



PHOTO: MITCHELL REARDON

Sustainable Urban Growth through Densification and Regional Governance: The Stockholm Case

This Nordregio Policy Brief is designed to provide policymakers working in growing cities and regions with policy options to accommodate population growth without vast urban sprawl. Even in Stockholm, Europe's green capital in 2010, there are possibilities for policy improvements in shaping the urban form while accommodating population growth. For example, a continuation of current planning policies will require that Stockholm's urban form is expanded by 155 km² between 2000 and 2050 to accommodate the growth. But if the policies were intensified in a realistic way, this could be reduced to 65 km².

SOME URBAN FORMS seem more sustainable than others and planning research has identified a number of methods for evaluating them.¹ Based on Nordregio findings from several European research projects on sustainable urban development that analysed a number of urban regions; Stockholm will be used to explore several policy options that can be pursued, with a focus on densification and regional coordination.

Stockholm

With many workplaces and a wide range of retail, entertainment and cultural attractions concentrated in the inner city, regional development in Stockholm has led to a mono-centric urban form. Beyond the inner city, rational functionalist political decisions, the rise of the private car and lifestyle choices led to the expansion of a fragmented settlement structure. The result is an urban core with fingers of growth spreading outwards, with relative-

ly long commuting distances that reflect this separation of work and residence.

Between 1990 and 2002, Stockholm County grew by 13% (200 000 people). This growth is forecast to continue, with an additional 550 000 residents, or 45% growth, between 2001 and 2050. In response to this growth, the inner city focus and the surrounding fragmentation, the regional development plan for Stockholm, RUFs 2010, reflects the ambition to develop a polycentric structure where functional urban cores ring the city centre.² The regional plan for 2010 further promotes this approach through the inclusion of several additional cores and the continued development of the regional polycentric strategy. Further, the City of Stockholm's City Plan³ and Vision 2030⁴ both implicitly promote a municipal polycentric strategy through the development of a series of nodes; however the City Plan continues to emphasize the inner city's central importance. It is worth

Summary of Nordregio's key policy considerations for promoting resource efficiency in Stockholm and other growing cities

Densification

■ The greatest potential to accommodate growth without consuming greenfield land is through the densification of areas just beyond the inner city.

■ Targeted densification along high level public transit corridors and transportation nodes encourages alternatives to the private car while also reducing the consumption of greenfield areas.

Regional Coordination

■ Implementing the region's polycentric development strategy is crucial to reducing resource consumption per capita. It requires that all municipalities involved have a similar understanding of what needs to be accomplished.

■ Strong regional coordination can resolve tensions and promote dialogue amongst municipalities.

■ Competition between municipalities to attract residents and business can cause lower densities, longer travel distances and a fragmented urban form, all of which lead to increased resource consumption.

noting that the regional and municipal strategies for polycentric development are not explicitly coordinated.

Promoting a resource efficient form, particularly in the face of rapid growth, will be key to upholding Stockholm's position as a global leader in environmental sustainability. To this end, densification beyond the inner city and regional coordination, are central aspects to achieving this in Stockholm and other Nordic cities that are experiencing growth. These factors will be considered below.

Potentials

In accommodating this growth, Stockholm has several assets. The public transit network is relatively well developed, is well used and is closely linked to future spatial development. The City also has a congestion tax that has been effective in reducing commuting by private car.⁵ Planning authorities are aware of the challenges at hand and have responded with active strategies. In the inner city, this has led to infill projects on brownfield sites and other efforts to promote densification. At the larger scale, a strategy to promote a polycentric development pattern involving urban cores that corresponds with the transit network and encourages a more balanced structure has begun to be implemented.

Densification Beyond the Inner City & Along Transit Corridors

In meeting future growth, it is critical to recognize that without a considerable change to the inner city's built form, there are only limited opportunities to increase density. An analysis of growth potentials in the Stockholm Urban Form, which extends beyond the City of Stockholm boundaries, demonstrates that efforts to accommodate Stockholm's population growth in a sustainable manner will need to largely focus on surrounding areas that currently have lower densities. This is highlighted in Map 2, where the orange and red areas identify areas with strong potentials for growth. A number of policies to encourage densification have been enacted, but even in Stockholm, the 2010 European Green Capital, more can be done to reduce sprawl. If current regional plans are fully implemented, the Stockholm urban form will still expand by 155km² as a result of population pressure. However, if policy that promotes even further densification in strategic areas is adopted, this expansion would be reduced to 65km². Such efforts would save 90km² of greenfield space.

Nordregio analysis demonstrates that a continuation of current planning policies would lead to a substantial decline in the diversity of urban functions and access to high-level public transport

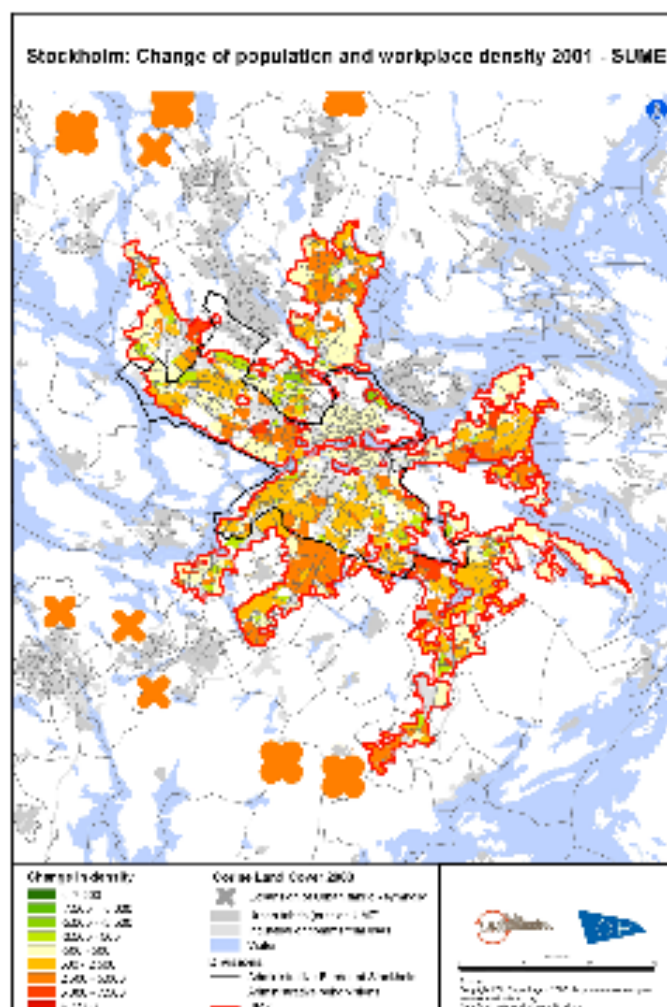
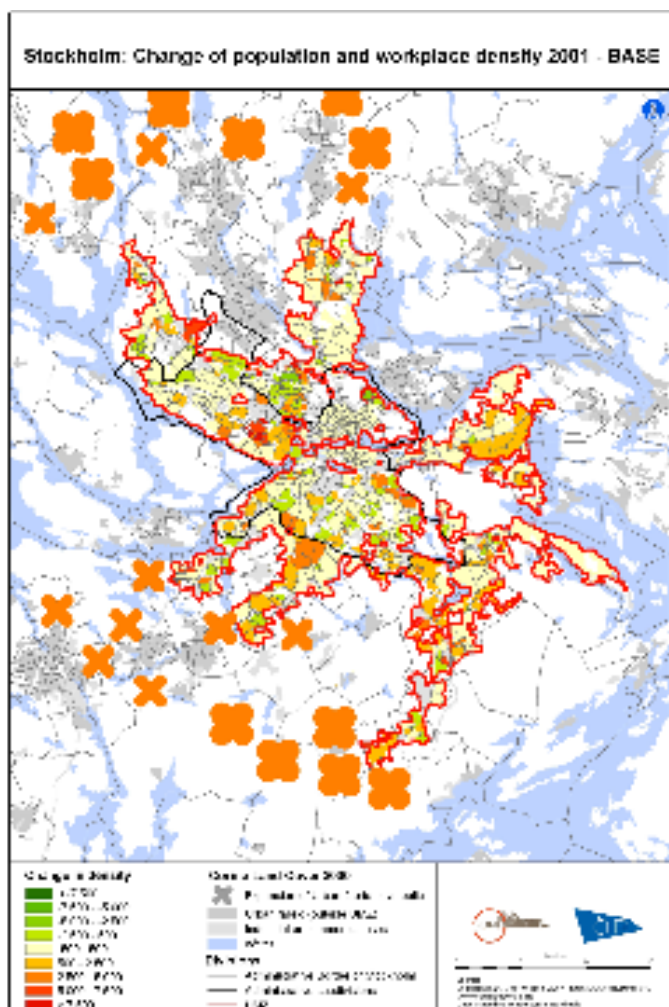
Defining "Stockholm"

THE CITY OF STOCKHOLM REFERS TO THE TERRITORY WITHIN THE ADMINISTRATIVE BOUNDARIES OF THE CITY OF STOCKHOLM.

STOCKHOLM COUNTY IS MADE UP OF 26 MUNICIPALITIES AND HAS POPULATION OF JUST OVER TWO MILLION PEOPLE. THE CITY OF STOCKHOLM IS THE BY FAR THE LARGEST IN TERMS OF POPULATION, WITH A 2010 POPULATION OF MORE THAN 830 000, COMPARED WITH 96 000 IN HUDDINGE, THE NEXT BIGGEST MUNICIPALITY. IT BORDERS THE COUNTIES OF UPPSALA AND SÖDERMANLAND, AS WELL AS MÄLAREN LAKE AND THE BALTIC SEA. THE CITY OF STOCKHOLM AND THE STOCKHOLM URBAN FORM FIT WITHIN ITS BOUNDARIES.

THE STOCKHOLM URBAN FORM DENOTES THE MORPHOLOGICAL BOUNDARIES OF THE CONTIGUOUS (GAPS OF LESS THAN 200M) BUILT UP AREA OF THE URBAN AGGLOMERATION THAT HAS DEVELOPED AROUND THE CITY OF STOCKHOLM. IT WAS DEVELOPED AS PART OF THE SUME PROJECT.

across this expanded Stockholm Urban Form. Such expansion would also result in increased land consumption and material consumption for the constructing of buildings and infrastructure would result. Further, the persistence of current planning trends in Stockholm would see about 167 000 additional residents within



The maps show two scenarios for Stockholm's densification for 2050. A continuation of current planning trends, with considerable land take up, is illustrated on the left, while a strategy that pursues more targeted densification, and limits sprawl, is shown on the right. Source: ÖIR 2011

the current Urban Form in 2050, while a denser development strategy would lead to about 379 000 new residents within the Stockholm Urban Form. This variation in the spatial situation of population in 2050 has an impact on the energy consumed for travel. In addition to having fewer commuters from outside the existing Urban Form, efforts to create a more resource efficient urban form would also increase densities in areas that are currently quite fragmented, with lower density levels.⁶

Regional Coordination & Polycentric Development

The strategy for the polycentric development of metropolitan Stockholm in RUF 2010 is an important factor for promoting a more resource efficient region. Dense, mixed use areas beyond the core present

the chance to implement a transit oriented development strategy while also ensuring that more people can accomplish a greater range of tasks locally, reducing the number and length of trips. An analysis of the implementation strategy identifies some additional challenges that policymakers in growing regions should be aware of however. In Stockholm, two key areas that Nordregio studies showed to be in need of resolution are the need for concrete steps in the development of the urban cores in municipalities adjacent to Stockholm and related to this, a transformation away from municipal competition towards coordination, as illustrated in the case below. In RUF 2010, it is striking to note how well balanced the urban growth cores are around the region. Interviews with municipal planners in 2010 demonstrated a wide range of ideas on what a

designation as an urban core meant and help to underline the political nature of Stockholm County's development strategy. For some municipalities, the designation represented a clear opportunity that served as the catalyst for developing denser, more intensively used centres. For others, there was little interest in promoting urban qualities such as higher densities or a greater mix of uses. For these municipalities, the designation was more of an honor than the foundation for a new urban core. Ensuring that stakeholders are aware of their opportunities and responsibilities in becoming centres of growth is key to fostering an urban form that is more conducive to public transit and densification.⁸ Beyond this, several planners from smaller municipalities noted concern about competition between RUF 2010 designated cores and

areas that the City of Stockholm intended to develop. Such competition can result in a less efficient urban form with reduced density and increased travel distances. In fostering cooperation, policymakers have the opportunity to reduce competition between neighbouring municipalities by promoting strong regional coordination, where disagreements are solved through open dialogue and ongoing planning discussions. In doing so, common interests can be identified, municipal potentials enhanced and a better sense of understanding can be achieved. These efforts will facilitate planning coordination, which enhances strategic planning at the regional level, a key factor in promoting sustainability, and resource efficiency in particular, in Stockholm.

Polycentric Development and Municipal Competition:

The Flemingsberg Case

A Nordregio case study⁹ took a more detailed look into the development of the urban cores around Stockholm; Flemingsberg was one core that exemplified the issues that they faced. As an important hub of activity in southern Stockholm, the district of Flemingsberg, shared by two municipalities, Huddinge and Botkyrka, has the potential to achieve its designation as a regional growth core in the coming decades. However, in realizing its potentials outlined in RUFs 2010, Flemingsberg must deal with competition from nearby Alvsjö, which is located within the municipality of Stockholm and is home to a larger logistics centre and the biggest rentable conference space in Sweden; a source of some frustration. As argued by the planners in interviews with Nordregio, "Stockholm has had its own plan for Alvsjö even though it was not selected as a regional core, they still have similar ideas that we have for Flemingsberg. It's a competition between those." In this case, the City of Stockholm is working beyond the confines of the RUFs 2010 plan. When coupled with the fact that the inner city remains the strongest growth driver in the region; the potential for a

David and Goliath situation emerges; something that could potentially be mitigated through cooperation and dialogue. The planners dealing with Flemingsberg recognize this disadvantage and understand that despite polycentric initiatives, they remain somewhat dependent on the City of Stockholm, "This planning builds on the fact that Stockholm is growing. If Stockholm stops growing then it's not much use." In this sense, the case of Flemingsberg illustrates the importance of regional coordination but also the challenges with intra-regional competition.

Resources

Research projects

Sustainable Urban Metabolism for Europe (SUME)

Funded: European Commission, DG for Research (Framework Programme 7), Lead Partner: Austrian Institute for Regional Studies and Spatial Planning (ÖIR)
In SUME, Nordregio made significant contributions to a number of the study area, including urban scenarios for Stockholm, Newcastle & Marseille, a metabolic impact assessment on Stockholm Royal Seaport and an evaluation of governmental policies and strategies for resource efficiency.

Sustainable Land Use Policies for Resilient Cities (SUPER-CITIES)

Funded: FORMAS, part of the Urban-Net Programme, Lead Partner: Middle East Technical University (METU), Department of City and Regional Planning

In the SUPER-CITIES project, Nordregio analysed practices in implementing a polycentric strategy in the Stockholm urban agglomeration. The Stockholm case was chosen to illustrate the need for a broader understanding of resilience in actual land-use planning to the extent that a governance system can be viewed as a resilient structure that is flexible and adaptable to rapid change at the city-regional level.

Endnotes

¹ EU FP-7 SUME Project, Planning Resource Efficient Cities: SUME Synopsis & Synthesis Report, SUME, Vienna, Austria, 2011. And P Schmitt, L Greve Harbo, A Tepecik Diş & A Henriksson, 'Polycentricity and Urban Resilience – The Case of the Stockholm

Urban Agglomeration' in Eraydin, A./Tasan Kok, T. (eds.) *Resilient Thinking in Urban Planning*, Springer, New York, 2012, forthcoming.

² Stockholms läns landsting, Regional utvecklingsplan för Stockholmsregionen: RUFs 2010, Stockholm County Council, 2010.

³ The City of Stockholm Planning Administration, *The Walkable City: Stockholm City Plan*, The City of Stockholm, Stockholm, 2010.

⁴ The City of Stockholm Executive Office, *Vision 2030: A Guide to the Future*, The City of Stockholm, Stockholm, 2007.

⁵ A Blomquist, *Fakta om SL och Länet 2007*, Storstockholms Lokaltrafik, Stockholm, 2008.

⁶ EU FP-7 SUME Project, Planning Resource Efficient Cities: SUME Synopsis & Synthesis Report.

⁷⁻⁹ SUPER-CITIES Urban Net Programme, Sustainable Land Use Policies for Resilient Cities, SUPER-CITIES, Ankara, Turkey, 2011.

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