

**Introducing the Randstad
A polycentric metropolis**

Nadin, V.; Zonneveld, W.A.M.

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1 Introducing the Randstad

A polycentric metropolis

Vincent Nadin and Wil Zonneveld

Introduction

The Randstad is a cluster of relatively medium-sized and small cities in the western Netherlands that encircles an expanse of largely open land. It is undoubtedly an important urban region, hosting in an area of about 7,000 km², Europe's largest seaport, third busiest airport, second largest Internet Exchange, and about 7 million people. But *the Randstad* is much more than this. Since the 1960s, it has acquired distinction as the archetypal polycentric metropolis, an integrated urban ring around a *Green Heart*, with the status of a world-class metropolitan region. There is a presumption too, that government has played an influential role in strengthening the polycentricity of the region, especially through its renowned capability in spatial planning.

But the reality of the polycentric Randstad as opposed to the idea is controversial, as is the role of spatial planning. Do the interconnections between the four main cities – Amsterdam, The Hague, Rotterdam, and Utrecht – and the many smaller settlements in-between function as an integrated polycentric region? Does the economic and social performance of the combined whole of the Randstad add up to more than the sum of its parts? Advocates point to the apparent complementarity of the main cities with a tendency for business and financial functions to be centred in Amsterdam, port and logistics in Rotterdam, governance and international justice in The Hague, and research and development in Utrecht. Critics draw attention to the relatively limited flows of commuters between the cities, and the concentration of the daily urban flows within the individual city-regions, which they argue operate independently.

Naturally, the truth lies somewhere between these opposing views. This book reviews the evidence on both the idea and the reality of the Randstad polycentric metropolis. In this introduction we explain the reasons for producing the book and our questions; elaborate our understanding of the notion of a polycentric metropolis; sketch the key characteristics of the Randstad; and preview its history of spatial development and planning as an orientation for the chapters that follow. But much has been said about the Randstad in the past so why should we take up this task again now?

We know from our work at Delft University of Technology with its highly international community of staff and students that there is a wide and growing interest in the experience of the Netherlands in managing spatial development to resolve competing land use demands in congested and vulnerable environments. Metropolitan planning authorities across the world are exploring the potential of polycentricity to assist in creating more prosperous, environmentally sustainable, and socially just regions. They see the Netherlands, and specifically the Randstad, as a source of inspiration. The Randstad is recognised as an exemplary case – true or not – of effective territorial governance in a polycentric region.

In Europe, the idea of polycentric functional regions is well established at city, region and transnational scales, having first been promoted as a policy option in the late 1990s (CSD, 1999). The aim then was primarily to spatially ‘balance’ urban development and economic opportunity and to foster better relations between urban and rural areas. About the same time, it became clear that large metropolitan city-regions are the focal point in global international economic competition, and that they tend to be more successful where they have a strong concentration and diversity of skills and services. This condition is delivered by large monocentric cities and their hinterlands, but it might also be delivered by a cluster of cities acting in concert. Thus, regional and local governments took up the polycentricity concept with the primary aim to create an integrated urban cluster with combined weight that would have competitive advantage in international competition, combined with the advantage of accessible metropolitan landscapes due to its spatial structure.

Since the 1990s the importance of polycentricity as a mechanism for creating critical economic and social mass in urban and regional development in European regions has not diminished. Further encouragement and measures to capitalise on the huge potential for strengthening the competitiveness of urban regions through policies for polycentricity will feature in the forthcoming *EU Territorial Reference Framework* (ESPON, 2020) as well as in the draft European *Territorial Agenda 2030* (TA 2030, 2019). Elsewhere in the world, especially in south-east Asia and Latin America, policies for polycentricity have been taken up vigorously, in part where there are clusters of cities, but also as a way forward for huge monocentric agglomerations. In China, strengthening polycentricity within and between cities is a national policy, and an explicit objective of the strategic spatial plans of most cities, including Beijing (Liu and Wang, 2016). It is not surprising therefore that policy makers should continue to look to the Randstad for evidence of the value of polycentricity where it has been promoted in various ways since the 1950s.

However, anecdotally, we find that there is often a misunderstanding about the performance of the polycentric metropolis of the Randstad and the role of spatial planning in creating it. The apparent uniformly good quality of urban development, infrastructure, natural environment and public realm, together with the relatively high level of stability in the governance and economy of the Netherlands, may give a false impression. There is a

view in the Netherlands that foreigners see the Randstad through rose-tinted glasses. The views from within the country on the reality and value of a polycentric Randstad tend to be more sceptical. This is not to undermine the achievements over 70 years, but to say that a critical but constructive assessment would be helpful, the ingredients of which this book seeks to provide.

The Randstad and polycentric regions generally are not only vehicles to create critical economic mass. Cooperation among otherwise discrete cities also provides the platform necessary to deal with other pressing challenges. The economic performance criterion is today joined by other goals and priorities on which sustained prosperity depends. This change may be particularly evident in the Netherlands, where the concentration of people, economic output, and social infrastructure lies on land mostly below sea level. Metropolitan regions are in a crucial position to address many other concerns: protecting critical natural capital, strengthening resilience to risks including flooding, mitigating climate change, providing good quality shelter for all, designing environments that are sensitive to the needs of an ageing population, integrating migrants into society, managing urban-rural relations, shaping settlement patterns to avoid unnecessary conversion of open land, and more. And in 2020, the COVID-19 crisis gave to the world a very sharp reminder of the significance of the living environment in cities and regions for the maintenance of the health of their people, and of the importance of building resilient communities, cities and regions that can quickly respond to crises. There is no doubt that the aftermath of COVID-19 will present great tests for territorial governance as city and regional actors reform their objectives and policies in light of changing global and local conditions.

The contributions here provide a platform of understanding that can be employed in weighing the advantages and disadvantages of the spatial form and governance of the Randstad polycentric metropolis for these urgent questions. How government and key players take up these challenges in the future urban development of the Randstad and other metropolitan regions will have critical consequences for their citizens. They should be informed by a review of the origins, performance and likely future of this polycentric metropolis. The chapters in this book update evidence across a number of themes and disciplines to explain the historical conditions giving rise to the Randstad and its later evolution; they review the chequered history of the governance of the Randstad polycentric metropolis as it has come and gone in national policy; they present competing views of the value of the Randstad as a regional planning concept in the past and for the future; and they review its practical impact on the performance of the region and the Netherlands as a whole while offering a balanced view on the effectiveness of planning. Decision makers around the world will continue to look to the Netherlands for creative examples of regional spatial development and governance, and we hope will benefit from this critical review of the evidence.

In sum, we present this book to provide sources of evidence, but also critical analysis and understanding of a complex global metropolitan region, and

through this, possible lessons for strategic planning in other metropolitan regions. We have four main questions that are addressed to varying degrees by the following chapters and to which we return in the conclusion.

- How has the spatial configuration of the Randstad evolved, and what has been the contribution of deliberate societal intervention versus the natural conditions of the delta?
- Does the polycentric Randstad metropolis have real substance in reality in terms of the whole being more than a collection of parts, or is it no more than an idea promoted for professional and political reasons?
- What are the advantages and disadvantages of the Randstad's spatial configuration for meeting economic, environmental and social challenges, for the needs of business, and for the lives of its citizens?
- What is the outlook for the Randstad as a policy concept in the context of the government's competing needs to improve resilience in the vulnerable delta setting, and to meet demands for further urban development and transformation?

Polycentricity and the metropolitan region

What is polycentricity and how would we know if a region is polycentric and if it has delivered the intended benefits? The central notion is that proximate cities share functions, services and labour between them, and combine their complementary strengths in a collaborative way. The cities accrue benefits in terms of their economic standing and opportunities for citizens because they 'borrow size' from the others (Burger *et al.*, 2015; Meijers and Burger, 2017) and that integration between cities in a cohesive urban system improves economic performance of the whole (Meijers *et al.*, 2017). Polycentricity has been a significant concept in European spatial planning since the 1990s, indeed it has been argued that it is central to a 'new European vocabulary' of spatial planning, being 'sufficiently vague to serve as receptacles for the wide range of perspectives' (Gløersen *et al.*, 2007: 418). It may be vague, but the primary purpose has always been clear, to enable regions of dispersed urban centres to compete more effectively in the global economy. Some 'perspectives' may give priority to other objectives too, for example, increased polycentricity may reduce unnecessary duplication of services and inefficient use of land and create more opportunities for citizens in terms of employment, services (including metropolitan landscapes) and social life.

Achieving polycentricity requires capacity in sub-national government to share and enable flows, which, in turn, needs hard and soft infrastructure interventions and shared governance of some functions in the region. Government administrations rarely operate at a scale that enables them to provide the necessary cooperation. Establishing statutory institutions that combine city governments is difficult, and in most cases probably unnecessary, but some platform or platforms for sharing and integrating policy and investment

are a prerequisite for pursuing polycentricity. In Europe, since the 1990s there has been a proliferation of special planning areas for functional planning regions, or soft spaces, that cut across formal administrative jurisdictions (Allmendinger *et al.*, 2015a,b). They operate at different scales for many purposes, but include many planning initiatives to strengthen the polycentric attributes of regions. To some extent they provide a ‘metagovernance’ for the region that overcomes the limitations of fixed territoriality and creates conditions for combining different forms and scales of governance arrangements in smaller units, including their spatial strategy making (Allmendinger and Haughton, 2009).

Spaans and Zonneveld (2015) describe the Randstad and the Green Heart as archetypal ‘soft spaces’ (although from the mid-1990s the boundaries of the Green Heart were ‘hardened’ through precise mapping in regulation plans). However, as we explain below, the creation of a governance platform at the Randstad level has eluded its advocates. Nonetheless, there are many other overlapping and intersecting soft spaces within the western Netherlands, where governance platforms have been established and are active, including for the south and north ‘wings’ of the Randstad (the regions surrounding Amsterdam and Rotterdam–The Hague), inter-municipal cooperation areas, and other ad hoc cooperation arrangements. At the Randstad level, it has not been possible to reach political agreement about the validity of the space and the concept because of the very large number of varied interests and the attitudes of particularly powerful ones. Bounded spaces for government are deeply rooted, not least in the Netherlands where the municipalities are relatively powerful. Local governments can claim legitimacy as the accountable policy maker when it suits them. But even if there is no platform at the Randstad level, the existence and endorsement of the Randstad concept may still play a role in reminding the actors that they are playing on a wider stage than their immediate surroundings.

At the wing level and other sub-spaces within the Randstad, cooperation has proved more workable though still difficult, and a layering of nested planning spaces has emerged with a mix of formal and informal institutions formulating shared policy through varying processes and levels of competence. At this level, cooperation tends to be associated with plainly strong functional relationships with obvious flows of commuters and tangible and intangible goods and services crossing between the constituent jurisdictions. However, the many cooperation arrangements across the Randstad tend to be in the form of networks, with government in control often aligned with business and its agenda over a specified territory, rather than the more fluid bottom-up actor networks that have been advocated (Jauhainen and Moilanen, 2011).

The lack of deeper cooperation arrangements at the Randstad scale reflects much uncertainty about whether it actually constitutes a functional region, and if the pursuit of polycentricity would bring the benefits claimed. The chapters that follow address these issues thoroughly. Here, we should emphasise that there is very diverse mix of attitudes to the Randstad. There

are many advocates. A number of the chapters in this volume refer to the inclusion of the Randstad in Hall's 1966 seminal work, *World Cities*. Hall elevated the Randstad to one of the 'great urban regions of the world' alongside London, Tokyo, New York and others, making up a global network of 'urban concentrations of business, specialised expertise, knowledge and finance' (Pain, 2017: 1). This high ranking in the world urban hierarchy certainly would not be achieved by any one of the main cities alone, indeed, only Amsterdam among the cities of the Randstad figures among the 55 'alpha cities' of the Globalization and World Cities (GaWC) Research Network.¹

Since then, the Randstad has been celebrated in many publications (especially in other countries). Along with Hamburg, the Randstad is been picked out in a study of soft planning spaces in north-west Europe as a prominent example of a successful initiative that has overcome problems of territorial administrative boundaries 'to accept and include on a pragmatic basis the heterogeneity of actors and consciously avoiding a formal geography and instead promoting flexible or blurred boundaries' (Othengrafen *et al.*, 2015: 227). This perspective is justified only in relation to the cooperation in the sub-spaces of the Randstad. But in practice, too, the Randstad is presented as a model for other regions. In the United Kingdom, the One Powerhouse Consortium (2019: 2) has invoked the example of the Randstad as one of a few global regions that 'have used spatial planning to focus political will, economic activity and social reform to great effect'.

Those who are not enthusiastic (especially in the Netherlands) fall into two camps. There are those that doubt the Randstad's polycentric character but want government to act more forcefully to deliver it, and there are those that refer to the Randstad as a myth, rejecting both its existence or benefits that might accrue from becoming more polycentric. The most notable exponent in the first group is Niek de Boer, former professor at Delft University of Technology from 1969 to 1989, whose 1996 book (in translation) 'The Randstad Does not Exist: the Failure to Pursue a Metropolitan Policy', argued that the government had not addressed but should act at the 'metropolitan scale'. In a similar way, an OECD Territorial Review of the Randstad in 2007 concluded that functional relations in the Randstad operated mostly at the scale of the city-region, but it also strongly advocated national government to intervene to strengthen the functional coherence of the Randstad as a whole to reap benefits from potential agglomeration effects.

A figurehead for the second group is Zef Hemel, a former board member of the Urban Planning Department of Amsterdam who believes the Randstad to be an 'expensive fairy tale', and that it 'bears a striking resemblance to the "Emperor's Clothes"' (2017). Sceptics such as Hemel tend to agree about the importance of networks of cities but argue that such functional connections go well beyond the four core cities of the Randstad within and beyond the Netherlands.

How does these alternative views stand up to the evidence? There is support both for and against, and many commentators end up sitting on the

fence. Meijers *et al.* in Chapter 6 and Ritsema van Eck and Van der Wouden in Chapter 7 summarise the different ways that functional relations have been measured. They give a balanced view, explaining that findings on functional coherence depend very much on the indicators used. Whilst the treatment of the Randstad in national policy has been inconsistent, they are in no doubt that spatial planning has made a difference in the Randstad. Meijers *et al.* add that the normative pursuit of polycentricity in the Netherlands has been determined largely by political ideology, rather than the facts, and has been diminished in the face of populism and neoliberalism.

By way of a preview of the dynamics of the Randstad that follows in Part III, the numerous studies of functional relations in the Randstad tend to concentrate on the analysis of commuting flows, but there is also attention to information flows between businesses, residential and business migration, labour market effects, leisure trips, and other measures. The findings are that the bulk of daily urban flows is concentrated in the city regions, but trips by professional and business occupation groups are important at the Randstad scale. Some cities are more connected than others and this is strongest within the north and south wings. Ritsema van Eck and Van der Wouden report in Chapter 7 that flows did not change between the 1990s and early 2000s, but there has been some growth at the Randstad scale of people flows, especially occupations requiring higher level education. Whilst much smaller in absolute terms, these movements may reflect more accurately the metropolitan functions of a global business services that Hall and others refer to. De Hoog explains in Chapter 10 that *metropolitan* functions are not dependent on the daily urban system. Another aspect of this is the increasingly significant role of Amsterdam as a node in the city network, attracting more distant commuting. This relates to its business service function and may also be an indication of the housing shortage and affordability problem highlighted by Elsinga *et al.* in Chapter 9.

On the benefits of polycentricity, an assessment of the Randstad's performance in the early 1990s strongly supports Hall's 1960s assessment by concluding that the collective strengths of the cities together with the sea and air gateways 'propel the Randstad to the top of the European urban hierarchy, making it a world city of the highest level... [but that] In terms of the various advanced producer services and international management activities, the Randstad achieves only a middle-level ranking' (Shachar, 1994: 398). This would support stronger intervention by government on aspects of polycentricity. Since then, the balance of importance of trade and other flows between cities in or beyond their immediate region has changed markedly. Wall (2009) argues that cities of the Randstad now depend more on other international cities than their local neighbours, making the idea of local functional relations and regional polycentricity less, rather than more important. Policy on the Randstad will surely need to keep abreast of these dynamics. The global COVID-19 crisis of 2020 heralds another far-reaching and more swift reform of international business and cultural relations. The performance

measure for a polycentric Randstad is perhaps not international economic performance per se, but rather its resilience in recovering from such shocks.

Profile of the Randstad

The term *Randstad* was coined in 1938 by Albert Plesman, a pioneer in aviation and founder of the Dutch airline KLM. He used the term *Randstad* to express what he saw from his aircraft, a ‘rim city’ or ‘edge city’. The rim is formed by the four main cities as shown in Figure 1.1. (The full story of the genesis of ‘Randstad’ is given in Chapter 6.) This morphological character of the *Randstad* will quickly become recognisable to the newcomer. First impressions of the territory of the *Randstad* are usually that it is flat; that it is clearly urban but interspersed with large stretches of open and intensively used agricultural land; that it is orderly arranged with a clear demarcation of built and unbuilt environment; that if travelling by road or rail it is congested, but if travelling by bike that it is enlightened and open; that citizens are well housed in attractive neighbourhoods; that the historic environment appears to be cared for and well managed; that the urban realm offers a high quality and safe walking environment; and that the people are prosperous and welcoming, if at times a little blunt.

The geography of the *Randstad* is unmistakably deltaic, with expanses of flat open land crisscrossed by watercourses and historic windmills that remain from a former network of more than 10,000. It is a polder landscape where over eight centuries past generations have reclaimed land from marshes and the sea for agriculture and urban development. The result is a completely artificial landscape of straight lines and intensive agriculture. Water is inescapable, and in the cities too, where canals and dikes form the essential and historic foundations on which the cities were designed and built. The landscape is immediately recognisable as Dutch with its regular, rational, and orderly aesthetic quality. But beneath the surface appearance, urbanisation and intensive agriculture and recreation put huge pressure on the environment. A 2019 EU review (CEC, 2019) noted that progress was being made in improving water and air quality and habitat and biodiversity degradation, but concluded that there is much more to be done if the Netherlands is to meet its national and international commitments.

Estimates of size and significance of the *Randstad* vary because there is no formal administrative border, no government tier, and therefore no official statistics, as explained below. Reference is often made to figures for the four constituent provinces in which the *Randstad* sits or their main cities: Flevoland (Almere), North Holland (Amsterdam), Utrecht (province and city) and South Holland (Rotterdam and The Hague). This is a reasonable approximation for many purposes although it does add a large part of mainly agricultural lands in North Holland and Flevoland which are not part of the metropolitan region. But the boundaries of the *Randstad* are elastic, expanding and contracting depending on the topic and interests pursued. Generally, the geographical meaning of the *Randstad* has expanded over the decades, notably to take in Almere in Flevoland which was built on land reclaimed



Figure 1.1 The Randstad including its wider setting.

Source: Statistics Netherlands (CBS) and NWB, edited by Marnix Breedijk, PBL Netherlands Environmental Assessment Agency.

from the sea from 1974 and formed part of the Amsterdam city-region from the late 1980s. At periods in the history of the Randstad, there has also been an interest in urban corridors that extend beyond the core cities to the east (Germany) in particular, but they are excluded from the discussion here.

To put the Randstad in context, Table 1.1 gives a number of measures for the Randstad in comparison to three ‘monocentric world cities’. Bearing in mind the difficulties of international comparison because of varying definitions and administrative structures, the area of the larger Randstad (four provinces) is similar to that of the metropolitan region of Guangzhou, but much larger than Greater London. The four cities of the Randstad and numerous small towns around them have a combined population of about 7 million whilst the four provinces in which the Randstad is based have a joint population of over 8 million, 47% of the total population of the Netherlands. The dependency rate, the proportion of working age population compared to the young and elderly, was around the average for Europe at about 70%, but will be an increasing challenge for government.

As might be expected, the Randstad has a lower population density than the monocentric metropolitan regions. The table gives two estimates for population density, one based on the provinces and the larger figure based only on the constituent city-regions. However, the Netherlands has the highest population density and the highest rate of urbanisation in Europe at 500 persons/km²

Table 1.1 Comparison of key figures for Randstad and other world cities

	<i>Area, km²</i>	<i>Population, million^a</i>	<i>Pop density, pers/km²</i>	<i>GDP 2019 billion \$^c</i>	<i>Sustainable cities index ranking^d</i>	<i>Air traffic capacity million seats^e</i>
Greater London	1,572	11.6	5,729	851	1	3.9
Guangzhou	7,434	13.3	1,789	382	74	3.5
Los Angeles	4,496	13.2	2,935	1,170	45	3.7
Randstad ^b	8,287/7,000	8.15/7.1	983/1,014	420	12	3.0

Source: Authors.

a Sources: United Nations, Department of Economic and Social Affairs, 2019; Los Angeles-Long Beach-Anaheim, CA Metro Area: US Census Bureau 2019 estimate.

b Randstad: As there is no administrative area for the Randstad, the figures given refer first to the four provinces (Regio Randstad, 2017), and second to our own estimate of the area of the Randstad 7,000 km² (the ‘extensive Randstad’, including Purmerend in the north, Almere and Amersfoort in the east and Dordrecht in the south). The smaller population figure refers to the four city regions.

c Sources: OECD Stat. Available at: <https://stats.oecd.org/Index.aspx?DataSetCode=CITIES#>, except for Guangzhou: estimated by Asia Times at: <https://asiatimes.com/>. Randstad figure is sum of the four main cities.

d Source: Arcadis, 2018.

e OAG seat capacity statistics February 2020. Available at: <https://www.oag.com/>. Later in 2020, capacity was reduced by as much as 95% because of the COVID-19 restrictions on travel.

and 92%, respectively (excluding very small countries)², growing from 52% in 1950 (UN Department of Economic and Social Affairs, 2018). These relatively high figures are more pronounced for the Randstad, which has a population density of about 1,000 persons/km², although the urban profile is 'low rise'. The population is spread evenly across the region, with only 2.5 million in the four main cities. And it is diverse. In the Netherlands, as a whole for 2019, 27% of the population had a 'migration background', that is, a parent born in another country.³ The population is also remarkably well-housed in comparison to most other metropolitan regions. Elsinga *et al.* explain in Chapter 9 how post-war governments have intervened strongly to initially solve a housing shortage, and later to improve the conditions of the housing and its urban surroundings. Government-led and subsidised housing has been instrumental in the spatial development of the Randstad, contributing to the conversion of the region from a cluster of self-contained cities to a dense network of urban settlements.

Almost complete urbanisation of the Randstad is reflected in the density of infrastructure. The Netherlands is second only to Belgium among European countries for road density. It has the fifth highest road density in the world, including a very high provision of motorways, some 127 km for each 1,000 km² land area, with much of it concentrated in the Randstad and especially around the port of Rotterdam.⁴ However, the road network is outshone by the water infrastructure, even though much of that which is keeping the feet of the Dutch dry is invisible. It includes thousands of pumping stations, 22,000 km of dikes and 70,000 km of watercourses. The Randstad has a disproportionate share given that a majority of its surface area is below sea level. Water transport on the other hand is plainly visible. The Randstad has by far the highest density of water transport in Europe save for one region, also in the Netherlands – Zeeland. Railways too are well catered for with South Holland having the seventh most dense network in Europe (133 km/1,000 km²), behind German and Czech regions. Travellers from most other countries are impressed with the rail service which is a true network with fine stations (part of a national programme of planning projects), and many precise interconnections between lines, and between rail, other public transport, and cycling. Despite its strengths, the public transport network is somewhat weak at the scale of the Randstad. Only the main stations are connected across the Randstad between Rotterdam and Amsterdam, since 2009 with the option of the Netherlands, only high-speed line. This dense infrastructure network also services the ports: Rotterdam Port, the largest port in Europe handling the equivalent of 37,000 '20-foot containers' each day; and Schiphol Amsterdam Airport, the fourth busiest airport in the world for international traffic which provides in the peak period more than 200,000 passenger seats per day.⁵

The development of extensive physical and soft infrastructure has since the seventeenth century gone hand in hand with the growth of the economy

and international trade. In 2017 the Randstad (four provinces) was the fourth largest metropolitan economy in Europe, after London, Paris, and the Rhine-Ruhr (also polycentric), and before the COVID-19 crisis was experiencing reasonably good growth throughout the later 2010s of about 2.5% per year. Whilst the Netherlands is probably most well-known for its export of agricultural products, the most important trade for the Randstad is in machinery and transport equipment, manufactured goods and chemical products (Statistics Netherlands, 2019). Petroleum, the import of crude and export of refined and related products, is also important. As Hein explains in Chapter 3, the Randstad, and particularly Rotterdam, forms the hub of the significant ‘petroleum landscape’ of the Netherlands, though it is not so visible to those not directly involved. In contrast, agriculture is on display in the Randstad, notably the complex of greenhouses in the West- and Eastland between Rotterdam and The Hague which is a major hub of the Dutch intensive, high-tech horticulture industry that has made the Netherlands the second largest exporter of food products in the world after the United States.

Perhaps surprisingly, investment in research and development in the Dutch economy is low at around 2% compared to other European metropolitan areas (only half the rate of Copenhagen for example). The proportion of the labour force with a higher education is also low at 39% compared to London with 49%. In 2007, the OECD warned of a ‘brain drain’ in the Randstad and the need to do more to attract and retain a highly qualified workforce making effective use of its higher education infrastructure. On the other hand, the Randstad is home to five of the top 75 universities in the world, while Germany has ‘only’ four.⁶

A dimension of the Randstad that is invisible to the visitor is its (territorial) governance, although aspects can be inferred from the general conditions on view. In Chapters 3 and 4 Meyer and Hooimeijer explain how the challenging water environment gave rise to strong governance and a collaborative culture in the Netherlands from the 1200s that are still prevalent today. Spaans *et al.* bring that up to the present day, presenting the many abandoned attempts to provide for a ‘fourth layer’ of government for the metropolitan regions and resulting in a convoluted map of contemporary governance arrangements. In sum, there has been little success in providing collaborative governance for the Randstad as a whole, despite calls for administrative reform, for example, in the early 1990s. Dieleman and Musterd (1992) believed that it was time for a metropolitan government with sweeping competences in spatial planning, housing, transport, and more. Such reform is unthinkable now, but there is a serious widening gap in the governance of the metropolitan region beyond the wings as central government retreats from national spatial planning. Collaboration platforms around the two centres of gravity north and south have been more successful. For Schrijnen (Chapter 15) it is a matter of regret that although the Randstad operates and is recognised as metropolis in so many ways, there has been little coordinated policy across the whole metropolis, especially in creating a truly metropolitan transport system.

Episodes in the modern development of the Randstad

The idea of the Randstad as a polycentric metropolis is a consistent feature in the modern history of Dutch spatial development and planning, but there have been many twists and turns. Most of the papers that follow in this volume refer to key stages in this history and explain in more detail the key events and their relevance for the Randstad today. Here, we provide a sketch of the main episodes in the evolution of the Randstad as a general orientation for readers. An elaborate timeline is provided by the *Spatial Planning Calendar: 75 Years of National Spatial Planning in the Netherlands* (Ministry of Infrastructure and Environment, 2013). Also, various chapters in this volume set out a chronology relevant to the topic in question, with varying phases, see in particular, Chapter 11 by Zonneveld and Chapter 13 by Van der Wouden.

We distinguish five key episodes in thinking and practice about the Randstad in Dutch spatial policy from the 1950s to the 2020s. The episodes are, in turn, related to waves of urban growth, wider economic and demographic change, and political priorities. Needless to say, this simple organisation of a 60-year history is in reality not so neat. Layers of detail and the interconnections among these periods are revealed in the following chapters. Over those 60 years the challenge of effectively managing physical urban growth has become more intense as the population of the Netherlands has grown by 70% and GDP per capita has increased six-fold. In meeting that challenge, the controversial notion of the Randstad has usually been present, though in varying form and significance. And it has endured even when eschewed by formal policy. Whilst policies may change abruptly, practices and ways of thinking will change more slowly. The point has been made many times that Dutch planning revolves around a deeply rooted and persistent culture, the doctrine of rule and order. The notions of the Randstad and the Green Heart are so fundamental to this doctrine that ‘rescinding these ideas would mean the demise of the doctrine and the institutional arrangements surrounding it’ (Faludi and Van der Valk, 1994: 253).

The clustered pattern of cities in what was to become the western Netherlands was fixed from the Middle Ages. In Chapter 2, Brand explains that by 1560 the main cities were pursuing complementary functions and that by 1850 a strengthening national government was beginning to control the expansion of cities and lay the foundations of the polycentric spatial configuration, ensuring that one city, Amsterdam, was not able to dominate. By the beginning of the twentieth century, there was clear recognition in society of an interconnected urban region beyond the individual cities.

1950s and 1960s: containment and the metropolitan network

The priorities in the immediate post-war period were reconstruction and restoring industrial production. Redevelopment in conjunction with rural-urban migration and natural growth meant that the Randstad cities grew

quickly. Projections in 1960 forecast that population would almost double by 2000, from 11 to 20 million, though the outcome has been 17.4 million by 2020. The government's willingness and capacity to plan and regulate physical development had also been growing from the 1940s. Stimulated by a new planning agency created in wartime and a 1958 policy advice of a high-level advisory committee, national government created the necessary political, administrative, and research organisations needed to intervene, and so it did.

Experience of the war and occupation reinforced the pre-war view that decentralisation of industrial activity and the containment of a cluster of independent cities were conducive to a more secure, prosperous, and fair society. Later in the 1960s, this was to become the now infamous concept of *gebundelde deconcentratie* or 'concentrated deconcentration'. It was a physical morphological policy but reflecting the strong Christian Democratic culture of the country with its emphasis on small towns and villages, underpinned also by concerns about social and spatial justice, the latter idea known today in Europe as territorial cohesion (Faludi, 2007).

The tools used to promote and implement these ideas began with a 1958 advisory report, *De Ontwikkeling van het Westen des Lands*, the Development of the West of the Country, which called for the continued separation of a ring of distinctive cities around an agricultural heartland, with the anticipated strong urban growth directed to areas beyond the Randstad avoiding suburbanisation or the 'sprawl' of cities. These recommendations were taken up in the ground-breaking first national formal policy statement in 1960, the *Nota Inzake de Ruimtelijke Ordening in Nederlands* (National Spatial Planning Report, or Report on Spatial Organisation of the Netherlands).

It was followed in 1966 by the *Tweede Nota over de Ruimtelijke Ordening* (Second Report on Spatial Planning) which established the principle of concentrated deconcentration and added more specific plans for overspill and new towns. It also took a wider view of the position of the Randstad beyond the Netherlands as part of the western European urban agglomeration (Lambregts, 2009). The assumption underlying both reports was that the cities of the western Netherlands constituted a functional urban region – the Randstad, with two interdependent 'wings', north and south.

The 1950s and 1960s were formative years when government took great strides to lay the foundations of national spatial planning in the Netherlands, of which the Randstad concept was a central element. The three main reports from the 1950s and 1960s drew international attention. The notion of the Randstad was disseminated and popularised first by Burke 1966 who described the Randstad as the 'Greenheart Metropolis', and soon after by Hall as explained above. But the effectiveness of this initial planning, particularly containment policies, is questionable. More successful was the determined policy to meet housing needs leading to peripheral expansion of the cities, and even urban development in the Green Heart.

1970s and 1980s: city regions

In the 1970s the post-war expectation of rapid and sustained economic growth was dashed by the oil crises of 1973 and 1979, leading to economic recession, with high levels of unemployment. This slowed population growth, urban development, and to a degree suburbanisation, although increasing prosperity for many sustained the growing demand for space. The recession and slower growth highlighted the vulnerability of the cities to economic downturns and drew attention to the relatively poor quality of life and residential environments they offered which was contributing to city population decline. Attention shifted to stimulating economic activity, but macro-economic conditions and political ideology favouring a more liberal economic approach meant that by the 1980s retrenchment of government activity was underway across the board in favour of more market-oriented thinking.

The third multi-volume national spatial strategy of 1973 with various updates to 1983 was less ambitious for the Randstad agglomeration overall, concentrating instead on urban renewal and revitalisation of the cities, their commuting zones and growth centres. Urban containment policy pursued urban 'bundling' and 'concentration', primarily through the designation and implementation of urban growth centres and the necessary public transport infrastructure to ensure they were contained in the city-region.

During much of the 1970s and 1980s the Randstad concept was in the doldrums, not forgotten but not a force in planning policy, playing only a secondary role in comparison to the city-regions. Towards the end of the 1980s there was a radical and controversial rethink of the notion, reducing its scope to the three larger city-regions making up a 'West Wing', where there was thought to be most potential to create an internationally competitive economic environment. However, political opposition ensured that this policy, set out formally in a 1988 draft *Vierde Nota over de Ruimtelijke Ordening*, the Fourth Spatial Strategy, was never adopted. The slimmed down city network was roundly criticised for, among other things, undermining the coherence of, and cooperation within, the Randstad and the Green Heart.

1990s: Randstad world city

The essential argument of the late 1980s that the Randstad had significance for the Netherlands international economic competitive position was carried forward to become a major stream of thinking in the 1990s when growth of the cities was re-established. Initially, it was ancillary to traditional concerns with patterns of spatial development, especially housing. The *Vierde Nota over de Ruimtelijke Ordening Extra*, the Fourth National Spatial Planning Report Extra finalised in 1993, became known by the acronym *Vinex*, referring to its major programme of urban expansions around the Netherlands, which were to deliver more than 750,000 homes, a third of which are located in the Randstad.

The 1990s were perhaps the high point of national spatial planning in the Netherlands and for the Randstad. The Vinex programme was orchestrated by central government to deliver largely housing development, with the public sector acting as developer and infrastructure provider. But this planning was not well integrated with other influential sectoral departments, especially Economic Affairs. The role of central government and the leading position of spatial planning were coming into question. The legacy of long recession in the 1980s maintained the government focus on the contribution of spatial policy to economic growth. One important aspect of this was the opportunity to capitalise on the creation of the EU Single Market by cementing the Randstad's position as a world city – a polycentric metropolis of global significance and a gateway for international economic relationships. In this context, government's economic priorities aligned with spatial planning for strengthening the polycentric metropolis of networked cities in the Randstad. It was at this time that Dutch planners were playing a leading role in the formulation of the *European Spatial Development Perspective* (CSD, 1999; Faludi and Waterhout, 2002), which promoted polycentrism and the integration of spatial policy throughout Europe.

Fortuitously, economic growth and growing income from natural gas exploitation provided funding for significant investment in hard and soft infrastructure to strengthen competitive advantage in global gateways, economic clusters and corridors. But during the 1990s, the political 'neoliberal offensive' was also gaining ground, including privatisation and outsourcing of government and dismantling of the welfare state. These changes were to fundamentally reshape Dutch spatial planning in the following decades (De Jong, 2013).

2000s: Rescaling

By the 2000s, free market neoliberal ideology was firmly rooted in Dutch political culture (Waterhout *et al.*, 2013). The very purpose of government came into question and former central government functions were devolved to provinces and municipalities, outsourced to the market, or simply abandoned. National government was less willing to take on a prescriptive position in national spatial development, and the private sector started to take over former government roles reinforced by EU macro-economic policies restraining public spending. There was a 'rescaling' of spatial planning (Roodbol-Mekkes and Van den Brink, 2015) both downwards to local government and upwards to the wider transnational north-west European scale. The approach in spatial policy was less visionary and more pragmatic following the dictum of city-regions as the 'engines' of national economic performance. Emphasis turned away from the Randstad to the engines – the city-regions, and the planning and delivery of key projects to support them, with much less thought to strategic interrelations. Government policy was more sectoral concentrating on improving the competitiveness of clusters of

economic activity in the growth areas of knowledge and creative industries (Bontje *et al.*, 2011).

The gap in government policy towards the wider Randstad region was filled by an independent group led by urban design and planning professors of Delft University of Technology and Amsterdam University. The group successively advocated for policy attention to a functionally integrated polycentric metropolis that could compete with other global regions, specifically at the level of the whole international delta of north-west Europe beyond the Randstad. This eventually resulted in a strongly articulated policy statement of the planning aldermen of the four main Randstad cities (Deltametropool, 1998). Thus, spatial strategy and interventions at the scale of the ‘Deltametropolis’ became a formal part of government policy, taken up in the draft 2001 Fifth Spatial Planning Report (Lambregts and Zonneveld, 2004).

Attention to spatial networks in the wider Delta region was short-lived though as the political colour of government changed which took spatial policy back towards economic priorities. The final 2004 version of the Fifth Report (authorised translation: National Spatial Strategy) was a corporate government plan with a strong lead from the Ministry of Economic Affairs, and for the first time, explicitly recognising the need to deal with the effects of climate change. The Randstad returned as the principal location for the critical drivers of the Dutch economy that would be supported by national government funding: three dominant economic cores (of 13 in the country), nationally significant development projects or zones including Schiphol Airport and the port of Rotterdam (both designated as ‘Mainport’), and agricultural complexes or Greenports.

The belated recognition of the need for an integrated strategy also gave rise to the first, and for now, the last, formal planning document that concentrates solely on the Randstad: *Structuurvisie Randstad 2040* (Ministerie van VROM, 2008). *Randstad 2040* took its lead from the economic agenda of government and asserted the ambition to strengthen the Randstad as one of Europe’s leading urban regions. It demonstrated the connections between policies and investments of various government departments and agencies and set out guiding principles: improving the quality of urban and natural environments, safety and climate resilience, concentrating new urban development in the cities, and improving accessibility, especially around the ‘two centres of gravity’ in the northern and southern Randstad.

At the end of the 2000s, it seemed that the Randstad idea was restored with government policy taking on the agenda for a polycentric metropolis first established in the 1950s. But *Randstad 2040* did not anticipate and was quickly overtaken by the severe effects of the 2008 banking crisis. Evers and Vogelij in Chapter 14 explain the weaknesses of the process that gave rise to *Randstad 2040* and its core assumptions, not least that high growth would continue. They argue that it failed to address political and economic uncertainties and the lack of wider civil society engagement which fatally undermined the robustness of its approach. After yet another election the document was shelved.

2010s: Randstad backstage

Economic growth in the Netherlands went into reverse following the 2008 global financial crisis, from 3.5% in 2007 to -4.5% in 2009. A fall in global demand and weak domestic conditions created a ‘Great Recession’, not equalled before or after until the COVID-19 crisis of 2020 (Masselink and Van den Noord, 2009). Naturally, government attention turned to dealing with very high levels of unemployment and slow growth.

A change in the coalition government in 2010 ensured that neoliberal economic ideology remained at the fore. The new national government quickly adopted the *Structuurvisie Infrastructuur en Ruimte* (SVIR), the National Policy Strategy for Infrastructure and Spatial Planning (2012). The Randstad is mentioned in this ‘strategy’ but it has little content, save for proposals for new road building, a recurring policy goal when liberals and Christian-democrats participate in a government coalition. Here, it draws strongly on the 2007 OECD *Territorial Review of the Randstad Holland* in citing the importance of building roads to ease congestion to support economic growth and the ‘business environment’. This and other recommendations in the OECD report such as using the Green Heart to provide housing seemed already outdated when made, and certainly are in 2020. But the report is very clear about the need for the Netherlands to tackle ‘the lack of integration of the Randstad to improve its operation as a unified urban area...’ (OECD, 2007: 27). It is rather doubtful though whether increasing road capacity could mean anything here.

Economic growth is not everything of course, and other related issues began to figure prominently in the 2010s, not least the risks from climate change, and from that, the need to strengthen resilience in a country where 70% of the wealth generation takes place on land below sea level (Stead, 2014). Despite huge ambitions the Netherlands was lagging behind in some aspects of its climate mitigation and adaptation agenda, for example, in having the lowest share of renewable energy resources of all EU member states.⁷

The limited imagination of central government in addressing these issues through shaping the spatial configuration of the Randstad was confirmed when previously sacrosanct policies, the Green Heart and buffer zones, were formally abandoned. Instead the proposed ‘main national spatial structure’ is a location map of infrastructure – pipelines, energy, water, nature and other projects, though it does explain the important cross-border connections. Further decentralisation saw that regional planning was taken on by the provinces and the institutions created for the north and south wings as explained above.

The SVIR did not signal the demise of the Randstad idea, but it has been very much backstage in spatial development through the 2010s. Indeed, for much of this time, spatial planning itself has been much less in favour, with its ministry abolished in 2010 and its concerns becoming just one part of the Ministry of Infrastructure and Water Management (in 2017 spatial planning

moved again to another ministry). An agenda for simplification of spatial planning as part of a wider transition to ‘government as enabler not provider’ was adopted in 2012 under the slogan *Eenvoudig Beter*, ‘Simply Better’. Its centrepiece proposal is a new *Omgevingswet*, the Environment and Planning Act. The choice of the word ‘environment’ is not accidental. It marks a step away from ‘spatial planning’ with the intention to integrate 15 acts completely and about 25 acts partially and all government policies that affect the living environment – and also to integrate the 80 or more related government visions and policy documents in one overarching strategy. The first iteration of that ‘simplified’ scheme was delivered in 2019 in the *Nationale Omgevingsvisie*, Draft National Strategy on Spatial Planning and the Environment (NOVI).

The NOVI has immense ambitions. The idea that the solution to the urgent need to integrate the impact of sectoral policies on the living environment lies in the creation of one dominant ‘environmental’ law and strategy is questionable, especially the suggestion that this is a simplification. At the time of writing accession of the Act is proposed for 2022, some ten years after it was conceived. However, in the event, the content of the Draft NOVI is not so different from previous national spatial strategies. The differences are more in the process and specificity. The weakening position of national government means that it has had to engage more with other actors who do have power to deliver, be they, other government departments, local government, agencies, business or civil society. And the draft is very much a general document establishing principles and policies, with few specific designations. Difficult decisions will be left to the provinces, municipalities and agencies, and they will need new tools to balance the many competing interests and priorities set out in the NOVI. The Randstad does figure in the text but rather tangentially, in relation to the challenge of maintaining the open identity of the Green Heart. However, the NOVI still recognises the importance of the maintenance of concentrated development in a polycentric structure of cities ‘which function as a single, complementary system’ (Ministry of the Interior and Kingdom Relations, 2019: 24) but at the scale of the whole Netherlands rather than the Randstad. In 2020, the claim that the strategy is not a static document but rather a process of constant adaptation will be severely tested if it is to remain significant in the face of the COVID-19 crisis.

2020s post-pandemic Randstad

The crisis from 2020 was a major blow to the Netherlands. From the 1980s city populations were growing and during the 2010s the economy had strengthened, indicated for example, by the declining levels of property vacancy. In the aftermath of the crisis these advances will inevitably be reversed, and some problems that were worsening such as housing affordability, exacerbated. Urban densification in the Randstad in order to deliver a government priority of 1 million new homes by 2030 will certainly be resisted, with changing residential location preferences putting more pressure on open

land. The anticipated decline in commuting especially by public transport, and growth in teleworking and online shopping might reduce the demand for commercial space in the Randstad cities, though it will also present opportunities to improve the living environment sought by NOVI.

Despite COVID-19, the Netherlands greatest challenge remains the effects of climate change, and not least in the Randstad where many critical assets are located in the most vulnerable places. NOVI does set the scene for more concerted action on mitigation and adaptation with, for example, a key priority to ensure space for the energy transition, and an emphasis on mixed uses, self-sufficient neighbourhoods, circular cities, and healthy environments. But does the NOVI go far enough in adapting spatial policy to new and possible future conditions? In Chapter 8, Boelens and Jacobs argue that future policy needs to go further with a fundamental rethink of the accepted wisdom around spatial policy and the generation of growth, to new ways of creating prosperity. They cite the example of the shifting objectives of Rotterdam Port from a gateway for goods where profitability is declining, towards business services allied to the port and its international standing. The COVID-19 crisis will strengthen demands for new directions in policy. These may accelerate shifts in economic structure with more attention to the consequences of climate change and the inevitable demands for more attention to healthy environments. We return to these points in the conclusion.

Structure of the book

The following chapters are organised in three sections broadly following the structure of origins, operation, and planning of the Randstad. We begin in Part II with a review of the history of the Randstad and explanation of how no one city evolved to dominate the region. The four chapters explain how the pattern of the Randstad's spatial configuration and distribution of functions arises from the interplay of changing natural environmental conditions especially related to flood risk, waves of technological innovation from windmills to wind turbines, economic and social organisation, and strong government intervention.

Part III examines the contemporary operation of the Randstad as a metropolitan region and asks if the reality of functional relations meets the concept of polycentricity. The five chapters in this section demonstrate the different ways of understanding and measuring functional relationships and complementarity, and outline dominant themes in the discourse of urban development in the Randstad. Part IV reviews changing ideas about how government should organise itself to strengthen and exploit the Randstad, the actual outcomes in governance and policy, and the contribution of spatial planning to shaping its current form and performance. We conclude in the final chapter by returning to, and offering answers to our four main questions.

Notes

- 1 <https://www.lboro.ac.uk/gawc/world2018t.html> (accessed 29 June 2020).
- 2 In Europe, Malta has a higher population density and urbanisation rate, and Iceland a higher urbanisation rate.
- 3 Source: Statistics Netherlands, see opendata.cbs.nl.
- 4 Source: Figures for all transport infrastructure are taken from Eurostat Inland Transport Infrastructure at the Regional Level, updated 2020 (accessed 29 June 2020).
- 5 August 2019: nearly 220.000 on average per day, <https://www.schiphol.nl/en/schiphol-group/page/transport-and-traffic-statistics/> (accessed 29 June 2020).
- 6 Times Higher Education World University Rankings 2020, <https://www.timeshighereducation.com/world-university-rankings/2020/> (accessed 29 June 2020).
- 7 Eurostat renewable energy statistics, January 2020, https://ec.europa.eu/eurostat/statistics-explained/index.php/Renewable_energy_statistics (accessed 29 June 2020).

References

- Allmendinger, P. and Haughton, G. (2009). 'Soft spaces, fuzzy boundaries, and me-tagovernance: The new spatial planning in the Thames Gateway', *Environment and Planning A: Economy and Space*, 41(3), 617–633.
- Allmendinger, P., Haughton, G., Knieling, J. and Othengrafen, F. (2015a). 'Soft spaces, planning and emerging practices of territorial governance'. In: Allmendinger, P., Haughton, G., Knieling, J. and Othengrafen, F. (Eds) *Soft Spaces in Europe: Re-Negotiating Governance, Boundaries and Borders*. Routledge, London, 3–22.
- Allmendinger, P., Haughton, G., Knieling, J. and Othengrafen, F. (2015b). *Soft Spaces in Europe: Re-Negotiating Governance, Boundaries and Borders*. Routledge, London.
- Arcadis (2018). *Citizen Centric Cities: The Sustainable Cities Index 2018*. Arcadis, Amsterdam.
- Bontje, M., Musterd, S., Kovács, Z. and Murie, A. (2011). 'Pathways toward European creative-knowledge city-regions', *Urban Geography*, 32(1), 80–104.
- Burger, M.J., Meijers, E.J., Hoogerbrugge, M.M. and Masip Tresserra, J. (2015). 'Borrowed size, agglomeration shadows and cultural amenities in north-west Europe', *European Planning Studies*, 23(6), 1090–1109.
- Burke, G.L. (1966). *Greenheart Metropolis: Planning the Western Netherlands*. MacMillan, London.
- CEC, Commission of the European Communities (2019). *The EU Environmental Implementation Review 2019 Country Report: The Netherlands*, Brussels, 4.4.2019 SWD (2019) 133 final.
- CSD, Committee on Spatial Development (1999). *European Spatial Development Perspective: Towards Balanced and Sustainable Development of the Territory of the EU*. Luxembourg: Office for Official Publications of the European Communities.
- De Boer, N. (1996). *De Randstad bestaat niet [The Randstad Does Not Exist]; De onmacht tot grootstedelijk beleid*. NAI Uitgevers, Rotterdam.
- De Jong, A. (2013). 'The Netherlands: Neoliberal dreams in times of austerity', *New Politics*, XIV(2), Web Journal accessed 1 July 2020, newpol.org/.
- Deltametropool (1998). *Verklaring van de wethouders ruimtelijke ordening van Amsterdam, Rotterdam, Den Haag en Utrecht over de toekomstige ruimtelijke ontwikkeling in Nederland*

- [Declaration of the Spatial Planning Aldermen of Amsterdam, Rotterdam, The Hague and Utrecht on the Future Spatial Development of the Netherlands]. dS+V, Rotterdam.
- Dieleman, F.M. and Musterd, S. (1992). 'The restructuring of the Randstad Holland'. In: Dieleman, F.M. and Musterd, S. (Eds) *The Randstad: A Research and Policy Laboratory*. Kluwer Academic Publishers, Dordrecht/Boston/London, 1–16.
- ESPON (2020). *ESPON Policy Brief: Polycentric Territorial Structures and Territorial Cooperation*. ESPON EGTC, Luxembourg.
- Faludi, A. (2007). 'Territorial cohesion policy and the European model of society', *European Planning Studies*, 15(4), 567–583.
- Faludi, A. and Van der Valk, A. (1994). *Rule and Order: Dutch Planning Doctrine in the Twentieth Century*. Kluwer Academic Publishers, Dordrecht/Boston/London.
- Faludi, A. and Waterhout, B. (2002). *The Making of the European Spatial Development Perspective; No Masterplan*. Routledge, London.
- Gløersen, E., Lähteenmäki-Smith, K. and Dubois, A. (2007). 'Polycentricity in transnational planning initiatives: ESDP applied or ESDP reinvented?' *Planning Practice & Research*, 22(3), 417–438.
- Hemel, Z (2017). Free state of Amsterdam Weblog, zefhemel.nl/over/, Accessed 4 February 2020.
- Jauhainen, J.S. and Moilanen, H. (2011). 'Towards fluid territories in European spatial development: Regional development zones in Finland', *Environment and Planning C: Government and Policy*, 29(4), 728–744.
- Lambregts, B. (2009). *The Polycentric Metropolis Unpacked: Concepts, Trends and Policy in the Randstad Holland*. PhD University of Amsterdam. Amsterdam Institute for Metropolitan and International Development Studies (AMIDSt), Amsterdam.
- Lambregts, B. and Zonneveld, W. (2004). 'From Randstad to Deltametropolis: Changing attitudes towards the scattered metropolis', *European Planning Studies*, 12(3), 299–321.
- Liu, X. and Wang, M. (2016). 'How polycentric is urban China and why? A case study of 318 cities', *Landscape and Urban Planning*, 151, 10–20.
- Masselink, M. and Van den Noord, P.J. (2009). 'The global financial crisis and its effects on the Netherlands', *ECFIN Country Focus*, 6(10), 1–7. European Commission's Directorate-General for Economic and Financial Affairs, Brussels.
- Meijers, E.J. and Burger, M.J. (2017). 'Stretching the concept of "borrowed size"', *Urban Studies*, 54(1), 269–291.
- Meijers, E.J., Hoogerbrugge, M.M. and Cardoso, R. (2017). 'Beyond polycentricity: Does stronger integration between cities in polycentric urban regions improve performance?' *TESG: Tijdschrift voor Economische en Sociale Geografie*, 109(1), 1–21.
- Ministerie van VROM (Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer) (2008). *Structuurvisie Randstad 2040: Naar een duurzame en concurrerende Europese topregio [Vision Randstad 2040: Towards a Sustainable and Competitive European Top Region]*. Ministerie van VROM, The Hague.
- Ministry of Infrastructure and Environment (2013). *Spatial Planning Calendar*. Available online: <https://www.government.nl/documents/leaflets/2013/07/04/spatial-planning-calendar> (accessed 29 June 2020).
- Ministry of the Interior and Kingdom Relations (2019). *Draft National Strategy on Spatial Planning and the Environment; A Sustainable Perspective for Our Living Environment*. Ministry of the Interior and Kingdom Relations, The Hague.
- OECD (2007). *Territorial Reviews: Randstad Holland, The Netherlands*. OECD Publishing, Paris.

- One Powerhouse Consortium (2019). *A Spatial Blueprint for the Midlands*. Barton Willmore, London.
- Othengrafen, F., Knieling, J., Haughton, G. and Allmendinger, P. (2015). 'Conclusion—What difference do soft spaces make?' In: Allmendinger, P., Haughton, G., Knieling, J. and Othengrafen, F. (Eds) *Soft Spaces in Europe: Re-Negotiating Governance, Boundaries and Borders*. Routledge, London, 215–235.
- Pain, K. (2017). 'World cities'. In: Richardson, D., Castree, N., Goodchild, M.F., Kobayashi, A.L., Liu, W. and Marston, R. (Eds) *International Encyclopedia of Geography: People, the Earth, Environment and Technology*. Wiley Blackwell, Chichester, 1–9 Available online: <http://centaur.reading.ac.uk/39142/>.
- Regio Randstad (2017). *Randstad Monitor: Competitiveness, Business Climate and Quality of Life*; The Randstad Region compared to other metropolitan areas in Europe. Representation of the Randstad Region, Brussel.
- Roodbol-Mekkes, P.H. and Van den Brink, A. (2015). 'Rescaling spatial planning: Spatial planning reforms in Denmark, England, and the Netherlands', *Environment and Planning C: Government and Policy*, 33(1), 184–198.
- Shachar, A. (1994). 'Randstad Holland: A "World City"?' *Urban Studies*, 31(3), 381–400.
- Spaans, M. and Zonneveld, W. (2015). 'Evolving regional spaces: Shifting levels in the southern part of the Randstad'. In: Allmendinger, P., Haughton, G., Knieling, J. and Othengrafen, F. (Eds) *Soft Spaces in Europe: Re-Negotiating Governance, Boundaries and Borders*. Routledge, London, 95–128.
- Statistics Netherlands (CBS) (2019). *Dutch Trade in Facts and Figures; Export, Investment and Employment*. Statistics Netherlands, The Hague.
- Stead, D. (2014). 'Urban planning, water management and climate change strategies: Adaptation, mitigation and resilience narratives in the Netherlands', *International Journal of Sustainable Development & World Ecology*, 21(1), 15–27.
- TA, Territorial Agenda 2030 (2019). *Draft Territorial Agenda 2030 Version December 2019*. Available online: <https://www.territorialagenda.eu/renewal-reader/draft-territorialagenda.html> (accessed 29 June 2020)
- United Nations, Department of Economic and Social Affairs (2019). *World Urbanization Prospect*. The 2018 Revision. United Nations, New York.
- Wall, R. (2009). 'The relative importance of Randstad cities within comparative worldwide corporate networks', *TESG: Tijdschrift voor Economische en Sociale Geografie*, 100(2), 250–259.
- Waterhout, B., Othengrafen, F. and Sykes, O. (2013). 'Neo-liberalization processes and spatial planning in France, Germany, and the Netherlands: An exploration', *Planning Practice & Research*, 28(1), 141–159.