Metropolitan Landscape
Definition, Mapping, and Governance

Nefs, Merten

Publication date
2022

Document Version
Final published version

Published in
Teaching, Learning & Researching Spatial Planning

Important note
To cite this publication, please use the final published version (if applicable).
Please check the document version above.

Teaching, Learning & Researching
Spatial Planning

Edited by Roberto Rocco, Gregory Bracken,
Caroline Newton & Marcin Dąbrowski

TU Delft
BK Bouwkunde

TU Delft OPEN

SPS

Teaching, Learning & Researching
Spatial Planning

TOOLS, CONCEPTS AND IDEAS TAUGHT AT THE SECTION OF SPATIAL PLANNING AND STRATEGY OF THE

OF URBANISM, FACULTY OF ARCHITECTURE AND THE BUILT ENVIRONMENT

DELFT UNIVERSITY OF TECHNOLOGY, THE NETHERLANDS.

COVER: TU DELFT CENTRAL LIBRARY BY MECANOO ARCHITECTS, TU DELFT. PHOTO BY R. ROCCO (2019).

Metropolitan Landscape
Definition, Mapping, and Governance

MERTEN NEFS

PHD CANDIDATE AT THE DELFT UNIVERSITY OF TECHNOLOGY & ERASMUS SCHOOL OF ECONOMICS, M.NEFS-1@TUDELFT.NL

This chapter revisits the most significant international definitions of the metropolitan landscape. It shows methods of mapping and measuring the metropolitan landscape, most of them developed at TU Delft. Additionally, it discusses one of the tools that can be used to develop the metropolitan landscape and reflect on its qualities and challenges: the Community of Practice (CoP). The organisation and some of the outcomes of a Dutch CoP for metropolitan landscape development (coordinated by the Deltametropolis Association 2016-2023) are highlighted. The chapter draws conclusions on metropolitan landscape challenges and sets an agenda for spatial planning and research in this field.

METROPOLITAN LANDSCAPE, SPATIAL PLANNING, QUALITY OF LIFE, CARTOGRAPHY, COMMUNITY OF PRACTICE

1. Introduction

In our highly urbanised world, in which planners attempt to solve different problems and integrate several policy agendas simultaneously, the concept of metropolitan landscapes has become increasingly important. After all, how do we call the backcloth and the stage on which the energy transition, climate adaptation, and other major spatial transformations of our time play out? Furthermore, the environmental quality and accessibility of the metropolitan landscape is, for a large part, responsible for the quality of life and well being in cities, and therefore also their economic competitiveness in the global arena.

In this chapter, we revisit the most significant international definitions of the metropolitan landscape. It shows methods of mapping and measuring the metropolitan landscape, most of them developed at TU Delft: metropolitan landscape characterisation (Tisma et al.), spatio-visual characteristics of landscape spaces (Nijhuis), territories-in-between (Wandl), diagrams for international comparison (Nefs) and urban-rural planning forces (PBL, the Netherlands Environmental Assessment Agency).

Additionally, we discuss one of the tools that can be used to develop the metropolitan landscape and reflect on its qualities and challenges: the Community of Practice (CoP). No single authority is responsible for the metropolitan landscape. Therefore, planners from public and private entities continuously explore better ways to collaborate and share their experience. The organisation and some of the outcomes of a Dutch CoP for metropolitan landscape development (coordinated by the Deltametropolis Association 2016-2023) are highlighted.

The chapter ends with conclusions on crucial metropolitan landscape challenges and sets an agenda for spatial planning and research in this field.

2. Definitions of the metropolitan landscape

The metropolitan landscape has inspired many geographers and planners to define aspects of it in intriguing terms, such as the *Zwichenstadt* by Thomas Sieverts, Edge City by Joel Garreau, and Post-suburbia by Edward Soja. The lack of a more holistic view has made the metropolitan landscape into a fuzzy, fragmented, and complex field of work (Harms et al., 2004). The overlapping and blurring of land use functions, such as residential and agricultural use, contributes to this fuzziness, as does the blending of the key spatial divisions urban and rural into the so-called peri-urban. According to Piorr and Ravetz (2011), large parts of Europe and more than half of the Netherlands are in fact peri-urban. In landscape conservation circles, a less fuzzy and more holistic landscape definition is used – an area perceived by people, also including infrastructural and brownfield landscapes, since the European Landscape Convention of 2000.

The conflict of economic, social, and political interests is common in the metropolitan landscape, which is why planners are increasingly being forced to investigate it. In the Netherlands especially, the economic use and interests have played a large part in the planning and shaping of the (metropoli-

tan) landscape. Already in the seventeenth century, landscape transformations and cultivation were related mainly to business models, 'making a living' or showing off one's wealth (Steenhuis, 2019). The nineteenth-century paintings of Vincent van Gogh often depict landscapes as places of transformation and hard labour – one of the reasons for the recently founded Van Gogh National Park in a (today highly urbanised part of) Noord-Brabant. During the 2017 Landscape Triennial, Persian-Dutch writer Kader Abdolah reflected on the strong economic roots of the Dutch landscape, and the way it shapes its citizens:

> The spirit of the merchant is so powerful in this lowland, with its swamps, that the spirit sets firmly into its body. Sometimes it can take thirty or fifty years, but there is no escaping from it (Feddes & Nefs, 2018: 90)

In our neoliberal time, the metropolitan landscape has been characterised as a battleground for economic developments (Ambrose, 1992; Nefs, 2021; Scott et al., 2013). Landscape architect Hough observes that 'it has long been the fate of the rural landscape at the edge of the city to be the raw material for housing subdivisions, industrial estates, and mobile-home parks. [...] The changing scene at the edge and the placelessness that goes along with it has become a battleground between efforts to preserve rural land and the relentless forces of urbanisation' (1990: 88). Today, besides housing and industry, there are also wind and solar parks, various transport infrastructures, recreational facilities, and other functions demanding space at the urban fringe. If we allow planners to nudge those functions to the places where they are still acceptable,

without aiming for a holistic approach, we get what Dirk Sijmons calls 'a landscape from hell'. At the same time, the metropolitan environment is increasingly being listed as a valuable asset for urban quality of life, as well as a tool for improving health and retaining (possibly even attracting) talent in a region. In Dutch economic policies, however, metropolitan landscape has been a blind spot for a long time (Luttik et al., 2008; Vereniging Deltametropool, 2016).

These definitions provide several perspectives to discuss and work with the metropolitan landscape concept. However, to use it in spatial planning, we need to go one step further to visualise and map the metropolitan landscape.

3. Mapping the metropolitan landscape

'The map is not the territory'. This truth applies especially to the metropolitan landscape. However, it is possible to understand important aspects of the metropolitan landscape by using different types of cartography. A complete overview would be impossible in one chapter, but we will revisit five recent maps made in the Netherlands, three of them at TU Delft. The first three focus on the hybrid morphology of the metropolitan landscape, building on the ideas of the urban network (Baccini & Oswald, 2008), the horizontal metropolis (Viganò et al., 2018) and the in-between city (Sieverts, 2001). The fourth focuses on its general geographical structure in contrast to other metropolises, while the fifth focuses on rural-urban planning powers. All five used geographical information systems (GIS) at some point in the process.
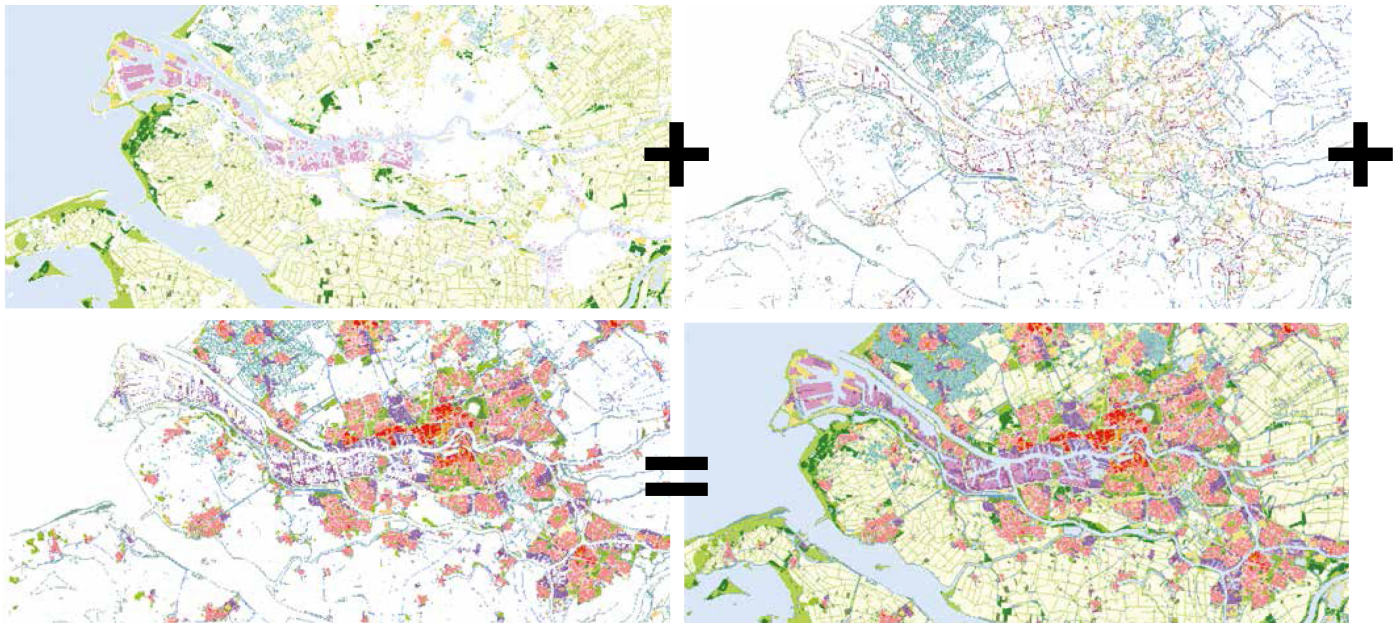
Figure 1: Details of cluster analysis of the Metropolitan Landscape Characterization study, focusing on the Rotterdam area. Tisma, Van der Velde, Nijhuis & Pouderoijen, 2014.

As we have seen above, the metropolitan landscape contains urban, rural, and peri-urban landscape types, but where are these located precisely, and how can we separate one type from another if they look like a blend? In their work on the Rotterdam area, Tisma et al. (2014) break the metropolitan landscape apart statistically, in small grid cells with a certain combination of land-use types. It turns out that about a third of the metropolitan landscape is neither predominantly urban nor rural, but rather one of many hybrid forms of both. Additionally, they use so-called cluster analysis. They discover that only some land uses are found in large continuous areas – mostly agriculture, nature reserves, water, and Rotterdam's port area. Especially (peri)urban areas are largely discontinuous, forming edges and patches with a mix of land uses, as shown in Figure 1.

Spatial planning laws in most countries deal with either rural or urban areas and do not have clear statements about the hybrid areas. Traditionally, these regions have been ignored in spatial plans or lumped into one of two major categories. Even though there will probably not be a special law for hybrid landscapes, the introduction of hybrid land use categories helps planners to be more specific in their spatial plans in metropolitan areas and to cross their disciplinary boundaries when needed. For hybrid landscape types to be useful in practice though, land use is not always enough. What a plot of land looks like is not necessarily determined by how it is used. In a study for the Arnhem-Nijmegen region (Vereniging Deltametropool, 2017b: 66), Nijhuis combined 25 land-use types with six dominant visual characteristics into a set of 150 categories of the urban-rural continuum (Figure 2). This nuanced perspective opens the door to planning areas that have previously gone unnoticed and have largely unknown cultural and ecological values. Using the characteristics of the metropolitan landscape in
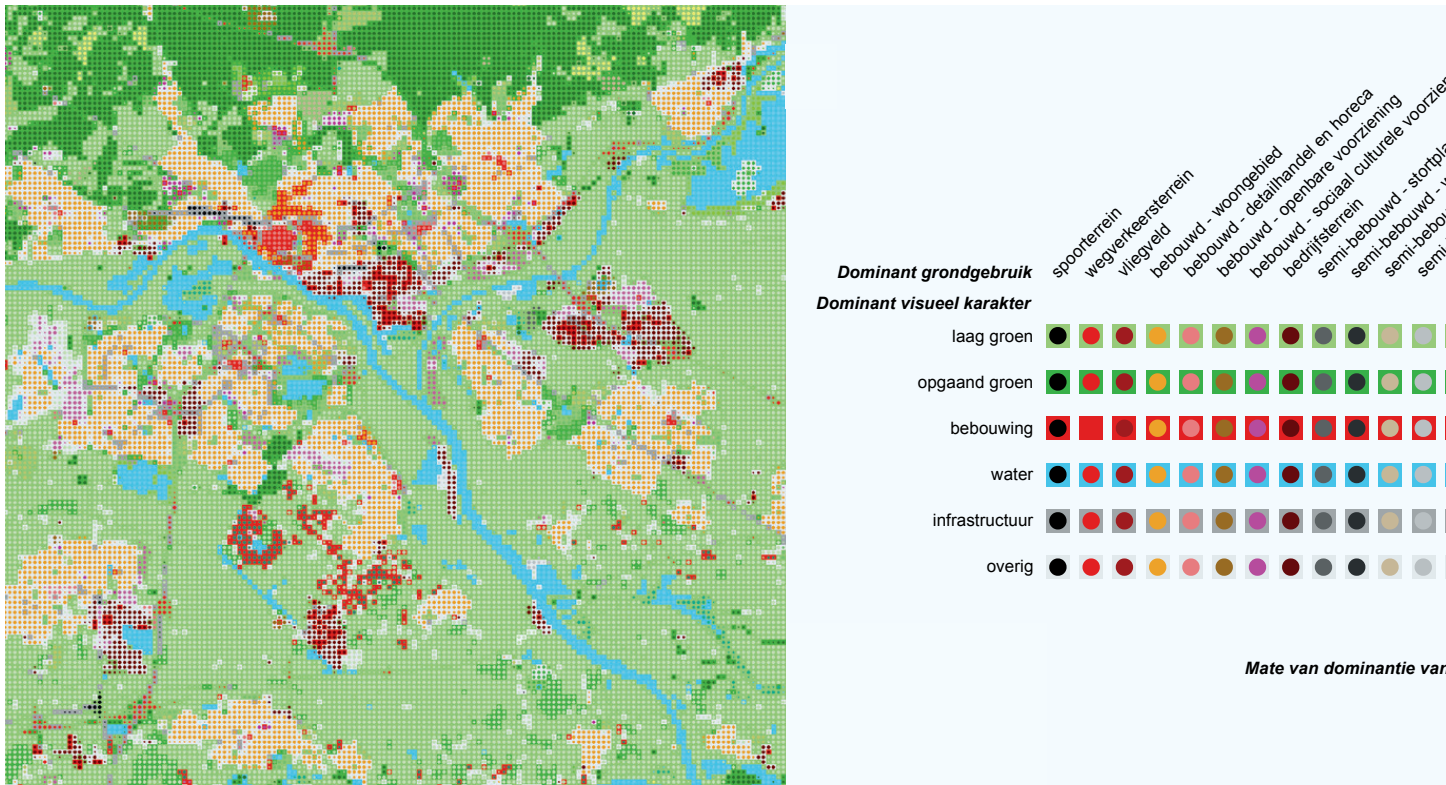
Figure 2: The urban-rural continuum in the Arnhem-Nijmegen region. Nijhuis, 2017.

planning necessarily means making it political: how can interventions in parts of the metropolitan landscape realise social, environmental and economic policy goals? In his work on territories in-between, Wandl (2020) recommends not to be blinded by the black and white view that separates urban from rural and condemns urban sprawl. There are indications that the mixed and hybrid areas between the extremes play an essential role in keeping metropolitan areas liveable and sustainable since these areas can produce ecosystem services for those who live nearby. Wandl promotes a combination of the usual functional zone planning of the territory with network urbanism, which for example links consumers to producers in a metropolitan area. An example of such a link is the availability of green space, which provides recreation, clean air and

other services to the inhabitants. A region which can offer this, is considered more sustainable. Figure 3 shows the calculated potential for sustainability in territories in-between.

Metropolitan regions around the world use per-

Figure 3: Potential for sustainability in territories in between, mapped for South Holland. Wandl, 2020.

ceptions of their metropolitan landscape to present themselves in the global arena, for example, as an excellent place to live and work in the battle for talent, or an exciting place to visit. Such perceptions also frequently form the assumption underneath spatial and economic policies in these areas. The complex and technical approaches described above do not always work in these discussions with a diverse group of public and private stakeholders. The abstract metropolitan landscape diagrams by Nefs (Vereniging Deltametropool, 2016) communicate a simple perception of the metropolitan landscape in a region. For example, that the Dutch Randstad can be seen as urban agglomerations situated around a Green Heart in the Rhine Delta, while Greater London is a dense monocentric metropolis at the river Thames, surrounded by a greenbelt. To enhance perception and experience, travel time from the
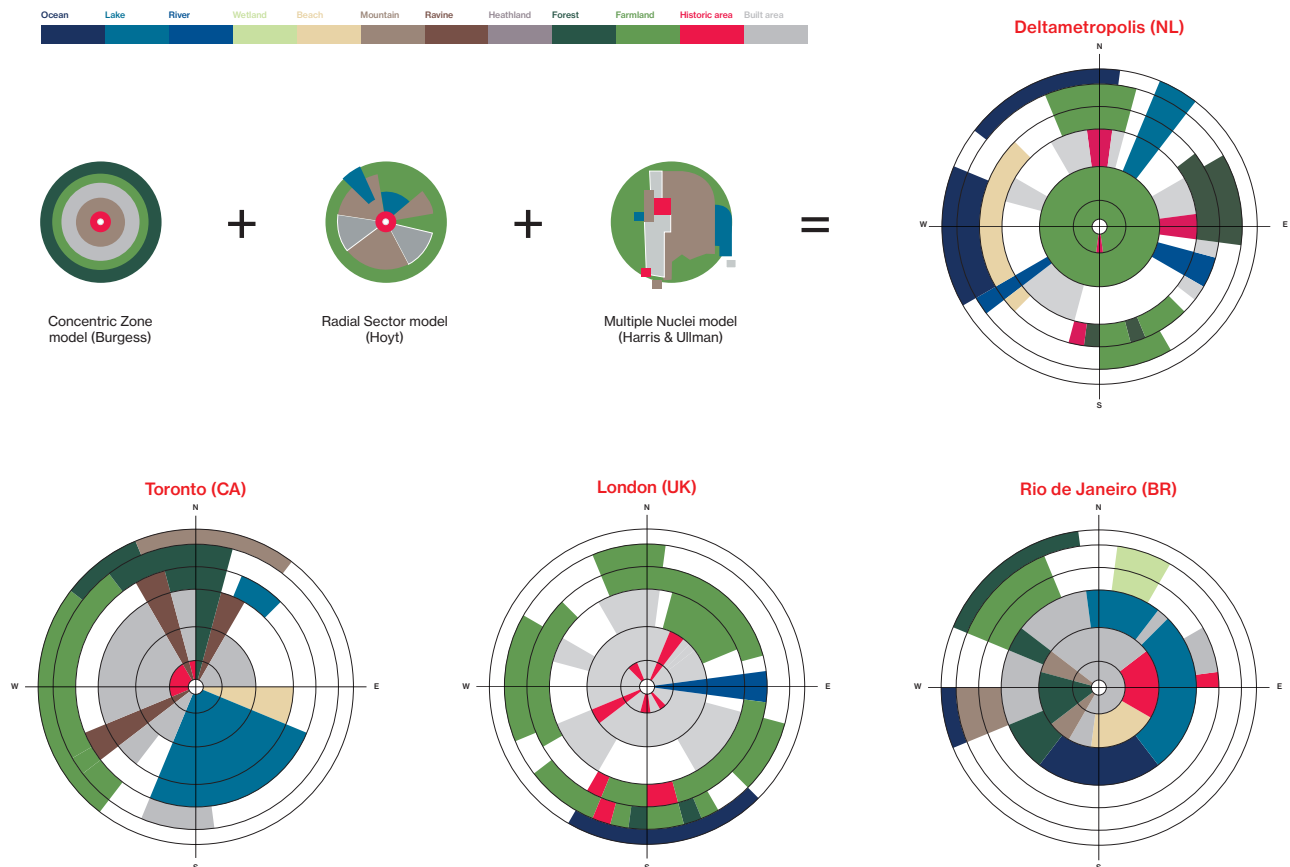
in het grondgebruik

Figure 4: Metropolitan landscape diagrams for the Deltametropolis, London, Toronto and Rio de Janeiro. Nefs, 2016.
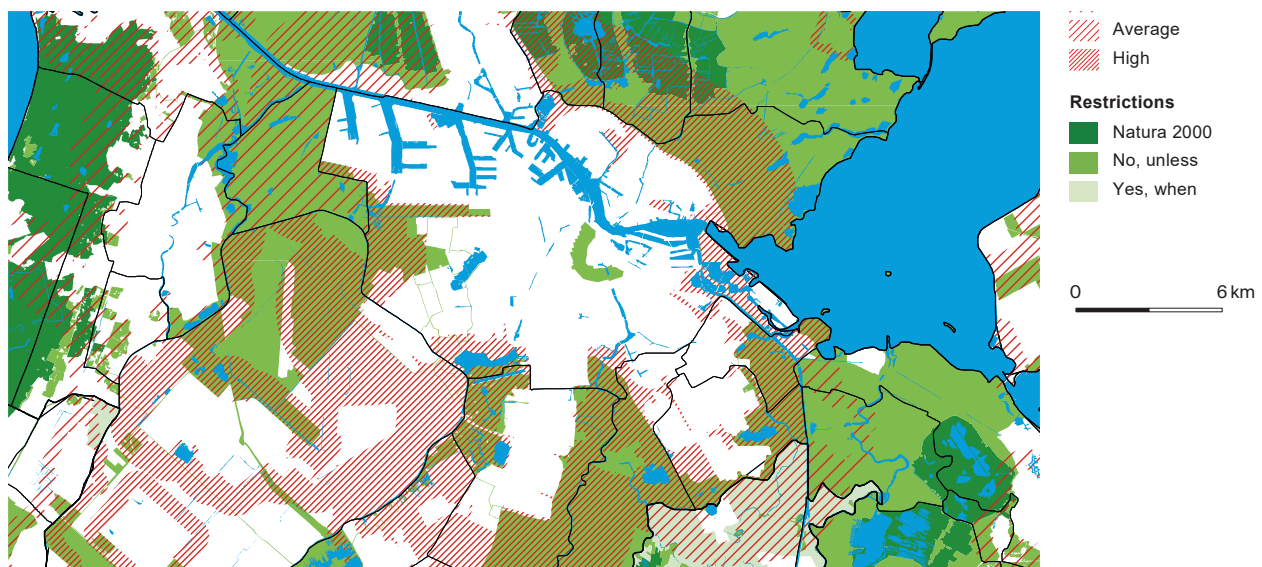
Figure 5: Red and green pressures mapped for the Metropolitan Region of Amsterdam. PBL, 2019.

population centre is used instead of physical (Euclidean) distance. The diagram (Figure 4) uses well-known geographical concepts such as the belt, the wedge and the multiple nuclei or zoning model. This makes diagrams comparable across countries.

The spatial planning regime itself, and how it plays out in different parts of the metropolitan landscape, can also be mapped. The Environmental Assessment Agency of the Netherlands (PBL) drew up the so-called red and green pressures in the metropolitan region of Amsterdam, showing development plans for new residential areas in red and restrictive policies and nature development in green. Figure 5 demonstrates clearly that these pressures meet in the urban fringe. Naturally, this is also where the largest and most significant planning discussions take place, as well as where important social trade-offs are made. For example, certain recent expansion plans of Amsterdam are considered important and sustainable, despite the transformation of open space on the urban fringe, since realising housing developments farther away would increase mobility and the commutes of thousands

of people who work in Amsterdam. As a compensation, financial means and land are used to increase biodiversity, water buffering, and recreational areas near such urban developments on the urban fringe of Amsterdam.

4. Working on the metropolitan landscape in a Community of Practice

In the section above, we have seen how different aspects of the metropolitan landscape can be visualised, to understand and plan these areas better. We have also noticed that the metropolitan landscape is very fragmented and hybrid in terms of urban and rural land uses, visual characteristics, and political perceptions. The institutional landscape in most metropolitan areas is equally fragmented and hybrid, including several overlapping government layers, planning scales, and sectoral departments, such as housing, agriculture, and infrastructure. To improve the region's quality and

socio-economic results, an integrated approach is required; however, how can this be accomplished in such a setting? Institutional reform is a possibility, albeit a slow and politically difficult route. This chapter discusses another option: keeping the institutional construct the way it is while working together in a Community of Practice (CoP).

A Community of Practice is a group of people and/or organisations who share a common goal. By sharing information and experiences, new solutions are found quicker in such a CoP than in normal circumstances, and they are put into practice earlier (Andringa & Reyn, 2014; Cummings & van Zee, 2005). In short, in a CoP, the participants learn together in practice. This is different from a Community of Learning - usually organised by an educational institute, in which participants (students, teachers and externals) learn from each other in a societal context. In the CoP, the issue is leading, while in the CoL, the institute is leading. In principle, both forms

are fitted to learn how to deal with complex 'wicked' problems. The CoP as a way of working is 'of all times', although its name and discussion in Dutch practice started around 2000 (Brood & Coenders, 2004).

The CoP Landscape as Location Factor (in Dutch *Landschap als Vestigingsvoorwaarde*) is based on the idea that metropolitan landscape development, while it is often regarded as a cost, is, in fact, a great asset in the economic performance of a region. Among the many hard location factors that businesses weigh when deciding whether to settle or remain in an area, access to talent has become one of the most critical. Talented workers are scarce and only settle in regions of excellent quality of life – strongly correlating with high-quality metropolitan landscape. This makes landscape, usually regarded as a soft factor, a priority for governments who wish to maintain or enhance their business climate and attractiveness. The goal of the CoP is to bring this

Figure 6: Landscape Triennial 2017 book presentation, joining CoP participants, researchers, planners and designers, students, entrepreneurs, citizen groups, politicians and policymakers. Photo Mirande Phernambucq. Printed with permission.
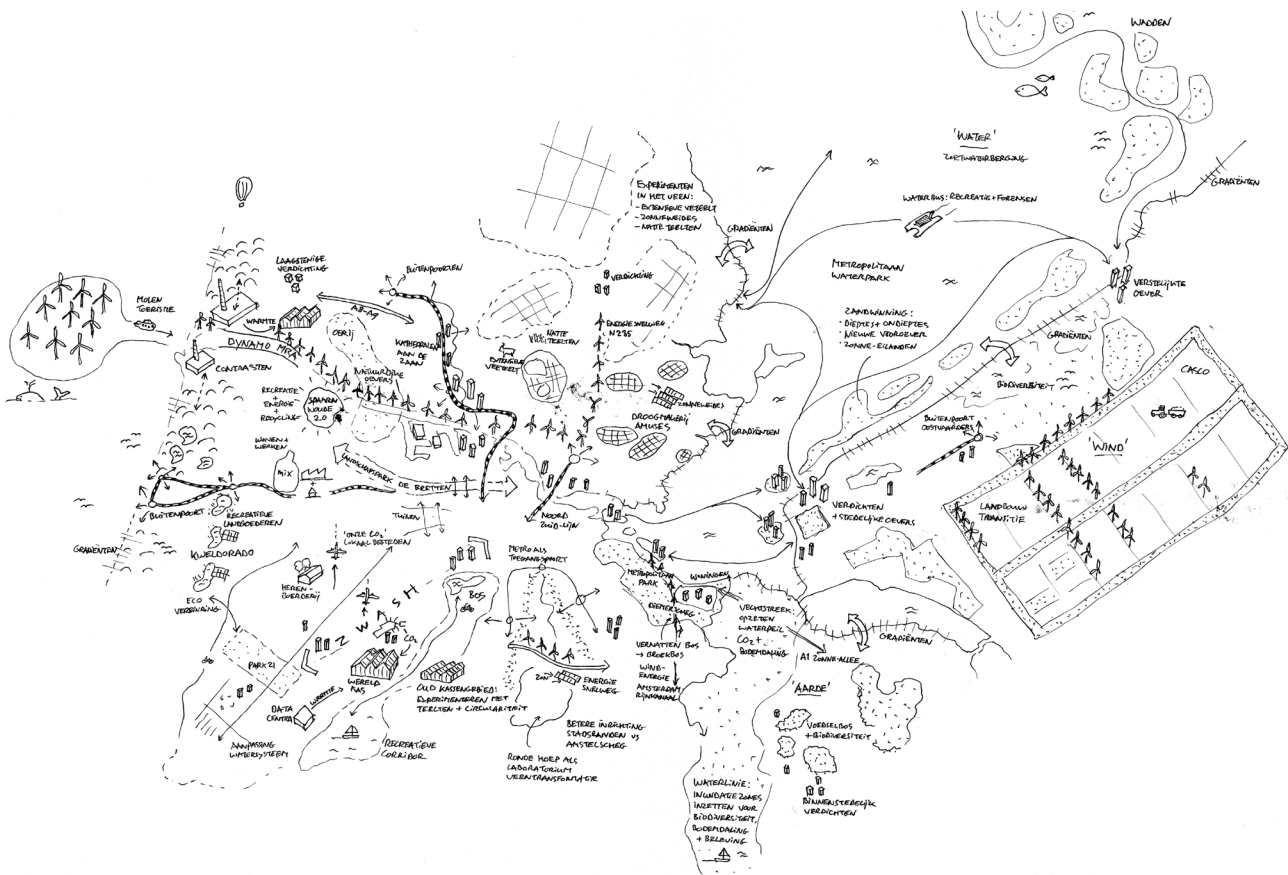
Figure 7: Metropolitan landscape co-development. Compilation of concepts and project ideas from 16 atelier sessions in 8 areas in the Metropolitan Region of Amsterdam. Nefs, 2019

idea into practice through policies and projects and learn as much as possible about the relationship between metropolitan landscape and economy.

Research comparing ten regions of 10 million inhabitants was the starting point for the CoP. The research (Vereniging Deltametropool, 2016) indicated that many metropolises worldwide had already made landscape investments as part of their economic policy, but that this remained a blind spot in the Netherlands' spatial-economic policies. Several Dutch regions reacted with enthusiasm to this message, since they were struggling to get landscape investment on the agenda, and out of the usual defensive discussion. A proactive economic landscape discourse made that possible. Together with three national governmental organisations, four regions founded the CoP to be coordinated by the Deltame-

tropolis Association. The community, which arose from collaborations in 2017 and became formalised in 2018, is funded and programmed to function until 2023.

Besides the founders (National Heritage Agency, National Forest Service, Board of Government Advisors, Deltametropolis Association, and the Provinces of Noord-Brabant, Noord-Holland, Utrecht, and Zuid-Holland), several other organisations participate in the activities of the CoP, including municipalities, researchers, planners, designers, students, entrepreneurs, citizen groups, and politicians. This rich community calls for flexible coordination with over 500 unique participants in events between 2017 and 2020. Participants come and go according to their needs and the timing of their projects. Some ways to keep the CoP members on the same page

are a yearly work conference, a dynamic webpage (Vereniging Deltametropool, 2018), shared content on partner websites, a 3-4 monthly newsletter and a LinkedIn group of ca. 250 members (Vereniging Deltametropool, 2017a).

The CoP's activities range frofactm small, informal peer-to-peer meetings in which participants exchange experiences and focus on one another's practises, to seminars and webinars of between 70 and 100 participants. The CoP has also co-organised parts of the Landscape Triennial 2017 (over 11,000 visitors), where the Landscape as Location Factor was the opening manifestation, and of the 2020 Triennial with the appropriate theme Hightech Highgreen. The involvement of high-tech and other companies in landscape development has become an increasingly important topic in the CoP. Hightech Highgreen focuses on public-private collaborations in landscape development in the Brainport region – the high-tech cluster around Eindhoven, to enhance both the quality of life and the business climate in the region.

The activities of the CoP, directly and indirectly, influence policies about landscape and economy in the Netherlands. The four mentioned provinces (and metropolitan regions in those provinces) explicitly state the goal of Landscape as Location Factor in their visions and other policy documents since 2017, in an increasingly concrete and operational manner (Metropoolregio Amsterdam, 2016; Provincie Noord-Brabant, 2018; PARK Zuid-Holland, 2018; Metropoolregio Utrecht, 2020). Sometimes the CoP organises participatory events to help form new policies on the regional level, for example in the Metropolitan Region of Amsterdam (see Figure 7). When stakeholders in the region are asked how they would like to address issues such as renewable

energy change, urban development, and water management, it turns out that they are willing to suggest alternatives (such as wind turbines) that are normally unwelcome when imposed from above. The recent national environmental strategy (BZK, 2020) also explicitly mentions the idea of landscape as a location factor in various parts of the document.

Knowledge sharing and development is also a part of the CoP's activities. The community has exchanged knowledge about planning and governance with other regions, in the Netherlands and internationally, for example, in Mantua, Toronto, and Birmingham. The CoP develops new knowledge by doing practice-oriented research, usually involving research by design, interviews, comparisons, and best practices. The results are distributed in digital and printed publications, which can be accessed freely under a Creative Commons license. One example is the publication Spot On, in which 12 Dutch pilot projects were bundled, including a proposal for the West Brabant region (see Figure 8). Another example is the Landvestors project, in which the CoP analysed 12 cases of landscape development by citizens and companies. Lessons for the Netherlands were drawn from these international cases, which can be roughly divided into donation, crowdfunding, and business models. In the next phase of Landvestors (from the Deltametropolis Association), landscape architects, planners, and economists

Figure 8: Research by design project, exploring the synergy between biobased agro-chemistry, delta nature development and recreation in the West-Brab

bant region. Studio Marco Vermeulen & Province Noord-Brabant, 2017. Printed with permission.

will apply these lessons to show the potential of private initiative in two high-tech regions with large landscape ambitions and transitions: the aforementioned Brainport and the *Rheinisches Revier* region in Germany.

5. Conclusions

In this chapter, we have looked at several definitions of the metropolitan landscape, and revisited five ways to map it. We have seen that there is lot of nuance between the rural and the urban realm, and that there are different ways to show this. The metropolitan landscape is clearly a broad concept with many aspects – some of which are more relevant to certain stakeholders and less to others. Certain aspects, such as the confrontation between red and green planning systems, are even invisible within the territory itself. Being the platform where several spatial transitions will take place, the metropolitan landscape should be understandable for professionals and citizens in order for them to come up with integrated and socially acceptable solutions. This calls for a flexible attitude towards the metropolitan landscape and the (plat)forms of collaboration needed to develop it, as well as continuous research – quantitative and qualitative, using design and all other tools available, to enhance the understanding of the metropolitan landscape and share the knowledge.

We have reviewed the founding and activities of the Community of Practice (CoP) Landscape as Location Factor. The CoP demonstrates the demand for broad open (plat)forms of collaboration on metropolitan landscape planning and the need for both grounded knowledge development as well as

informal exchange of experiences and other information among stakeholders. It has shown that, in light of economic prosperity (specifically, quality of life and the fight for talent), the initiative to improve Dutch metropolitan landscapes lies at the national, regional, and local levels. The regional level has become a more dominant player in spatial-economic strategies over recent decades, due to the decentralisation policies of the national government. However, recent discussions suggest that spatial planning on the national level might be making a comeback, and that municipalities still have a large decision-making power in spatial developments. One thing remains certain: the emerging spatial governance structure will need a continuously updated understanding of the metropolitan landscape to deal with the upcoming transitions. Flexible (plat) forms of collaboration and knowledge sharing will play an essential role in that effort.

6. References

Ambrose, P. (1992). The rural/urban fringe as battleground. In B. Short (Ed.), *The English rural community: Image and analysis*. University of Sussex.

Andringa, J., & Reyn, L. (2014). *Tien stappen voor een succesvolle community of practice*. Duurzaamdoor.nl. https://www.duurzaamdoor.nl/sites/default/files/2019-01/Tien%20stappen%20voor%20een%20succesvolle%20community%20of%20practice.pdf

Baccini, P., & Oswald, F. (2008). Designing the urban: Linking physiology and morphology. In G. Hirsch Hadorn, H. Hoffmann-Riem, S. Biber-Klemm, W. Grossenbacher-Mansuy, D. Joye, C. Pohl, U. Wiesmann & E. Zemp (Eds.), *Handbook of transdisciplinary research* (pp. 79–88). Springer Netherlands.

Brood, R., & Coenders, M. (2004). *Communities of Practice: Bronnen van inspiratie*. Boom Uitgevers Amsterdam.

Cummings, S., & van Zee, A. (2005). Communities of practice and networks: Reviewing two perspectives on social learning. *Km4D*, 1(1), 8–22.

Feddes, F., & Nefs, M. (2018). *Het volgende landschap* [...]. Vereniging Deltametropool, Stichting Landschapstriennale.

Hough, M. (1990). *Out of Place: Restoring identity to the regional landscape*. Yale University Press.

Luttik, J., Breman, B.C., van den Bosch, F.J.P., & Vreke, J. (2008). *Landschap als blinde vlek*. Wettelijke Onderzoekstaken Nature & Milieu. https://edepot.wur.nl/50832

Metropoolregio Amsterdam. (2016). *Actieprogramma Metropolitaan Landschap 2016-2020*. Metropoolregio Amsterdam. https://haarlemmerliederaad.haarlemmermeer.nl/Vergaderingen/Commissie-Raadsvoorbereiding-RVB/2017/02-mei/20:00/4B-2017-03-14-20161208actieprogramma-metropoliaan-landschapl-20162020web1-1.pdf

Metropoolregio Utrecht. (2020). *Utrecht Nabij: Ontwikkelperspectief verstedelijking en bereikbaarheid Metropoolregio Utrecht 2040, met een doorkijk naar 2050*. Metropoolregio Utrecht. https://www.stateninformatie.provincie-utrecht.nl/documenten/Ingekomen-stukken-van-GS-naar-PS/27-11-Bijlage-3-van-4-Rapport-Utrecht-Nabij.pdf

Ministerie van Binnenlandse Zaken en Koninkrijksrelaties (2020). *Nationale omgevingsvisie: NOVI* [National Strategy on Spatial Planning and the Environment]. Ministerie van Binnenlandse Zaken en Koninkrijksrelaties.

Nefs, M. (2021). Landscape as battlefield of the new economy. In K. Moore (Ed.), *Integrated landscapes in policy, practice and everyday life* (forthcoming). Routledge.

Provinciaal Adviseur Rruimtelijke Kwaleteit in Zuid-Holland. (2018). *Advies Landschapspark Zuidvleugel*. Provinciaal Adviseur Rruimtelijke Kwaleteit in Zuid-Holland. https://www.pazh.nl/werkprogramma+park+2017-+2019/advies+landschapspark+zuidvleugel/default.aspx

Piorr, A., & Ravetz, J. (2011). *Peri-urbanisation in Europe*. University of Copenhagen.

Provincie Noord-Brabant. (2018). *De kwaliteit van Brabant: Visie op de Brabantse Leefomgeving. Provincie Noord-Brabant*. https://www.brabant.nl/onderwerpen/omgevingsbeleid/omgevingsvisie#:~:text=De%20Omgevingsvisie%20bevat%20de%20belangrijkste,en%20een%20concurrerende%2C%20duurzame%20

economie.

Scott, A.J., Carter, C., Reed, M.R., Larkham, P., Adams, D., Morton, N., Waters, R., Collier, D., Crean, C., Curzon, R., Forster, R., Gibbs, P., Grayson, N., Hardman, M., Hearle, A., Jarvis, D., Kennet, M., Leach, K., Middleton, M., … & Coles, R. (2013). Disintegrated development at the rural-urban fringe: Re-connecting spatial planning theory and practice. *Progress in Planning*, 83, 1–52.

Sieverts, T. (2001). *Zwischenstadt: Zwischen Ort und Welt, Raum und Zeit, Stadt und Land*. Birkhäuser.

Steenhuis, M. (2019). *Narratief voor het MRA landschap. Vereniging Deltametropool*. https://www.metropoolregioamsterdam.nl/wp-content/uploads/2020/10/Narratief-voor-het-MRA-landschap.pdf

Tisma, A., van der Velde, R., Nijhuis, S., & Pouderoijen, M. (2014). A method for metropolitan landscape characterisationcharacterization: Case study Rotterdam. *Spool*, 1(1), 201–224.

Tress, G., Tress, B., Harms, W.B., Smeets, P.J.A.M., & van der Valk, A.J.J. (2004). *Planning Metropolitan Landscapes: Concepts, demands, approaches*. Wageningen University Research.

Vereniging Deltametropool (2016). *Blind Spot: Metropolitan landscape in the global battle for talent*. Vereniging Deltametropool. https://deltametropool.nl/publicaties/blind-spot-metropolitan-landscape-in-the-global-battle-for-talent/

Vereniging Deltametropool (2017a). *Landschap als Vestigingsvoorwaarde*. Vereniging Deltametropool. https://edepot.wur.nl/399966

Vereniging Deltametropool. (2017b). *Spot On: Het landschap als vestigingsvoorwaarde*. Vereniging Deltametropool. https://deltametropool.nl/publicaties/spot-on/

Vereniging Deltametropool. (2018). *Community of Practice 'Landschap als Vestigings-voorwaarde'*. Vereniging Deltametropool. https://deltametropool.nl/projecten/community-of-practice-landschap-als-vestigingsvoorwaarde/

Viganò, P., Cavalieri, C., & Corte, M.B. (Eds.) (2018). *The horizontal metropolis Between urbanism and urbanisation*. Springer.

Wandl, A. (2020). T*erritories-in-between: A cross-case comparison of dispersed urban development in Europe* (PhD thesis). BK Books. https://books.bk.tudelft.nl/press/catalog/book/745