2014a).

The national framework for directing spatial planning mainly consist of the so-called national expectation on regional and municipal planning, which is presented every fourth year. In this document the Government set out its expectations for what the regional and local plans should take into specific consideration. In this sense the Government's expectations serve as guidance and a framework for municipal planning processes. The Government may also consider issuing

legally binding national spatial planning regulations that would be used to secure the national interest. The Government may also draft a national land-use plan if this becomes necessary in order to implement a project that is in the national interest. The central government land-use plan can either be established as a detailed zoned plan or as part of the municipal plan. The Ministry of the Environment has primary responsibility for drawing up the plan, but this work can also be undertaken in collaboration with the municipality. Furthermore, the 22 national sectoral authorities can influence local plans through their right to object to both municipal and detailed development plans and to provide detailed guidance material to local authorities (Fredricsson & Smas, 2014).

The regional authorities (fylkeskommuner) are responsible for developing regional planning strategies, which should be in line with the national guidelines and framework (Norwegian Ministry of the Environment, 2011). The regional planning strategies are not legally binding for the municipalities, but serve as guidance for municipal plans. Potential conflicts of interest across municipal boundaries and between sectors should, for example, be considered in the long-term perspective of the regional planning strategies.

The municipal plan is the main document governing land-use and development within a municipality (see Figure 6.1). The municipal plan should include two parts, one a strategic plan and the other a land-use plan. The land-use plan directly guides local plans and is legally binding. A key issue with the newly introduced strategic plans at the municipal and regional level is that they have to be updated regularly, each new mandate period. The strategic plan should address long-term challenges in terms of the environment and

Box 6.1 Cities of the Future

Cities of the Future was launched in 2009 as a collaborative programme between the largest municipalities and central government that aims to develop urban areas that have the lowest possible GHG emissions and good urban environments. It involves the thirteen largest municipalities, the Ministry of Petroleum and Energy, the Ministry of Local Government and Modernisation, the Ministry of Climate and Environment, and also the Norwegian Association of Local and Regional Authorities and three business associations: Virke the Enterprise Federation of Norway; NHO – The Confederation of Norwegian Enterprise; and Finance Norway. It is a product of the Norwegian climate policy debate, where the main goal is to reduce greenhouse gases emissions from road transport, stationary energy use, consumption and waste in urban areas. A secondary goal of the programme is to also improve the physical urban environment with a specific focus on ecological cycles, security and health. The programme involves the urban areas of Oslo, Bærum, Drammen, Sarpsborg, Fredrikstad, Skien, Porsgrunn, Kristiansand, Sandnes, Stavanger, Bergen, Trondheim and Tromsø. An important feature of the programme is an online portal that provides municipalities with examples of best practice in order to inspire sustainable solutions (Cities of the Future, 2009).

Box 6.2 The city region of Stavanger

Rogaland County has been working for a long time on a sub-regional plan for the Stavanger-Jæren region that focuses on coordinating land-use and transport planning across municipal boundaries (see Figure 6.2). The sub-region consist of Stavanger municipality and seven neighbouring municipalities that have seen rapid urban development in the past decade in terms of increasing urban population, car dependency and rising housing prices. In order to mitigate further land take of valuable agricultural land and green space, the regional plan has restricted new urban development to within existing urbanised areas. Despite a strong regional mandate at the county level, this work relies on close collaboration with municipalities, and in consultation with them has designated priority areas for investments in public transport in order to reduce car usage (Rogaland County Council, 2013).

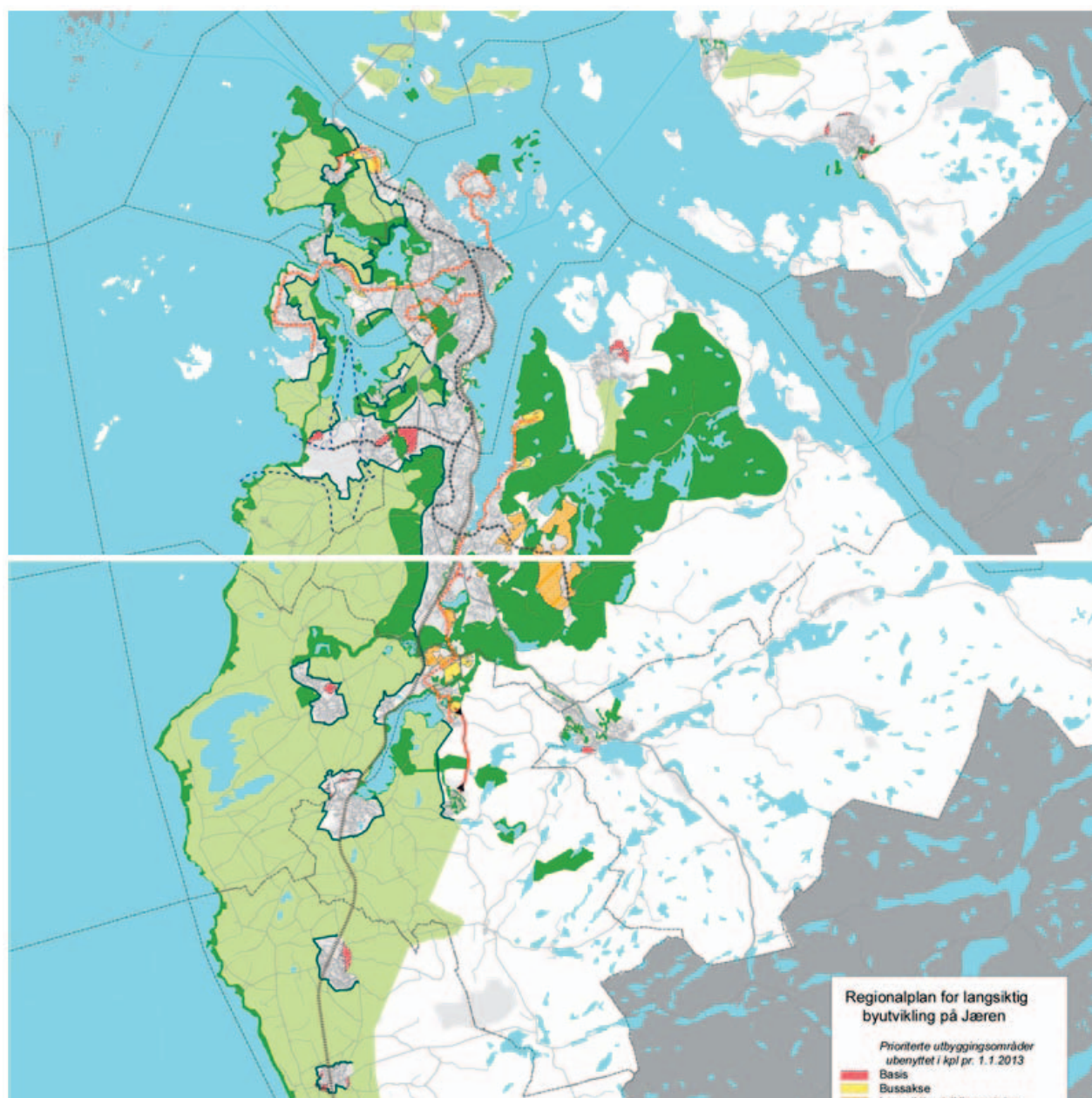
the objectives and strategies for the municipality as a whole. It also has to include various development options and describe the development of society, sectoral activities and future land-use requirements.

6.3 Policy instruments

In addition to the formal plans and strategies outlined in the Planning and Building Act, there are also other regional development policies and urban policies. The Norwegian Ministry of Local and Regional Development is responsible for national policy on rural and regional development. The policy follows a strong tradition of promoting balanced spatial development and balancing settlement patterns between regions and cit-

ies throughout Norway. However, the regional policy white paper from 2013 also acknowledges that the Oslo region and other major urban areas have seen significant growth in the past decade, resulting in specific urban challenges (Norwegian Ministry of Local Government and Regional Development, 2013a). For instance, there has been a notable impact on existing infrastructure, housing, public services, etc. necessitating coordinated solutions across municipal and regional boundaries, with input from national authorities. Integration between housing policy and national transport plans is a specific target area, with the Government having asked the counties of Oslo and Akershus to coordinate land-use and transport planning in the capital region. The white paper also emphasises that urban de-

Figure 6.2 Regional plan for the Jæren region 2013–2040 (Rogaland County Council, 2013)



velopment should be balanced between regions outside the major urban areas, with good living conditions in medium-sized cities that can take pressure off the largest urban regions (Norwegian Ministry of Local Government and Regional Development, 2013a).

The Government has also produced national policies with an explicit urban focus. In 2002, a white paper on improving the physical environment in cities and towns was published in which the Government specified priorities and planning principles for cities and regions (Norwegian Ministry of the Environment, 2002). These principles include issues such as creating a balanced urban settlement structure supporting functional urban structures, integrating land-use and transport planning, and facilitating high-quality urban densification. This remains an important policy document setting out the Government's planning principles for urban development in Norway (Norwegian Ministry of the Environment, 2002).

In 2003, a national initiative for urban planning in the metropolitan areas was presented with the aim of initiating a broader view of the city regions in Norway and creating a more long-term and cohesive urban policy (Norwegian Ministry of Local Government and Regional Development, 2003). The white paper included policy challenges for the city regions of Oslo, Bergen, Trondheim, Stavanger, Kristiansand, Tromsø, Fredrikstad and Drammen and stressed the need for more concentrated policies regarding functional urban regions. A second white paper on metropolitan regions was presented in 2006 entitled 'A Tolerant, Secure and Creative Oslo Region Report on the Capital Region of Norway' (Norwegian Ministry of Local Government and Regional Development, 2007). This was the first time a national policy was dedicated to the capital region alone, and it included urban policies designed specifically for the Oslo region. This was an essential shift in spatial policy, from the traditional regional policy of balancing regions towards more targeted policies for the Oslo region. The Government thus pursued a differentiated regional policy designed to support regional growth based on the capital's strengths.

In 2013, the Norwegian Ministry of the Environment published a guidance report on urban policies entitled 'The Modern Sustainable City'. This publication also sets out a political strategy for national urban poli-

cies and provides guidance on how major cities could be planned in order to contribute to sustainable urban development, i.e. cities should be dense and include vibrant city centres; cities should be diverse; and cities should be "green" in a broad sense (Norwegian Ministry of the Environment, 2013a). The report focuses on densification within existing urban areas and the development of cities based on the principles of good accessibility to public transport, commercial centres and other central functions in society. It provides examples of how Norwegian cities can be developed into functional city regions in which neighbouring municipalities work together across administrative boundaries – emphasised as an essential tool for managing urban growth in the larger cities in Norway. In promoting this, the Government has provided financial support to the municipalities of Oslo and Akershus to integrate transport and land-use planning in the capital region.

The report also places a strong emphasis on the national regulations for the localisation of external shopping centres. The background is that the Norwegian Government decided as early as 1999 to prevent the establishment of any new shopping centres outside urban areas. The current policy is less restrictive, but the development of external shopping centres can only be approved in coordination with regional plans (Norwegian Ministry of the Environment, 2013b).

In 2011, the Norwegian Ministry of Local Government and Regional Development, established the Academic Council for Sustainable Urban Policies to provide input and advice on the design of sustainable urban policies (Norwegian Ministry of Local Government and Regional Development, 2013b). The Norwegian Ministry of Local Government and Modernisation has also initiated a development programme concerning future-oriented and sustainable urban planning in conjunction with the largest urban areas. The aim is to improve the urban built environment and housing development and the programme runs from 2013 to 2017. The programme takes current urban challenges as its starting point; namely that strong population growth in the larger urban areas is putting more pressure on the authorities to plan housing supply, transport and land use in a more sustainable and efficient manner (Norwegian Ministry of Local Government and Modernisation, 2014b).

7. Iceland

The Icelandic approach to green growth recognises the importance of integrating different policy areas, even though the role of spatial planning as such is not specifically underlined. Icelandic green economy and sustainable development policy places a strong emphasis on social matters and the importance of quality of life is included in national policies, with Iceland 2020 being a key policy strategy.

The spatial planning system has compulsory planning regulation at two governmental levels; national and municipal. The national level is mainly responsible for general guidelines regarding land use and approves local plans, it also coordinates national sectoral plans such as those for energy and transport. At the local level, the municipalities are responsible for developing a municipal plan that should include a land-use strategy and plan. Icelandic municipalities also have the option to voluntarily develop a legally binding regional plan across municipal boundaries.

7.1 Green growth policies

Icelandic policy documents and strategies prioritise green growth and transforming Iceland into a green

economy. The key strategy documents ‘Iceland 2020’ and ‘The Strengthening of the Green Economy in Iceland’ prioritise the promotion of a green economy and sustainability with a connection to social development, especially Iceland 2020 (see Table 7.1). The Strengthening of the Green Economy defines a green economy as an “economy that increases quality of life while environmental risks and the disruption of ecosystems is minimised” (Icelandic Parliamentary Committee on the Strengthening of the Green Economy, 2011, p.14). The Strengthening of the Green Economy Strategy discusses, among other things, the need to integrate green economic aspects into different policy areas and to integrate national and local policy, especially in terms of transport, regional development, nature conservation, energy utilisation and other areas relating to land use. This kind of integrated approach is novel in the Icelandic system. The Strategy also discusses measures such as taxes and efforts to encourage citizens to use public transport (Icelandic Parliamentary Committee on the Strengthening of the Green Economy, 2011)

The latest addition to Icelandic green growth policy was the Programme for the Icelandic Presidency of the Nordic Council of Ministers 2014, which em-

Table 7.1 Green growth policies in Iceland

Strategies and programmes	Policy institutions	Focus areas
Iceland 2020 (2011)	Icelandic Prime Minister’s Office	Welfare, knowledge and sustainability, a focus on eco-innovation. 15 social objectives and 5 economic and development objectives.
The Strengthening of the Green Economy in Iceland (2011)	Icelandic Parliament	48 actions to strengthen the green economy.
Government Policy on Green Public Procurement (2013-2016)	Icelandic Minister of Finance and Economic Affairs; Icelandic Minister for the Environment and Natural Resources	To integrate environmental considerations at all levels of public procurement programmes. An action plan developed annually.
Strategic Regional Plan (2010-2013)	Icelandic Regional Development Institute	9 focus areas, including innovation and start-ups: increasing the share of domestic environmentally friendly energy used in transport, and develop methods to utilise or sequester carbon dioxide from industrial emissions.

Box 7.1 The city region of Reykjavik and Reykjavik Municipal Plan 2010-2030

The OECD studied Iceland in 2013 as part of its OECD Economic Survey series and also included a short chapter on green growth in the publication. The study states that the weak coordination of infrastructure development and urban planning, combined with weak coordination between municipalities in the Reykjavik area, has led to excessive urban sprawl, congestion problems and increased GHG emissions. Strengthened coordination between municipalities in the Reykjavik agglomeration in terms of urban planning and infrastructure development could reduce urban sprawl and private car use and thereby reduce GHG emissions (OECD, 2013). In response to these challenges, the Reykjavik Municipal Plan 2010–2030 was released in July 2014. The plan sets

out a binding policy covering all other planning decisions such as neighbourhood development plans and detailed plans. It includes objectives for each city district to become more sustainable and human-friendly, with a specific focus on the quality of the manmade environment. In relation to spatial planning, specific focus is placed on increasing urban density (with 90% of all new residential units being developed in existing urban areas, instead of the previous 50%); cycling, walking and public transport; conversion of open areas; improved access to housing for all social groups; and clearer urban design requirements. The figure below shows an excerpt from the plan for residential and mixed land-use areas in Reykjavik, which was approved by the National Planning Agency on 11 February 2014 (Reykjavik Municipality, 2014).

phasises green social development and, in particular, the bioeconomy (Nordic Council of Ministers, 2013). Iceland also works actively to promote green public procurement and has, among other things, published the Government Policy on Green Public Procurement 2013–2016.

7.2 Planning system

In Iceland, spatial planning is carried out at the national and local levels, and includes four main instruments: national planning strategy, regional plans, municipal plans and detailed development plans (see Figure 7.1). Regional plans inform municipal plans, which in turn inform detailed development plans. The local authorities are responsible for all three levels of plans and are also expected to take the current national planning strategy into account in the preparation of those plans. The National Planning Agency under the Ministry of the Environment is responsible for the administration, monitoring and implementation of the Planning Act. The Agency is also responsible for assisting and advising local authorities in preparing and reviewing spatial plans, including the approval of municipal plans drafted by local authorities. In addition, the Agency is responsible for the national planning strategy, but this includes national guidelines on land use, rather than being a physical plan. The Agency's role also includes responsibility for coordinating national sectoral plans, such as transport and energy plans (Icelandic National Planning Agency, 2013; Bjarnadóttir, 2008).

Municipal spatial planning is mainly governed by the municipal plan, which is a development plan for specific areas, covering all land within the boundaries of the local authority. The municipal plan requires the

approval of the local authority and the Minister for the Environment. The so-called local plans are development plans for specific areas within a municipality, that should be based on the municipal plan and contain further details about its implementation. Finally, regarding the regional plans, two or more local authorities have the option to join forces voluntarily to create a common regional plan across municipal boundaries. This plan requires the approval of the respective local authorities and the Minister for the Environment and will normally form a single geographical, economic and social entity, and will cover all the land of the municipalities involved (SEA on Iceland, 2014; Icelandic National Planning Agency, 1997).

Furthermore, the Iceland Planning Act emphasises that sustainable development is to guide all planning. According to the main Icelandic strategy on the green economy, the concept of a green economy fits well into the framework of the Planning Act, as well as into the Icelandic system of national strategic planning, in which municipalities and the central government set a common policy on land use and decision-making is directed by sustainable development and green goals (Icelandic Parliamentary Committee on the Strengthening of the Green Economy, 2011).

Furthermore, the Act on a Master Plan for the Protection and Development of Energy Resources (2011) sets out that Iceland is to have a national master plan for the protection and development of energy resources (Einarsson, 2011). The aim of the Act is to ensure that sustainable development has a permanent status in decision-making concerning the protection and utilisation of land (Icelandic Parliamentary Committee on the Strengthening of the Green Economy, 2011).

Figure 7.1 Spatial Planning on Iceland

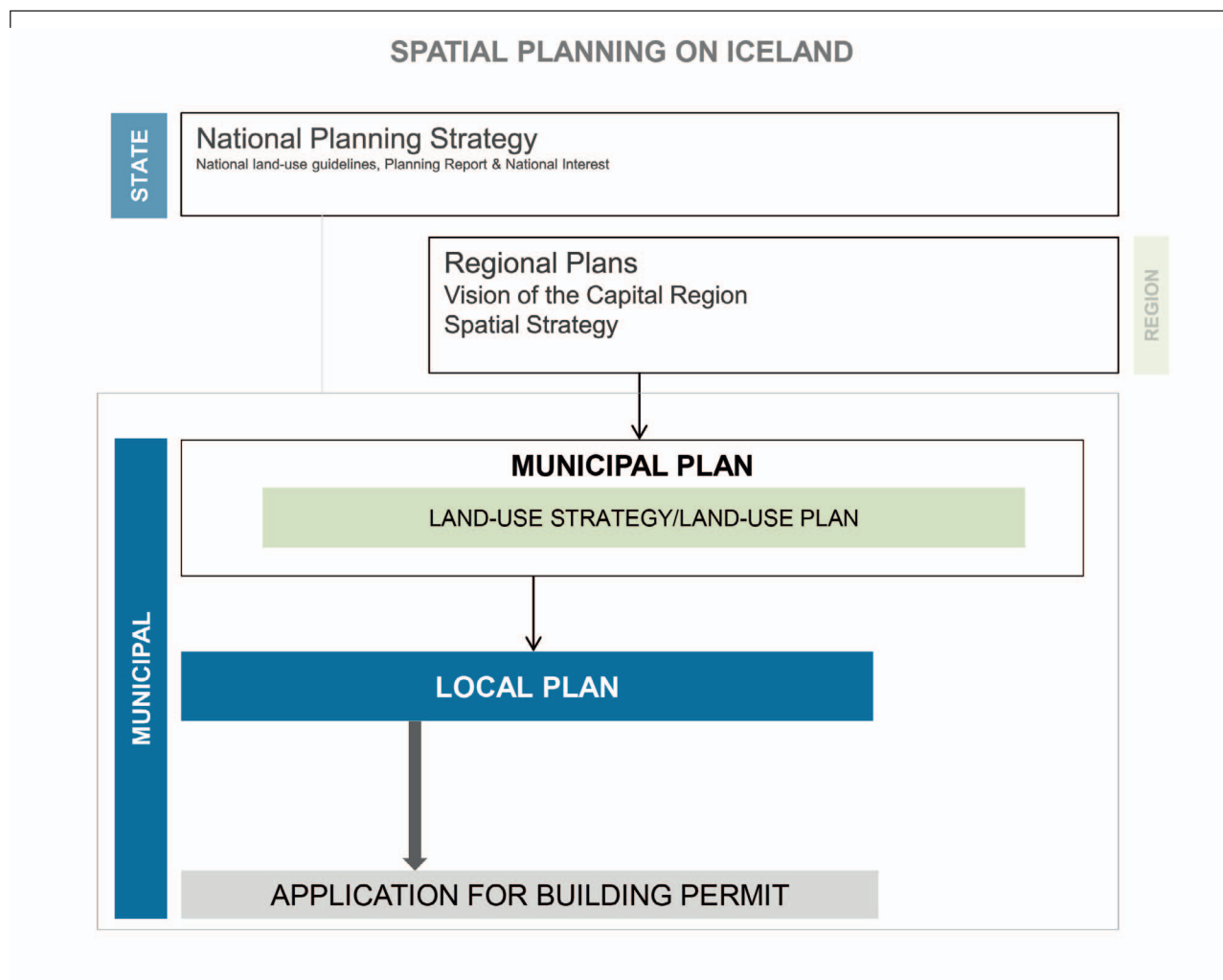


Figure 7.2 Reykjavik Municipal Plan 2010-2030 (Reykjavik Municipal Plan 2014)



8. Sweden

Sustainable growth and environmental technology are important policy areas in Sweden. The main national policies have a general focus on regional strategies for sustainable growth and there are specific national programmes targeting environmental technology and the cleantech sector.

Spatial planning in Sweden is characterised by a high degree of local autonomy. The Swedish Planning and Building Act and the Swedish Environmental Code constitute the legislative framework that guides overall planning. Spatial planning at the municipal level is mainly governed by the municipal comprehensive plan (översiktsplan), which guides strategic and land-use planning at the local level. At the regional level, there is no formal regional land-use planning regime (Stockholm and Gothenburg excluded); instead the regional authorities are responsible for regional development and the strategic issues of spatial planning.

To bridge the gap between local land-use planning and regional growth strategies, a number of informal initiatives have been implemented by the regional authorities, and national urban development policies have stressed that these initiatives have to be coordinated across municipal boundaries. In practice, this has led to the creation of regional structural plans (not formally binding), which involve municipalities joining forces to create a shared vision of future land-use development and related societal challenges with a regional perspective.

8.1 Green growth policies

Green growth as a concept is not widely used in the national policy documents. Instead, related terms such as sustainable growth, green economy and environmental technological development are reflected in policy priorities (see Table 8.1). For example, the Swedish Agency for Economic and Regional Growth defines sustainable growth as economic growth that is coupled to the development of human resources and the preservation of environmental values (Government Offices of Sweden, 2013b).

Sweden is considered to be a leader in sustainability, a reputation which has significant bearing on its export sector. The national authorities have ambitious

environmental objectives, provide state subsidies to sustainable urban developments or innovation; environmental requirements in procurement processes and cutting-edge cleantech companies have given Sweden a good reputation; accordingly, part of the country's national growth relies on the success of Swedish cleantech companies abroad (VINNOVA, 2011). In line with these priorities, the Swedish Government launched a strategy for the development and export of cleantech, allocating funds to support a fertile business environment for cleantech companies, aiding exports of cleantech goods and R&D and commercialisation within this sector. This environmental technology development and export strategy also highlighted sustainable urban planning as one of its key priorities (Swedish Government, 2011).

One example of the programmes initiated at the national level to encourage the cleantech sector is Bygginnovationen, a national innovation programme that runs from 2011 to 2014. Vinnova makes funds available to bridge the gap between research and the construction sector, and to encourage innovative developments that are efficient and lead to increased productivity and sustainable growth within the construction sector. It has a special venture for cleantech innovations within the construction sector, which should facilitate sustainable urban development (Bygginnovationen, 2013).

In the Strategy for Development and Export of Environmental Technology, Business Sweden, on behalf of the Government, analysed which export markets and sectors Sweden should prioritise. The following focus areas were recommended: sustainable urban planning, transport, energy, water, sewage and waste (Swedish Government, 2011). According to this strategy, regional actors and organisations promote the export of environmental technologies and support the SMEs operating in these fields in a variety of ways.

As stated in policy reports, green growth does not replace sustainable development, but is instead one aspect of it that focuses specifically on economics within the framework of sustainable development. The difference between the concepts is the extent to which they highlight socially sustainable development and increased societal benefit. Policies whose aim is en-

vironmentally sustainable growth must therefore be complemented by other measures to reach social and prosperity goals. However it has been noted that social sustainability can improve the effects of a green transition (Government Offices of Sweden, 2013a).

8.2 Planning system

Spatial planning in Sweden is regulated by the Planning and Building Act and the Environmental Code, which regulate areas of national importance protected due to their high environmental value. This legislation is enforced through the county administrative boards, which are tasked with monitoring the enforcement of national policies at the local and regional levels, ensuring that municipal comprehensive plans (översiktspan) are in line with national policies and regulations.

At the local level, a key planning instrument is the municipal comprehensive plan (see Figure 8.1). It is not a legally binding plan, but should include guidance on future land-use development and describe the long-term strategic developments within the municipality. The comprehensive plan should be coordinated with national and regional goals and take into account national interests such as the national environmental quality goals. Specifically, the 'Good Built Environment' goal is emphasised in comprehensive planning (Boverket, 2014). In addition, the comprehensive plan

has a guiding role towards the legally binding detailed plans (detaljplan) that regulate the use of areas of land and water (Boverket, 2013).

The regional level has no regulatory authority in terms of spatial planning; instead it makes recommendations concerning issues that may impact regional development and serves as an arena for cooperation between the municipalities.

The regional development recommendations are specified in the Act on Regional Growth and each county has a regional body responsible for regional development, including regional growth. The character of the regional bodies responsible for regional development varies, and they can take the form of a county administrative board, an inter-municipal cooperation body or the county council (Boverket, 2011).

The bodies responsible for regional development are tasked with leading and developing regional sustainable growth and development efforts. This responsibility includes drafting the regional development strategy and coordinating its implementation. This strategy should be a coherent strategy for the regional authority's work with growth issues and should include its vision, goals and long-term priorities for regional development, aiming towards sustainable growth. It should also serve as a platform for dialogue and collaboration between the local, regional and national levels and with counties and regions in other countries regarding re-

Table 8.1 Green growth policies in Sweden

Strategies and programmes	Policy institutions	Focus areas
Strategy for development and export of environmental technology 2011–2014	Swedish Ministry of Enterprise	▪ To create good conditions for the growth and development of environmental technology companies in Sweden ▪ To promote the export of Swedish environmental technology and thereby contribute to sustainable growth ▪ To promote research and innovation in environmental technology and facilitate commercialisation of innovations
Environment-driven growth programme (2012–)	Swedish Agency for Economic & Regional Growth	The programme supports Swedish companies and networks with environmentally adapted products when expanding into new markets.
Bygginnovationen 2011–2014	VINNOVA	▪ To contribute to increased productivity and efficiency. ▪ To create measurable employment and sustainable revenue growth in the Swedish construction industry. ▪ To strengthen the competitiveness of Swedish construction in the international market. ▪ To create a more positive environment for research within academia and a state where companies have a higher demand for individuals holding a PhD degree.

gional growth issues (Swedish Ministry of Enterprise, 2007).

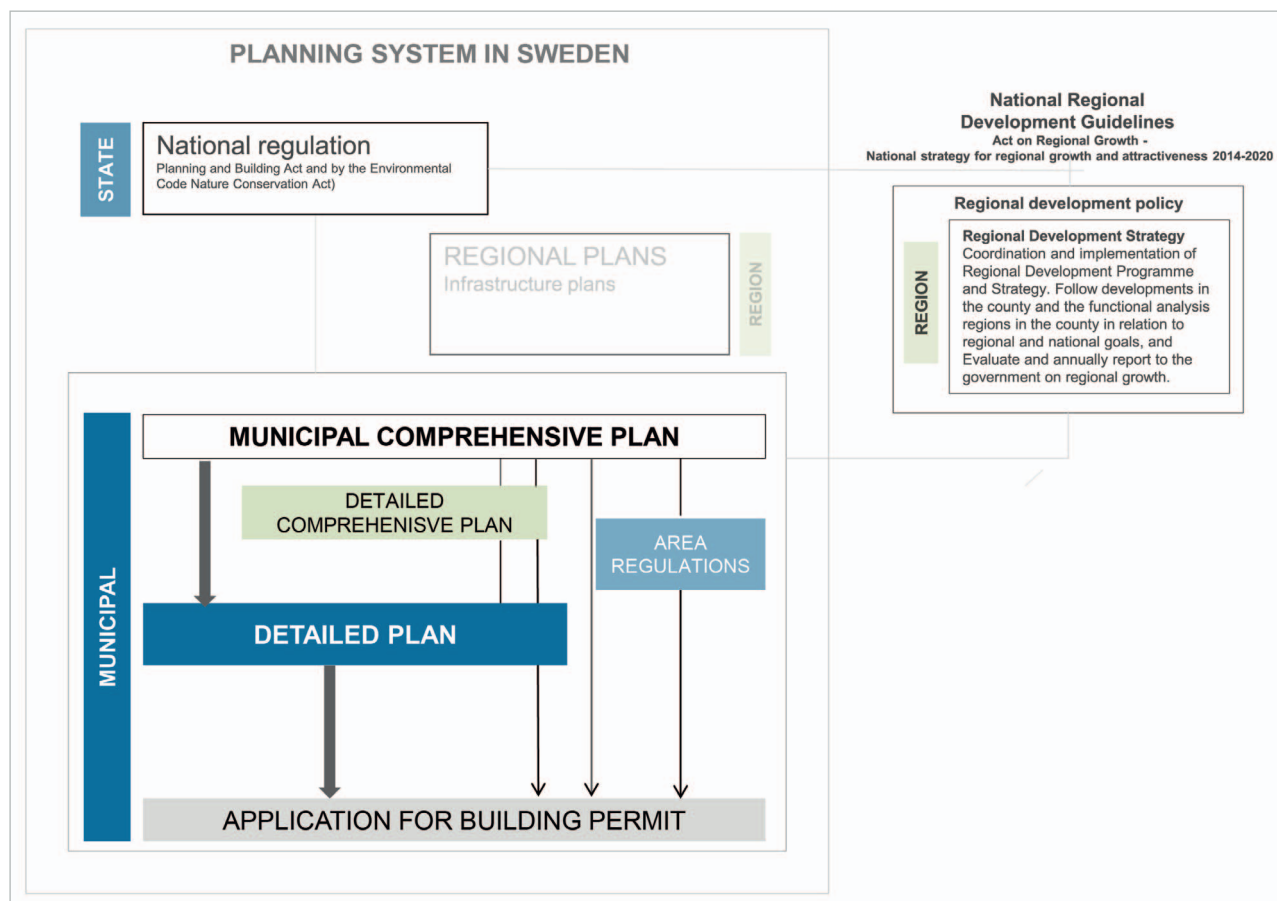
The regional development strategies should also serve to guide local strategies in municipalities, related regional strategies and development processes. This aspect was reinforced by an amendment to the Planning and Building Act in 2011, which underlined that the municipal comprehensive plan needs to take into account national and regional objectives and coordinate the comprehensive plan with these (Boverket, 2011).

8.3 Policy instruments

A current debate in Sweden is centred on the demand for 'national urban policies'. While the debate is gaining some ground at the national level, at the municipal level the idea of 'urban politics' is debated. For instance, some local actors prefer to speak of growth and the attractive city based on the concepts competition and governance. However, as has been discussed above, the need for improved cooperation between the regional and municipal planning authorities is evident. National urban policies would clarify priorities in the event of conflicts of interest and would coordinate developments and investments in infrastructure (WSP, 2013).

In 2014, a new national strategy for regional growth and attractiveness for the period 2014– 2020 was published by the Ministry of Enterprise. This strategy replaces the previous strategy for regional competitiveness, entrepreneurship and employment for the period 2007–2013. The strategy mainly targets actors with responsibility for regional development, county councils and national authorities; however, civil society organisations are also seen as key players in this effort. The strategy is organised around four priority areas: 1) innovation, enterprise and entrepreneurship; 2) attractive environments; 3) skills and expertise development in the labour force; and 4) international and cross-border cooperation. These priorities were identified based on experience from policy implementation, as well as a broad dialogue with regional and national stakeholders. They will guide the drafting and implementation of regional development strategies and other policies and programmes concerning regional growth. The national strategy highlights the importance of spatial planning in creating attractive environments, and includes policy guidance on improving the accessibility of the transport system, increasing coordination between inter-municipal and regional strategies, improving accessibility through information technology, improv-

Figure 8.1 Overview of the Swedish planning system and regional development guidelines



ing commercial and public services and increasing the range of cultural and leisure activities (Swedish Ministry of Enterprise, 2014).

In 2013, the Government also tasked the Swedish National Board of Housing, Building and Planning (Boverket) and the Swedish Agency for Economic and Regional Growth (Tillväxtverket) with designing a policy programme to strengthen the conditions for increased coordination between local planning and regional development in order to stimulate business development and sustainable growth. Municipal and regional efforts should be better integrated, rather than the current system that is separated into physical planning at the municipal level and strategic comprehensive planning at the regional level. The presumption is that planning the built environment is of great importance to increasing both the attractiveness of areas and business development (Swedish Government, 2013).

In addition to this, the Swedish Government has tasked the Delegation for Sustainable Cities with funding, and the Swedish Environmental Protection Agency with managing, a sustainable urban development platform called Hållbar stad (Sustainable City). The intention of this platform is to contribute to intersectoral coordination, the exchange of experiences and the dissemination of information. This initiative is

based on the previous work that was implemented by the Delegation for Sustainable Cities. The Government set up this platform to promote and fund sustainable urban development projects in the period 2008–2012. The Delegation addressed a variety of urban challenges and picked up on many of the themes found in contemporary urban planning debates (Delegation for Sustainable Cities, 2012).

Box 8.1 The city region of Malmö

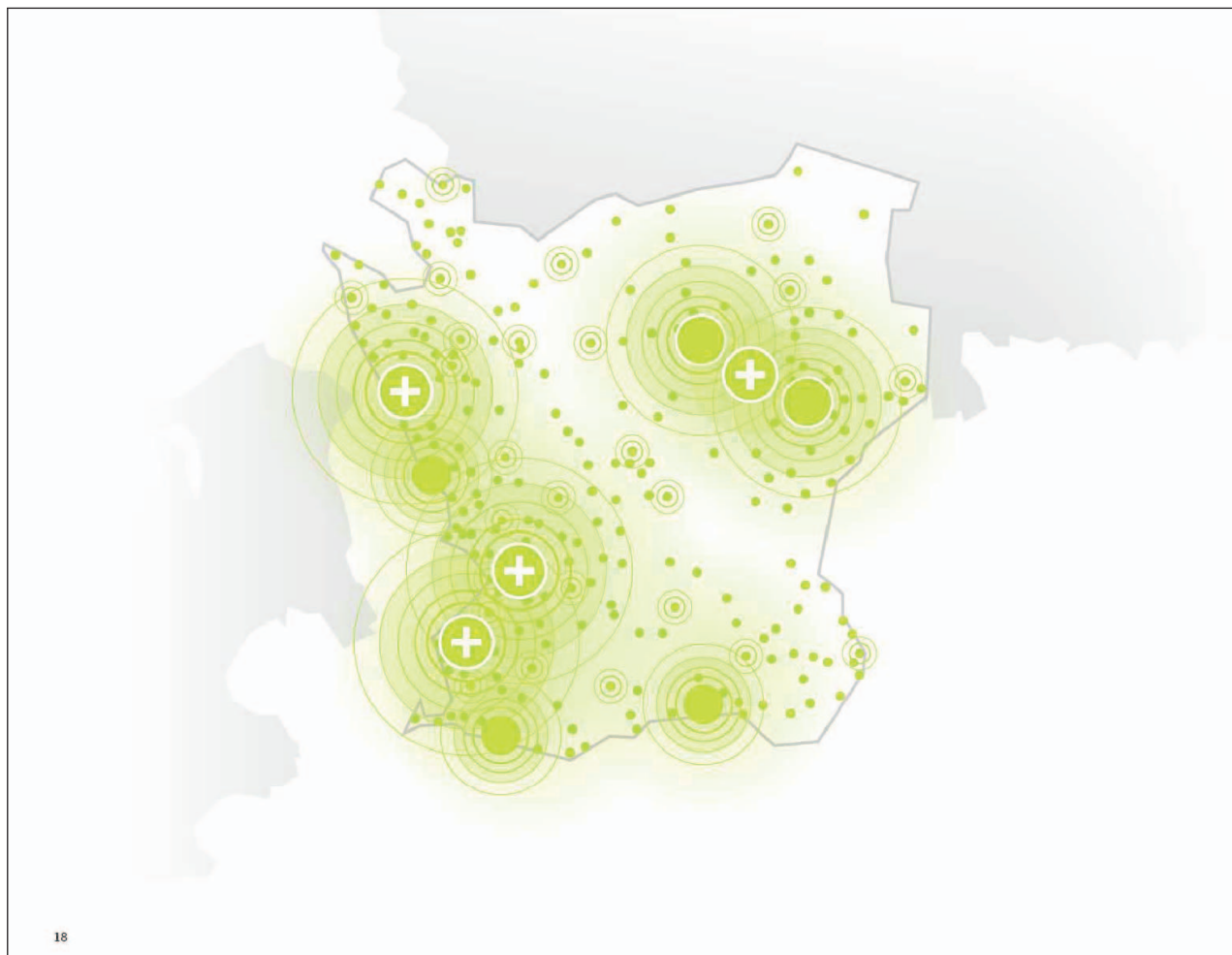
Region Skåne has been involved in regional development planning for many years and, since 2005, has been working with a dialogue process in order to create a regional strategy for land-use collaboration across municipal boundaries. This has resulted in the innovative and internationally recognised initiative called a 'Structural Picture of Skåne'. The aim of this initiative has been to connect regional development strategies with comprehensive planning in the region's 33 municipalities in order to create a common understanding and develop strategies within the region that cut across municipal boundaries. In 2012, a proposal for a spatial strategy was published called *Den flerkärniga miljonstaden Skåne* (The Polycentric Metropolis of Skåne) (see Figure 8.2) (Region Skåne, 2012). This spatial strategy is not a regional plan but more of a regional structural strategy for land-use planning and transport.

Box 8.2 The city region of Linköping-Norrköping

Another illustrative example of spatial cooperation between neighbouring municipalities is the joint comprehensive plan developed by the cities of Norrköping and Linköping. Both municipalities are pressured by population growth and they can see that joining forces gives them the opportunity to form a larger functional market and become more attractive as a result. Enhancing the multilevel governance of the initiative, the Swedish Agency for Economic and Regional Growth allocated funds to the project, which is executed jointly by the two municipalities, together with the East Sweden Regional Council (*Östsam*). The comprehensive plan aims to create sustainable economic, social and environmental development in the entire region. One of the core objectives has a clear spatial dimension: to locate fu-

ture developments centrally in order to create compact and attractive city centres. The attractiveness of the region is further aided by the plans to improve transport connections to Stockholm by building *Ostlänken* (the East Link rail project) (Samverkan Linköping-Norrköping, 2010). Among the lessons learnt are that adopting a city-regional perspective is crucial and that the joint comprehensive plan ensures that regional ambitions are translated into concrete and achievable objectives. The comprehensive plan was preceded by an economic analysis of the region that helped clarify its strengths and weaknesses and served as a good basis for discussion. The process has enabled the integration of growth perspectives into physical planning, and vice versa.

Figure 8.2 Example map from the proposal for spatial strategy on the polycentric metropolis of Skåne (Region Skåne, 2012)



9. A way forward: discussing the everyday life perspective

Adopting a critical approach to how and why certain spatial structures are favoured over others in planning practice has the potential to open up new perspectives on sustainability. As a policy discourse, green growth has to be seen in the context that cities of today are faced with increased transportation and use of resources, at the same time as spatial segregation separates suburbs from the inner city and exacerbates social and ethnic segregation (Wessel et al., 2005). One question that needs to be answered is why the compact city is often singled out in policy debates as the most favoured solution for achieving green growth? Box 9.1 below illustrates this question with specific reference to Stockholm.

There is currently a debate within academia as to whether or not the compact city (as part of the green growth discourse) contributes to sustainable development. While the benefits of the compact urban form may include greater use of public transport, reduced social segregation, better access to facilities, etc. (Burton, 2000), the potential disadvantages are less domestic living space, lack of affordable housing, more crime, lower levels of walking and cycling, and more congestion (e.g. Burton, 2000; Ferreira et al., 2011).

An important contribution to the discussion and the questions stated above is the everyday life perspective, which emphasises that certain discourses regarding how cities should be built and planned tend to gain power over others when studying the use of space and citizens' everyday lives. In that context, a dominant discourse is representative of how cities will develop in the future. Today, this focuses on economic growth and branding cities as attractive. In this quest there is a clear ambition for cities to regenerate old industrial areas and transform them into, for example, waterfront housing. A further ambition that would make our cities more attractive is to connect them to their suburbs. Reducing segregation is often used as an argument in favour of creating compact cities. The compact city is generally regarded as the dominant discourse with which to solve many of the problems faced by cities. The dominant discourses are developed by planning

professionals; it is therefore possible to argue that these narratives are those of middle-class white people (Orrskog, 2005).

Gender and intersectionality in spatial planning

One way of approaching the everyday life perspective is through the lens of gender and intersectionality.

A gender perspective implies that the planner is aware of and responsive to the understanding that women and men have different experiences of everyday life and that these experiences arise because of power structures that generally subordinate women. By ascribing certain values and perspectives to sex, they become gendered. Arora-Jonsson (2013) states that

Box 9.1 Compacting Stockholm: a top-down perspective?

In her research, Bradley (2009a) learns from interviews with spatial planners in Stockholm that the idea of building a continuous urban structure and the idea of the compact city is a top-down perspective. Politicians, planners and researchers have in mind the norm of the inner city, which they also try to apply to suburbs. The message from interviews with inhabitants of less affluent suburbs is that the inner-city norms are not always ideal or desirable in these areas (ibid.). For example, residents of Tensta (suburb of Stockholm) actually appreciate traffic separation and the green spaces between buildings (Bradley, 2009b). Bradley's interviews with planners in Stockholm also indicate that the driving force behind the compact city is economic rather than environmental and that a lot of contradictions can be found when justifying this approach environmentally. As one planner pointed out, "several assumptions about causes and effects in this strategy" (ibid. p. 242) can be questioned. "This particularly regards the assumption that densification and additional fine-meshed transport networks will lead to more vivid urban life and greater use of public transport" (ibid. p.242). According to the same planner, "the densification of suburbs such as Tensta and Spånga may result in a combination of the negative aspects of the inner city (noise, traffic, a lack of light, fresh air and greenery) with the negative aspects of the suburbs (lack of public meeting places and vivid public life, and long distances to cultural, commercial and service facilities)" (ibid. p. 242).

...the allocation of distinctive attributes on the basis of sex/sexuality is a doing of gender. Gender differences between the sexes may thus be understood not as the natural order of things, but historically, culturally and socially created. Sexual differences play an important role in organising social relationships and differences in power. (p. 31)

Kurian (2000) has developed a gender framework of so-called feminine and masculine values and perspectives, or pairs of attributes, to evaluate environmental impact assessments within the World Bank. These attributes represent values and perspectives that have historically, culturally and socially been ascribed to women and men, respectively. One such pair is technical and economic rationality (masculine attribute) versus political and social rationality (feminine attribute). In other words, masculinity in this framework is associated with maximising individual profit, whereas femininity is associated with the rationality of interpersonal relationships and the rationality of decision-making with an order of discussion and decision (ibid., p. 28). Another pair of attributes is the masculine attribute in which the main focus is on development, defined as economic growth, versus the feminine attribute in which the main focus is on sustaining way of life (subsistence and survival of the family). The emphasis on economic growth provides an indication that the compact city concept, as discussed in Box 1, tends to be derived from a masculine approach, where the motivation is economic rather than environmental.

Because our societies have produced and reproduced the above-mentioned notions of what should be associated with women and men, female and male planners have been found to prioritise different issues (Larsson and Jalakas, 2008). For example, female planners have been shown to be more empathic and caring towards “vulnerable” groups (ibid., p. 45). These findings indicate that values and perspectives that have been ascribed to women include “taking care” of children, elderly, sick people and housework (Larsson and Jalakas, 2008). However, one should be careful when automatically ascribing feminine values to female planners and masculine values to male planners; in relatively gender equal societies such as the Nordic countries, both male and female planners are often educated in a masculine tradition (Boverket, 2006, Dymén et al., 2013a and 2013b).

Furthermore, questions of class and ethnicity influence what aspects of everyday life gain power in the corridors of spatial planning departments. Thus, a next step towards understanding the contribution of an everyday life perspective to the interactions between

spatial planning and green growth is through an intersectional perspective, which has further developed our understanding of gender, ethnicity and class in relation to spatial planning. An intersectional perspective helps us to understand and reflect on how the interaction of ethnicity, class and gender contributes to inequality.

One concrete example of the usefulness of an intersectional perspective is that the gender equality of the Nordic countries has not called into question the idealisation of concepts such as economic growth, market economy and paid work. Gender equality is regarded as focusing primarily on women’s equal access to the labour market. An intersectional perspective would allow a more thorough and critical examination of gender, class and ethnic inequality (de los Reyes et al., 2005) by posing questions such as:

- Which social categories, if any, are represented in the plans and policies? Which social categories are absent? Are there any observable explicit or implicit assumptions about social categories and about relationships between social categories?
- How are relationships between humans and between humans and the environment portrayed? How is nature represented? What type of (environmental) knowledge is recognised and privileged?
- Are any behavioural norms discernible in the plans and policies? Are there norms covering the relationship to other humans, resources and nature? What are the norms that set the standards for a ‘good life’? How are these norms reproduced, reinforced or challenged? (Kaijser & Kronsell, 2013, pp. 13–14)

Adopting an intersectional perspective and raising the kind of questions listed above helps question existing norms. More tangibly, identifying and considering how gender influences energy consumption, for example, is one way for planners to broaden their understanding of how cities are used by different groups of people. Studies have shown that women generally use less energy than men, and that women generally display more pro-environmental attitudes (e.g. Carlsson-Kanyama et al., 2002, 2003, 2005, 2008; Rätty et al., 2010). Based on those findings, an intersectional perspective can shed additional light on differences in energy consumption between, for example, affluent and deprived areas.

Without acknowledging the feminine values of specific socio-economic-ethnic contexts, sustainable development strategies might not achieve their full potential (c.f. Dymén et al., 2013a and 2013b). For spatial planning practice, it is important to emphasise that identifying gendered differences in values, perspectives and attitudes also reflect those (i.e. masculine values,

perspective and attitudes) that tend to gain power (see Box 9.2 for a concrete example). This strengthens our understanding that the purpose of identifying interactions between gender and other socio-economic variables in attitudes to, and values and perspectives regarding, urban space, sustainability, green growth, etc. is a way to indirectly investigate which values, perspectives and attitudes gain power in planning practice, as well as those that may need special attention. Following on from our interpretation of an intersectional perspective, as presented above, we should also be aware that the masculine tradition, as holds sway in the corridors of spatial planning offices, represents the story of the middle-class Western society. In parallel, the feminine and masculine values and perspectives reflected upon above are also created in a Western society. Interpreting masculine and feminine values and perspectives through ethnicity, class, age and other factors would further problematise the narratives regarding what it means to be 'a good city' developed within the planning profession.

Concluding remarks on the everyday life perspective

In conclusion, many narratives are excluded when planning city regions and are not considered important even though narratives may be critical to sustainable urban development. A gender and intersectional perspective on spatial planning can contribute to the sustainable development of the Nordic city regions by shedding light on the everyday life of those urban residents who are generally not visible in spatial planning practice.

If spatial planners are to work towards sustainable

development in cities, there is a need for approaches in which spatial planners are open to different concepts regarding the city. Concrete examples are given in the sections above and especially in Boxes 9.1 and 9.2. Examples are also provided by Orrskog (2005), who describes alternatives to the compact city: the ecological city (with close interaction between nature, people and technology); or the gender equal and caring city where good housing and environments for children, men and women are prioritised; the multicultural city where ethnicity is seen not as a problem, but as an opportunity (Orrskog, 2005).

Recent research shows the difficulty of integrating an everyday life perspective into comprehensive planning, where questions of public character (paid work, business, employment and transport) are seen as most important. In contrast, activities related to the local and private sphere of life (e.g. health care, childcare care, service, local transport) have traditionally been associated with detailed planning (Larsson and Jalakas, 2008, Dymén, 2008). Given that comprehensive planning is supposed to guide detailed planning, it is imperative that an everyday life perspective be included as part of comprehensive planning. Planning should, to a greater extent, consider such things as future housing requirements in relation to people's everyday life situation in order to make their everyday lives easier (Dymén, 2008) and ensure that sustainable development policies are supported by urban residents, who, at the end of the day, are those who will be making the difference by changing their patterns of energy consumption, transport, etc. Planning at a city-regional level is often even more abstract and detached from everyday life. Thus, it

Box 9.2 Masculine approach to snow removal in Karlskoga

An example that sheds light on the notion of questioning existing norms is the attempt to incorporate a gender perspective into snow removal in the Swedish municipality of Karlskoga. The initiative was developed as a result of a gender equality course for the municipality's urban planning directors. The participants initially joked about the presumption that snow removal could have anything to do with gender equality, but they soon came to the realisation that patterns of snow removal were heavily rooted in a masculine tradition. For example, roads were cleared prior to bicycle tracks footpaths and traditionally male-dominated workplaces were prioritised ahead of female-dominated workplaces. Further research also found that three times as many pedestrians are injured as a consequence of slipping compared to motorists and that the cost of healthcare and loss of production is four times higher than the cost of snow removal. Today the routines for snow removal have changed and now correspond to a broader range of citizens' everyday life patterns:

Footpaths, bicycle tracks and bus stops are prioritised

Preschools are given the highest priority and cleared before six o'clock in the morning as this is where parents travel to first

Next, larger workplaces, both male and female-dominated, are prioritised

Next, pathways and bicycle paths to schools are prioritised
Larger roads are cleared last

However, it is interesting to note that the motivation for changing the snow removal routines in Karlskoga has not simply been to achieve equality; financial savings have also been a factor. This indicates that a traditional masculine attribute, economic growth, is at the top of the agenda and has to be emphasised even though the primary reason for changing routines was gender equality. Furthermore, turning our attention to the concept of green growth, the question may be asked as to whether the whole concept of green growth is a compromise between a traditional feminine value – sustaining way of life – and the growth concept – a historically masculine and rational approach to development?

would be interesting for future research to explore and investigate how and if an everyday life perspective on the sustainable development of the Nordic city regions can be approached by including a gender and intersectional perspective in spatial planning practice.

The debate about how city regions are planned in line with the three components of sustainable development is not new. Nevertheless, with the new policy concept of green growth, which is seen as a new engine for promoting economic growth with the goal of including environmental quality in existing economic processes and creating new jobs with a minimal environmental impact, this section has revisited green growth's potential to deliver sustainable development and urban sustainability.

Urban sustainability has become an important concern as urbanisation increases around the world. The extent to which urban areas can be sustainable is open to debate. Firstly, it is about the extent to which activities within urban areas contribute to unsustainable outcomes and, secondly, what chances there are of developing and shaping urban areas in a way that paves the way to sustainable social and economic development. Lastly, it is about steering the city-regional level of governance towards taking action for overall sustainability.

The city-regional level is increasingly pronounced as an appropriate level at which to develop and implement policies. City-regional planning can be defined in section 3; as spatial planning on a city-regional level focusing on land use and transport and integrating functional urban regions formed by the socio-cultural and economic movements of people. The aim is to co-ordinate land use, manage development activity and infrastructure investment across urban areas by taking socio-cultural and economic activity into account in order to set the right green public policy goals.

As argued in this section of the report, planning for green growth in city regions, does not satisfactorily take into account the implications of increased socio-cultural diversity. This is reflected in the definitions provided on green growth (see section 2 of this report); a focus on the social, more qualitative, longer-term dimensions related to quality of life is neglected (compared to sustainable development) in favour of economic, more quantitative, shorter-term dimensions. This is explicitly connected to the context in which green growth has emerged – the economic crisis of recent years.

Green growth emphasises the connection between economic growth opportunities that can be implemented with positive effects in terms of reducing the use of resources, especially energy. Section 2 indicates

that differences in energy consumption behaviours, in particular, are mainly driven by cultural norms, differences in wealth and by the need for international travel to overcome a lack of access to nature. All of which appear to trump the potential benefits of higher density living in the form of the compact city.

Adopting an everyday life perspective in spatial planning can help create openness to different perspectives on connecting everyday life and green growth, as well as sustainability more generally, by considering different narratives of the city, rather than emphasising the compact city as the only way to create an attractive and environmentally friendly city. For instance, within the concept of the compact city, a dense built environment can lead to lower quality of life as dense urban structures have the potential to affect health due to increased pollution. On the other hand, when the existing built environment undergoes retrofitting, the houses can become more expensive, potentially increasing the vulnerability of the disadvantaged. Social norms play an important role in urban sustainability, not just urban form.

This reaffirms the importance of spatial planning having an integrated and transversal nature, particularly the participatory and engagement efforts that acknowledge the importance of raising awareness to promoting efficient resource consumption behaviours by locals. More generally, it also shows that, while integrated spatial planning at the city-regional level has an important role in the creation of more resource-efficient urban areas, these efforts will be negated if attention is not also paid to creating attractive and accessible urban spaces for diverse groups of people.

The effect of age, gender, class and ethnicity on people's relationships to the surrounding environment is largely absent from the green growth strategies outlined in this report. In fact, it is people's relationships to the environment and the movements of their everyday lives that produce city-regional spaces. Nevertheless, despite being the main actors influencing the creation of these functional spaces, it is people who are not sufficiently included in green growth and urban development strategies. What is needed is a practical interest in the use of space for the everyday practices that take place within socially diverse urban environments. The everyday life perspective is a missing social component of urban sustainability and is vital to the success of green growth in city regions. In this section, we have introduced the concept of an everyday life perspective which provides a basis for discussion of the way forward; a more inclusive framework for green growth and spatial planning.

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Nordregio
P.O. Box 1658
SE-111 86 Stockholm, Sweden
nordregio@nordregio.se
www.nordregio.se
www.norden.org