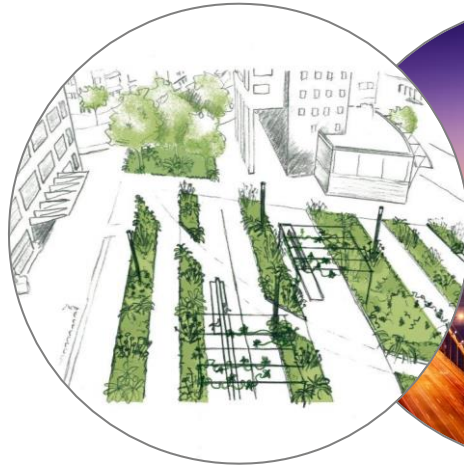


Natuurinclusief ontwikkelen in hoge dichtheid

Vervolgstappen: hoe kunnen verdichten en natuurlijke & leefbare stad samengaan?

Dr. ir. Robbert Snep – sr onderzoeker Groene Steden





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Loop

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N Clark St







Delft
Architectural
Studies
on Housing

Experimental
Housing

Experimentele
woningbouw



naaike uitgevoerd
/ publicatie



wijk-natuur

gebouw
-natuur

Natuur-
inclusieve
woonwijk

straat-
natuur

tuin natuur

straatgroen

HOUSING FOR SENIORS
KAMPUNG ADMIRALTY
SINGAPORE (WOHA)

wijkgroen





Westertrekvaart, Amsterdam

VORM, Cie, Flux Landscape Architecture, de Architecten Cie., Temp.architecture, en Raumplan.



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Contents lists available at [ScienceDirect](#)

Urban Forestry & Urban Greening

journal homepage: www.elsevier.com/locate/ufug



Review

Challenges and strategies for urban green-space planning in cities undergoing densification: A review



Christine Haaland*, Cecil Konijnendijk van den Bosch

Swedish University of Agricultural Sciences, Department of Landscape Architecture, Planning and Management, Box 58, SE-230 53 Alnarp, Sweden

ARTICLE INFO

Article history:

Received 8 April 2014

Received in revised form 22 July 2015

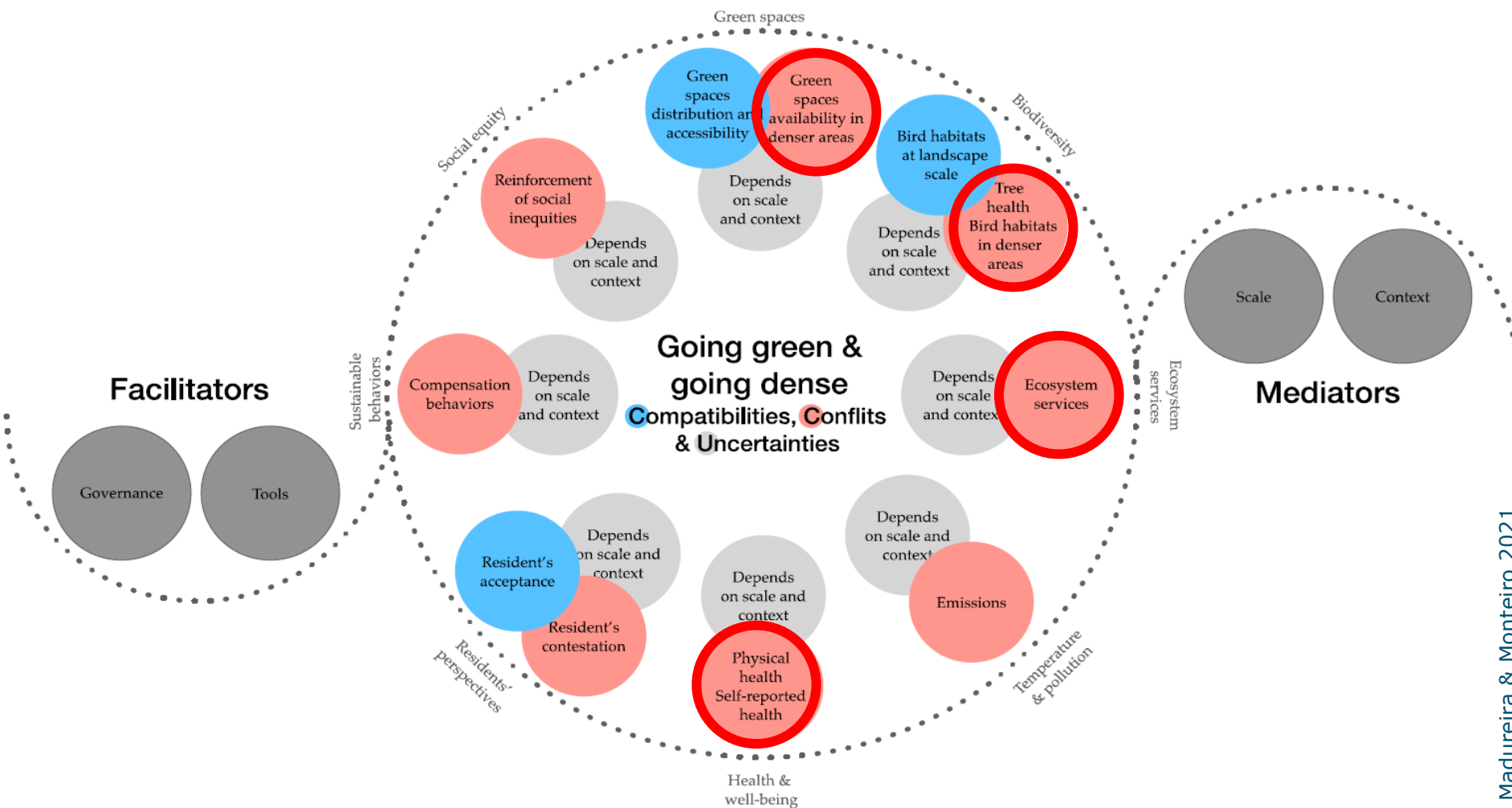
Accepted 23 July 2015

Available online 18 August 2015

ABSTRACT

The compact city approach has gained global impact as a planning approach for sustainable development in areas with increasing urban population. Through densification and compact building, the approach aims to counteract negative effects of urban sprawl in terms of ineffective land-use and related environmental problems. In spite of its benefits various problems and challenges are associated with

Going Green and Going Dense: A Systematic Review of Compatibilities and Conflicts in Urban Research



Artist impression



Realiteit

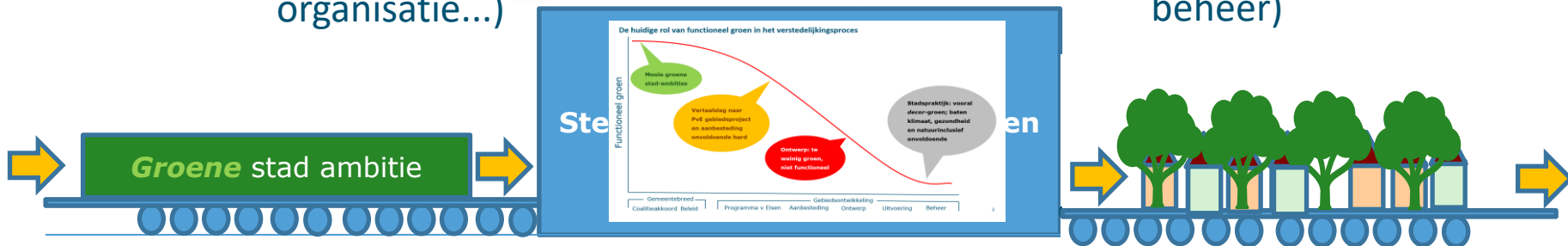




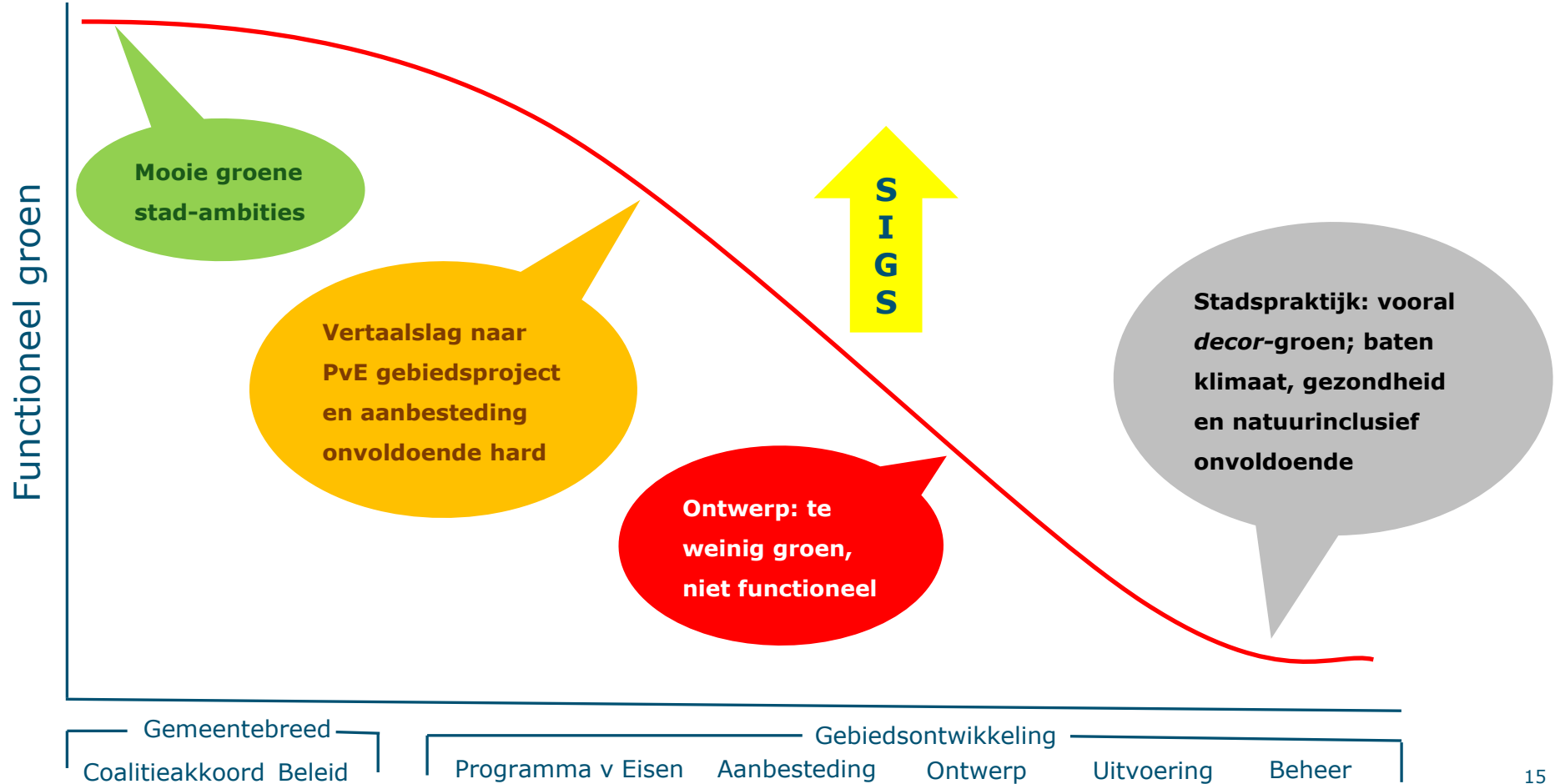
Strategie
(financiering,
normering,
organisatie...)



Uitvoering
(ontwerp,
inrichting &
beheer)



De huidige rol van functioneel groen in het verstedelijkingsproces



Succesvol Implementeren Groene Stadsontwikkeling (SIGS)

Topsectorproject Tuinbouw & Uitgangsmaterialen 2020-2023

gemeente Alphen aan den Rijn

gemeente Almere

gemeente Amsterdam

gemeente Dordrecht

gemeente Ede

gemeente Eindhoven

gemeente Gorinchem

Gemeente Groningen

Gemeente Haarlemmermeer

gemeente Leeuwarden

gemeente Utrecht

gemeente Zwolle

Staatsbosbeheer

NEPROM - Vereniging voor Nederlandse Projectontwikkeling Maatschappijen

BNSP - Beroepsvereniging Nederlandse Stedenbouwkundigen en Planologen

Tom van Tuijn stedenbouw

BNA - Branchevereniging Nederlandse Architectenbureaus

FAAM architecten

NVTL - Nederlandse Vereniging voor Tuin- en Landschapsarchitectuur

Vereniging Stadswerk

Stichting De Groene Stad

Nederlandse Cultuurgroep voor Rozen en Rozenonderstammen

VHG - Vereniging Hoveniers & Groenvoorzieners

NL Greenlabel

Wageningen University & Research (WUR)

<https://www.groenestadsontwikkeling.nl/>

Over SIGS



Het project 'Succesvol Implementeren Groene Stadsontwikkeling' (SIGS) staat in het teken van implementatie van functioneel groen in projecten voor stadsvernieuwing en -uitbreiding. Het doel hiervan is om stedelijke professionals van evidence-based kennis te voorzien over het

Praktische kennis



Wil je aan de slag met het realiseren van functioneel groen binnen jouw project of stad? Binnen SIGS zijn verschillende producten met praktische kennis gepubliceerd en verzameld. Deze praktische kennis en handvatten van WUR, aangevuld met informatie van SIGS partners,







Achtergrondinformatie



Meer weten over groene baten, de mechanismen achter het functioneren van groen en hoe stedelijk groen het beste ingezet kunnen worden in de stedenbouwkundige praktijk? Kijk dan bij 'Achtergrondinformatie'. Hier zijn de producten van WUR en SIGS partners gebundeld die dieper

REVIEW AND SYNTHESIS

Denser and greener cities: Green interventions to achieve both urban density and nature

Robert I. McDonald^{1,2,3}  | Myla F. J. Aronson⁴  | Timothy Beatley⁵ | Erin Beller⁶ |
Micaela Bazo⁷ | Robin Grossinger⁷ | Kelsey Jessup⁸  | Andressa V. Mansur^{9,10}  |
José Antonio Puppim de Oliveira¹¹  | Stephanie Panlasigui⁷ | Joe Burg⁷ |
Nicholas Pevzner¹² | Danielle Shanahan^{13,14} | Lauren Stoneburner⁷ | Andrew Rudd¹⁵ |
Erica Spotswood⁷ 

¹Center for Sustainability Science, The Nature Conservancy in Europe, Berlin, Germany; ²CUNY Institute for Demographic Research, New York, New York, USA; ³Humboldt University, Berlin, Germany; ⁴Department of Ecology, Evolution, and Natural Resources, Rutgers, The State University of New Jersey, New Brunswick, New Jersey, USA; ⁵School of Architecture, University of Virginia, Charlottesville, Virginia, USA; ⁶Real Estate & Workplace Services Sustainability Team, Google, Mountain View, California, USA; ⁷Urban Nature Lab, San Francisco Estuary Institute, Richmond, California, USA; ⁸The Nature Conservancy in California, San Francisco, California, USA; ⁹Department of Anthropology, University of Georgia, Athens, Georgia, USA; ¹⁰Institute for Resilient Infrastructure

TABLE 1 Urban forms and green interventions

Green intervention	Single-family detached	Rowhouse	M
<i>Land sparing interventions (interventions generally take space from development)</i>			
Preserve remnant patches	Low ^a	Low ^a	H
Maintain riparian corridors	Low ^a	Low ^a	H
Create managed parks	Low ^a	Low ^a	H
Build home gardens/backyards	High ^c	Medium ^c	Lc
Create stormwater GI	High	High	M
<i>Land sharing interventions (interventions do not generally take space from development)</i>			
Greening vacant lands	High	Medium	Lc
Instal green roofs/facades	Low ^e	Low ^e	M
Increase vegetation around perimeter	Low	Low	M
Increase vegetation along streets/ROW			

FIVE METHODS THAT CAN CREATE MORE URBAN NATURE

1. NUMBER OF GREEN SQUARE METRES

The municipalities can be required to estimate the number of green square metres in their cities according to a uniform definition.

2. BIOFACTOR

An ambitious minimum requirement for a biofactor for building and renovating in cities can be provided at a national level. This factor must apply to both private and public projects.

3. DISTANCE TO GREEN AREAS

The maximum walking distance for inhabitants in metres to a green area, which is public and of a certain size, can be established.

4. GREEN INFRASTRUCTURE

Requirements can be made along the lines that new buildings must, as far as possible, have green roofs and that the municipalities must prioritise and encourage the construction of green infrastructure, such as green facades and nature-based climate adaptation.

5. TREES IN THE CITY

All municipalities can develop a tree policy which protects existing trees and which at the same time focuses on species diversity. The policy can also include a concrete plan for increasing the number of trees in the city.

FIVE METHODS THAT CAN CREATE BETTER URBAN NATURE

6. MAP ECOSYSTEM SERVICES

Requirements can be made for the ecosystem services to be mapped before an urban area is developed or transformed and for a report to be made of how a given project may affect the ecosystem services. This can apply to both private and public projects.

7. MITIGATION HIERARCHY

When building or renovating, an evaluation based on the mitigation hierarchy can be carried out regarding which initiatives to launch in order to avoid, minimise, restore and offset the impact of the initiatives on the value of nature and the ecosystem services. This can be a prerequisite for the approval of the project.

8. ECOLOGICAL OFFSETTING

Municipalities and private developers can be obliged to fully offset the damage they cause to the ecosystem services and the value of nature in urban development. Compensation must only be a last resort after the parties involved have sought to avoid, minimise or restore the damage.

9. WILD NATURE AND QUALITY OF NATURE

The municipalities can be required to switch to more nature-like operations on the areas of the municipality where recreational use is not significantly in the way. They can also be required to measure the quality of nature in the cities' green areas on an ongoing basis.






10. ECONOMY OF URBAN NATURE

Requirements can be made to examine the economic value of relevant green areas and urban nature before decisions are made on how to de

ENVIRONMENTAL RESEARCH LETTERS

LETTER

Residential environments across Denmark have become both denser and greener over 20 years

Karl Samuelsson¹ , Tzu-Hsin Karen Chen^{2,3,4} , Sussie Antonsen^{3,5,6}, S Anders Brandt¹ , Clive Sabel^{2,3} 
and Stephan Barthel^{7,8} 

¹ Department of Geospatial and Computer Sciences, University of Gävle, Gävle, Sweden

² Department of Environmental Science, Aarhus University, Roskilde, Denmark

³ Danish Big Data Centre for Environment and Health (BERTHA), Aarhus University, Aarhus, Denmark

⁴ Department of Geosciences and Natural Resource Management (IGN), University of Copenhagen, Copenhagen, Denmark

⁵ Department of Economics and Business Economics, Aarhus University, Aarhus, Denmark

⁶ Centre for Integrated Register-based Research (CIRRAU), Aarhus University, Aarhus, Denmark

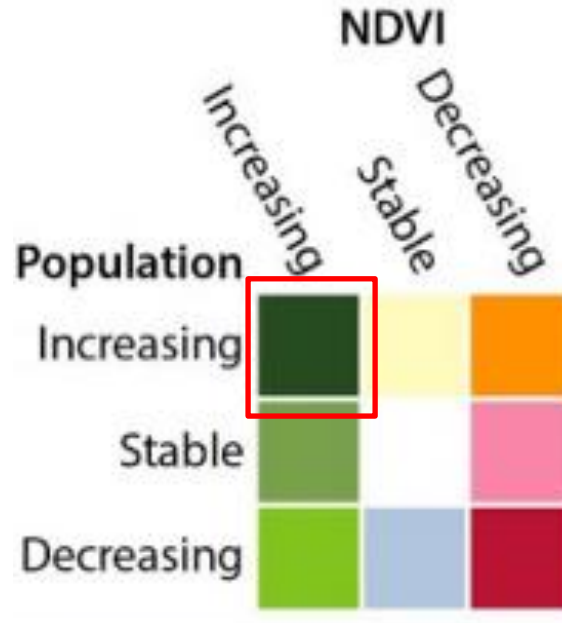
⁷ Department of Building Engineering, Energy Systems and Sustainability Science, University of Gävle, Gävle, Sweden

⁸ Stockholm Resilience Centre, Stockholm University, Stockholm, Sweden

E-mail: karl.samuelsson@hig.se

Keywords: urban densification, urban greening, remote sensing, population register, urbanisation dynamics

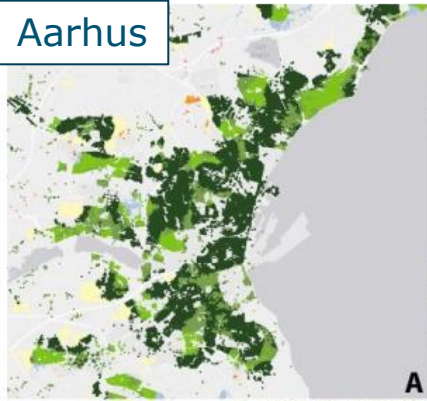
Change in NDVI and population within 500 m



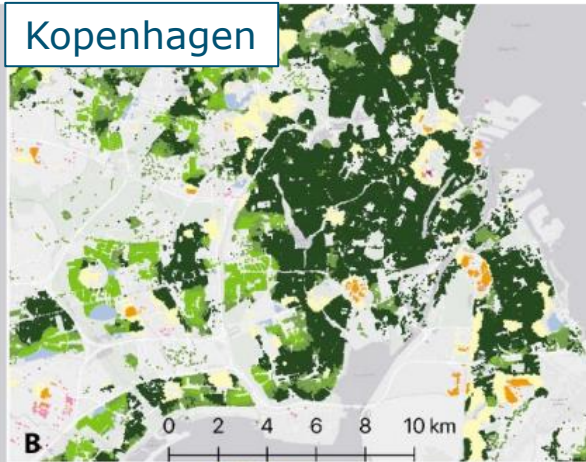
NDVI= % stedelijk groen waargenomen via satelliet/luchtfoto

Population=
dichtheid bewoners

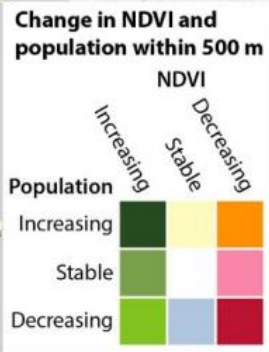
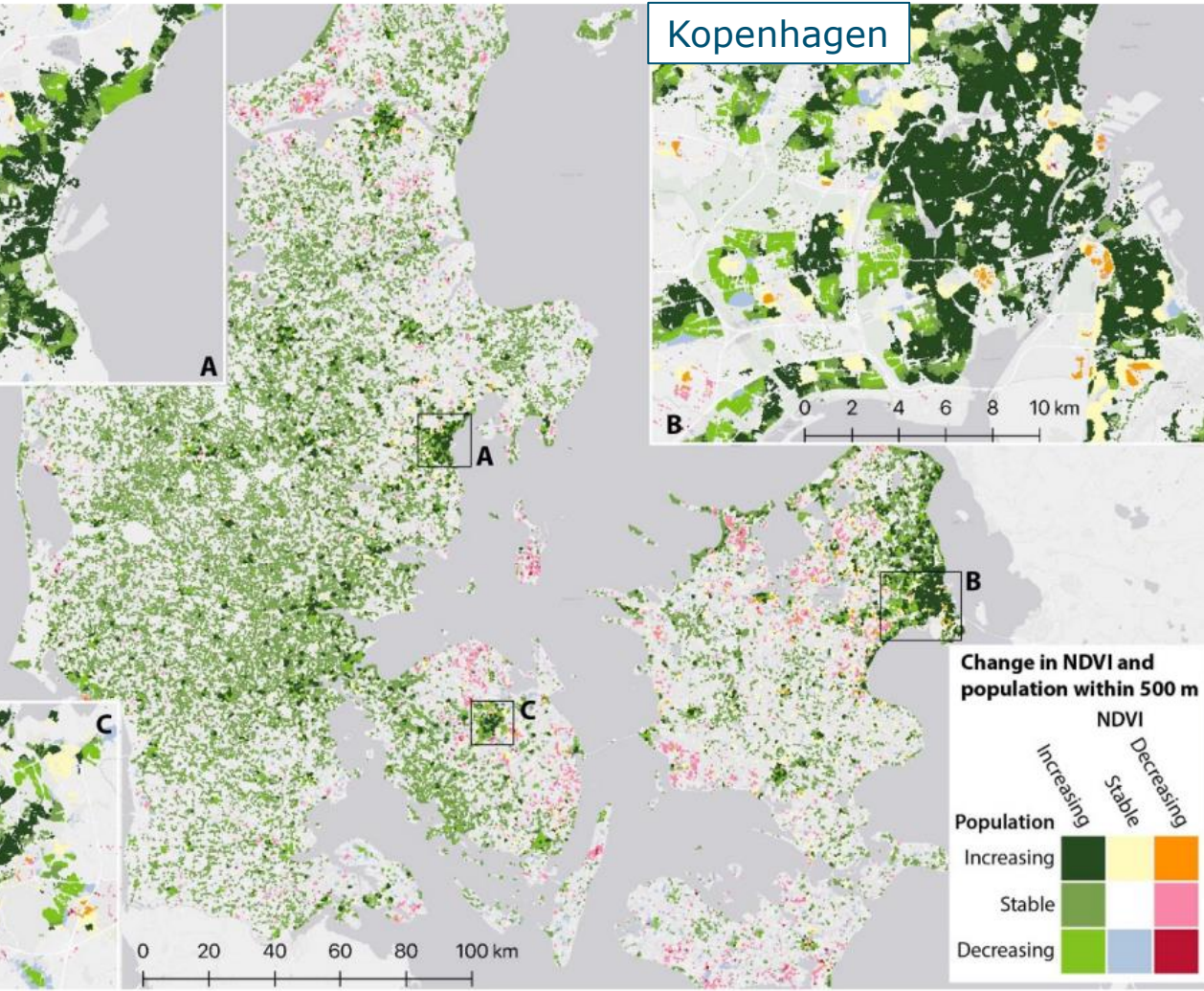
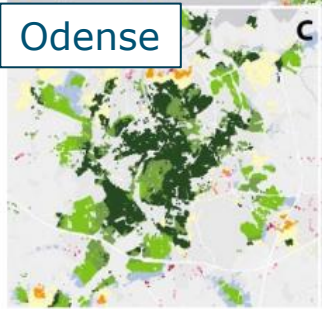
Aarhus



Kopenhagen



Odense



Copenhagen Is Getting An Exciting New Green City Park In Front Of Tivoli

 KATHERINE NOTMAN - STAFF WRITER · DECEMBER 2, 2020



The project has been given the green light to go ahead.

[in-park-copenhagen/#](#)

schaal

overheid

private partijen

actie

samenwerking

Stad & omgeving

Plaats
(omgeving)

Openbare
(OR)
Relatie
tussen
schalen

Private
bouw

Gebouwen

Dank voor uw aandacht!

Robbert.snep@wur.nl

