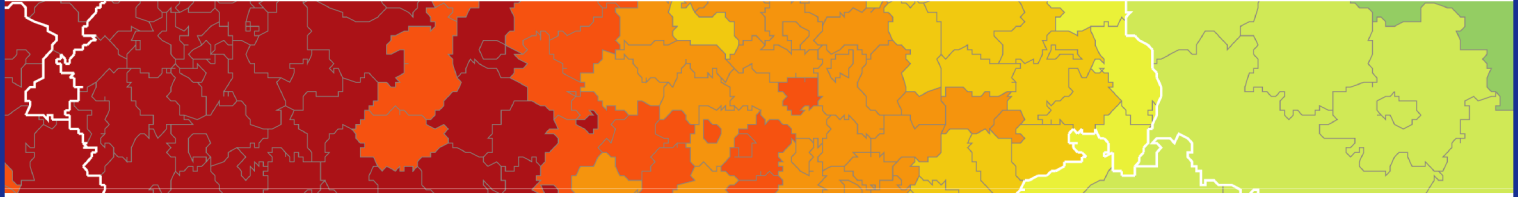




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SUPER – Sustainable Urbanisation and Land Use Practices in European Regions

Applied Research

Annex 3.9: Case study NL-Ladder

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This applied research activity is conducted within the framework of the ESPON 2020 Cooperation Programme.

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Information on ESPON and its projects can be found on www.espon.eu.

The web site provides the possibility to download and examine the most recent documents produced by finalised and ongoing ESPON projects.

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Annex 3.9: Case study NL-Ladder

**SUPER – Sustainable Urbanisation
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Abbreviations

AESOP	Association of European Schools of Planning
ARTS	ESPON Assessment of Regional and Territorial Sensitivity
CEMAT	Council of Europe Conference of Ministers Responsible for Spatial/Regional Planning
CLC	Corine Land Cover
COMPASS	ESPON Comparative Analysis of Territorial Governance and Spatial Planning Systems in Europe
EC	European Commission
ECP	ESPON Contact Point
ECTP	European Council of Town Planners
EEA	European Environmental Agency
ERDF	European Regional Development Fund
ESPON	European Territorial Observatory Network
ESPON EGTC	ESPON European Grouping of Territorial Cooperation
EU-LUPA	ESPON European Land Use Patterns
EU	European Union
GVA	Gross Value Added
ISOCARP	International Society of City and Regional Planners
ITI	Integrated Territorial Investments
JRC	EU Joint Research Centre
LCC	(Corine) Land Cover Change
LUE	Land Use Efficiency
MCA	Multi-Criteria Assessment
NUTS	Nomenclature of Territorial Units for Statistics
PBL	Netherlands Environmental Assessment Agency
PCG	Project Coordination Group
SCBA	Societal Cost Benefit Analysis
SDG	Sustainable Development Goal
SPIMA	ESPON Spatial Dynamics and Strategic Planning in Metropolitan Areas
SUPER	ESPON Sustainable Urbanisation and Land Use Practices in European Regions
TANGO	ESPON Territorial Approaches for New Governance
TIA	Territorial Impact Assessment

1 General introduction

In ESPON SUPER, the case studies contribute to the objective of unravelling how different interventions in diverse social, environmental and economic settings have transformed land-use development practices. In particular, the aim is to analyse, understand and learn from the successes and failures of practitioners and decision makers over the last three decades in their search for more sustainable land use. All case studies are based on close observation and direct contact with each territory and with the people involved in the design and implementation of each intervention. To this end, each case study was assigned to the project team with the greatest local knowledge of the territory, institutions and language.

The methodological framework used for all case studies consisted of three groups or basic sources of information and knowledge.

1. **Context:** each intervention addressed or influenced a particular land-use development practice which had emerged within a specific territorial and institutional context, which is crucial for understanding and interpreting the results. It was also important to know the objectives related to the sustainability of land use that had been set for each territory, albeit on paper, at the regulatory level. These tasks were based on desk research, even though, in some cases, local stakeholder support was valuable to locate the most relevant pieces of information.
2. **Developments:** the second source of data was the quantitative land use changes in the form of maps and graphs. This allowed each case study team to consider to what extent the underlying contextual factors and the studied interventions had transformed the territory and the rates of urbanization. This information was essential for evaluating the effects that each intervention had on land-use sustainability and, more indirectly, on culture and spatial planning practices.
3. **Stakeholder interviews:** each case study held over ten in-depth interviews with stakeholders involved in one way or another with the intervention. At these meetings, they were asked about the reasons for and the perceived urgency of the intervention, how its objectives were defined and by whom, the experience of implementing each intervention, the pitfalls encountered, as well as the benefits it had brought in terms of improving the three thematic dimensions of land-use sustainability: ecological, economic and social equity. In addition, stakeholder maps were produced that present the type and intensity of the relationships that some stakeholders had with the rest in a visual way.

This report on the case study of NL-Ladder presents a synthesis of all three outputs in order. It is structured as follows. This introductory section provides a summary of the main characteristics of the case study (Section 1.1), the scale of analysis (Section 1.2) and geographical scope (Section 1.3). Section 2 contextualizes how urbanization occurs in the case study area. It contains descriptions of typical urban developments, how this is regulated,

who promotes it, how it is implemented and emerging challenges regarding land-use development. Keeping with this contextual approach, Section 3 discusses how the studied intervention addresses the challenge of sustainability in its three thematic dimensions (Section 3.1) as well as in its temporal dimension (Section 3.2).

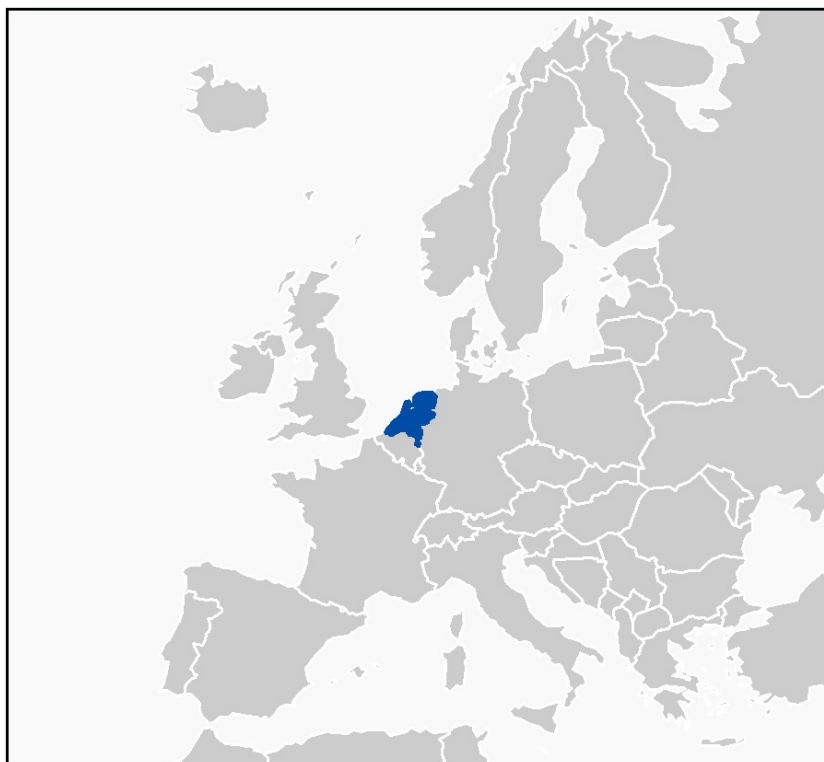
Section 4 presents the main results of the case study research in three parts. Section 4.1 analyses how the priorities of the intervention were configured based on information collected from the interviewed stakeholders. In particular, it seeks to know how a perceived problem was identified or constructed to justify the intervention, the extent to which land use sustainability was a consideration, and whether these elements tended to unite the community in favour of a collective interest or whether, on the contrary, they were a source of tension and conflict. Section 4.2 discusses in more detail how seven organizational and institutional aspects may have influenced the relative successes and failures of the intervention. Section 4.3 combines the analysis of land use changes, the opinions of the consulted stakeholders and, where relevant, the stakeholder maps, to make an assessment of the actual results of the intervention on the planning and development culture and the different thematic dimensions of sustainability. Finally, Section 4.5 explicitly answers questions posed to the ESPON SUPER team, thus reflecting the direct contribution of each case study to the project's objectives.

While each individual case study contributes to answering the questions posed, its true value lies in the possibility of combining and contrasting the outputs of the eleven cases. This choral work is presented in Annex 3.13. The triangulation of results allows for the formulation of generalizable conclusions and recommendations that can contribute to the design of new plans and policies better aligned with the objectives of sustainability and land take abatement at the European level. In this way, the case study presented in this report also contributes to this other broader objective.

1.1 Case study NL-Ladder

With well-known concepts such as growth centres, Vinex-neighbourhoods, green heart and buffer zones, the Netherlands is internationally acclaimed for its strong national spatial planning (Bontje, 2001; Cammen et al., 2012, 2012; Faludi & van der Valk, 1994). Since 2000 the country has phased-out, decentralized and deregulated its urbanization policies, including all those mentioned above. As a response to dissatisfaction with growing vacancy rates and diffuse urban development in the 2000s, the 2012 national spatial strategy introduced the sustainable urbanization procedure, also called the 'ladder' because it consists of three steps or rungs. This case study investigates the origins, content and impacts of this intervention on Dutch urban development and land use practices up to and including its revision in 2017.

Map 1.1: Location of case study “NL-Ladder”



1.2 Scale/s of analysis

The case study concerns an intervention called the sustainable urbanization procedure set at the national level. It concerns a three-step rule when considering urban development and, for this reason, is called the ‘ladder’ (*Ladder voor duurzame verstedelijking*). The ladder was introduced in the 2012 national policy document SVIR (*Structuurvisie Infrastructuur en Ruimte*) (Ministerie IenM, 2012c, 2012b), which is only binding on the national government, and subsequently written into the national bylaw Bro (*Besluit ruimtelijke ordening*) which makes it binding on all governments making zoning plans (national government, provinces and municipalities). Its application is therefore nationwide (Ministerie IenM, 2012a). The ladder itself is a very simple rule, but its implementation was controversial.

Specifically, the Ladder requires all zoning plans legally enabling urbanization to first argue (1) the need for this development (2) why, if on a greenfield, it could not be accommodated in existing areas and (3) if on a greenfield, its multi-modal accessibility. The vast majority of zoning plans are made at the municipal (LAU) level. This makes this level the second most important level for the case study, and the most important in terms of understanding its implementation. Provinces and the national government may also draw up zoning plans and impose them, but this is exceptional and usually concerns infrastructure rather than urbanization.

The province is also interesting by virtue of the fact that a few provinces drafted their own versions of the ladder, which are generally more far-reaching than the national rule (Gierveld,

2015). In addition, provinces sometimes attempt to assist municipalities in complying with the ladder by gathering information on planning activities, drawing up building quotas in their strategies, etc (Evers & Blom, 2016).

Finally, the non-statutory region is interesting because the ladder (pre 2017) requires initiators to argue that a 'current regional need' exists for the proposed development. In some cases, regional partnerships have taken on supportive roles similar to that described for provinces above.

Table 1.1: NL-Ladder scales

Scales	Main scale	Other scales
Supra/Trans-national		
NUTS 0	National level	
NUTS 1		
NUTS 2		Province (12)
NUTS 3		Region
LAU1 – NUTS 4		Municipality (>400)
LAU2- NUTS 5		

1.3 Geographical scope

The case study regards a national policy, so the entire territory of the Netherlands is affected. The specific area targeted by the intervention are the sites where urbanization is foreseen.

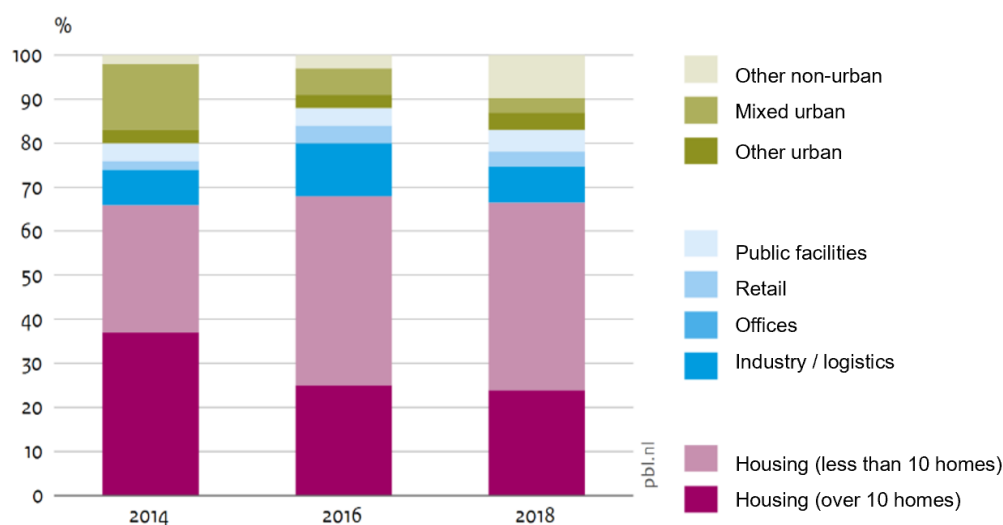
2 Contextual analysis

2.1 Typical urban development

Dutch spatial planning is world famous for large-scale projects such as the Vinex neighbourhoods or growth centres, but since 2010 urban development has become more piecemeal, partly as a result of the crisis and partly because no major national planning operations were undertaken. At present, the most common zoning plan is for 10 homes or less. Typically, new housing development is located on the urban fringe (edges of built-up area) while commercial development concentrates at highway locations near exits (Pols et al., 2018). As a result, both homes and jobs are decentralizing in the Netherlands. The same is true for retail development, but because only certain kinds of shops (furniture, garden supplies, car showrooms, etc.) are allowed at out-of-town locations most grocery and recreational shopping takes place in central locations (Evers, 2008).

Since the 2008 crisis, more redevelopment plans have emerged, such as the conversion of offices and shops into homes. After years of decline, the number of people living within existing urban areas has risen since 2010 (PBL 2018). As the economy improves, it is conceivable that Dutch urban planning will become more large-scale.

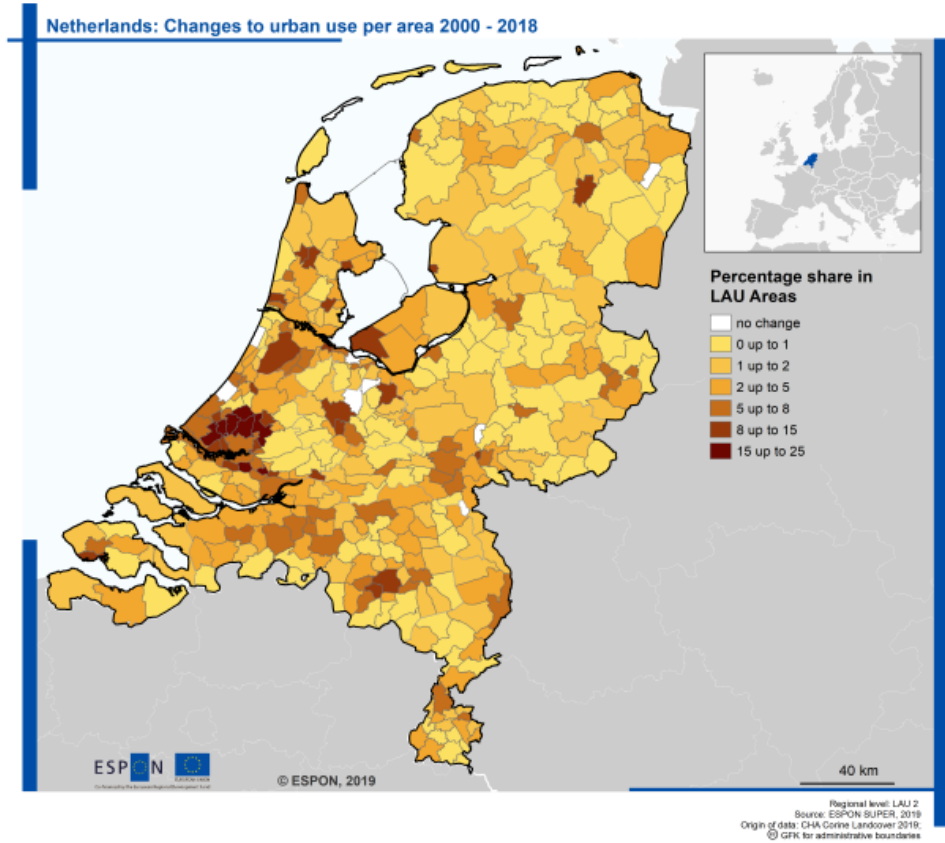
Figure 2.1: Zoning class of urban development plans over time



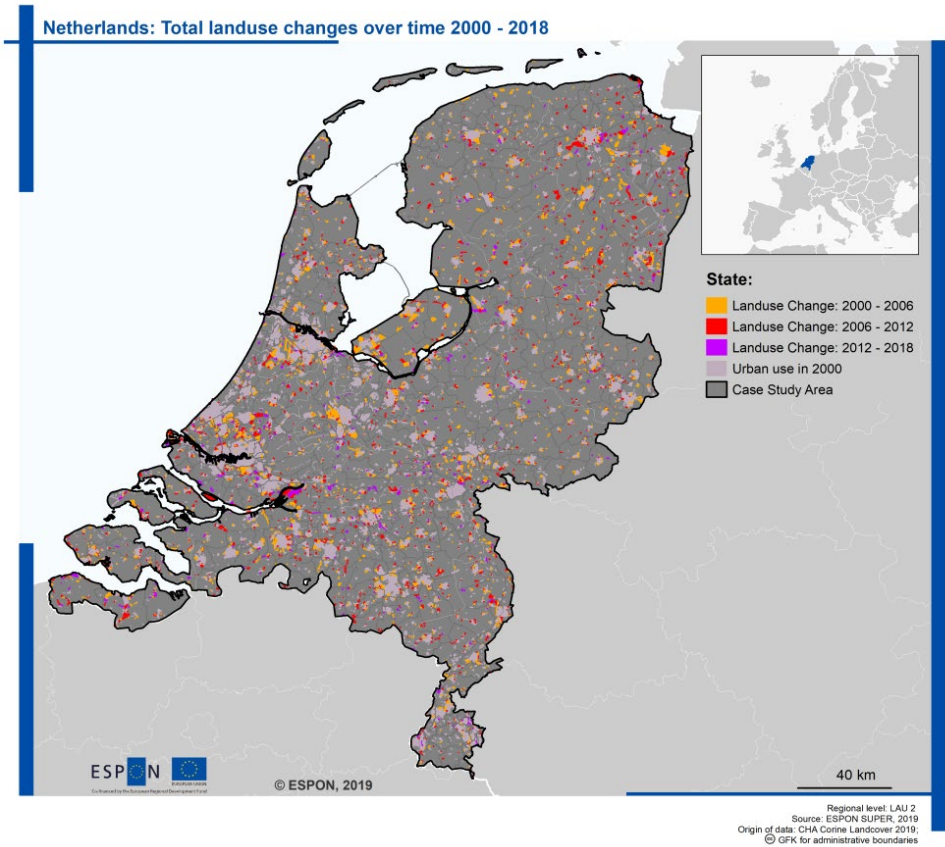
Source: PBL et al., 2018

The following two maps display the location, timing, and magnitude of urbanization in the Netherlands over the 2000-2018 period. Map 2.1 shows that much of the development occurred in the already densely populated Randstad region, with some small hotspots like Eindhoven and Assen. Map 2.2 shows that much of this development occurred at the edges of towns and primarily in the 2000-2006 period.

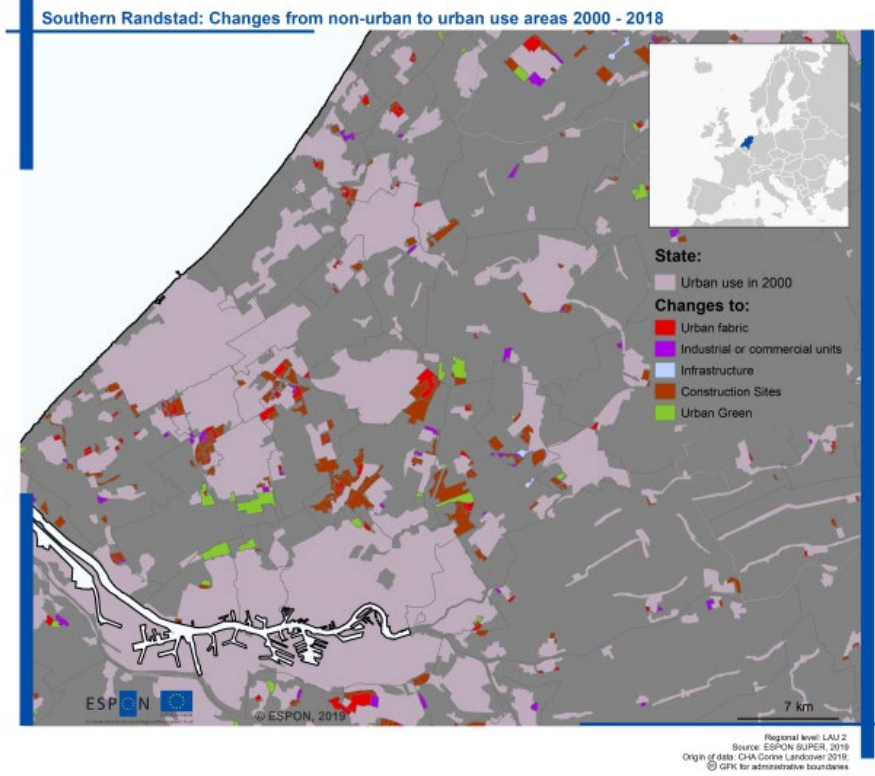
Map 2.1: Urbanization in the Netherlands (2000-2018)



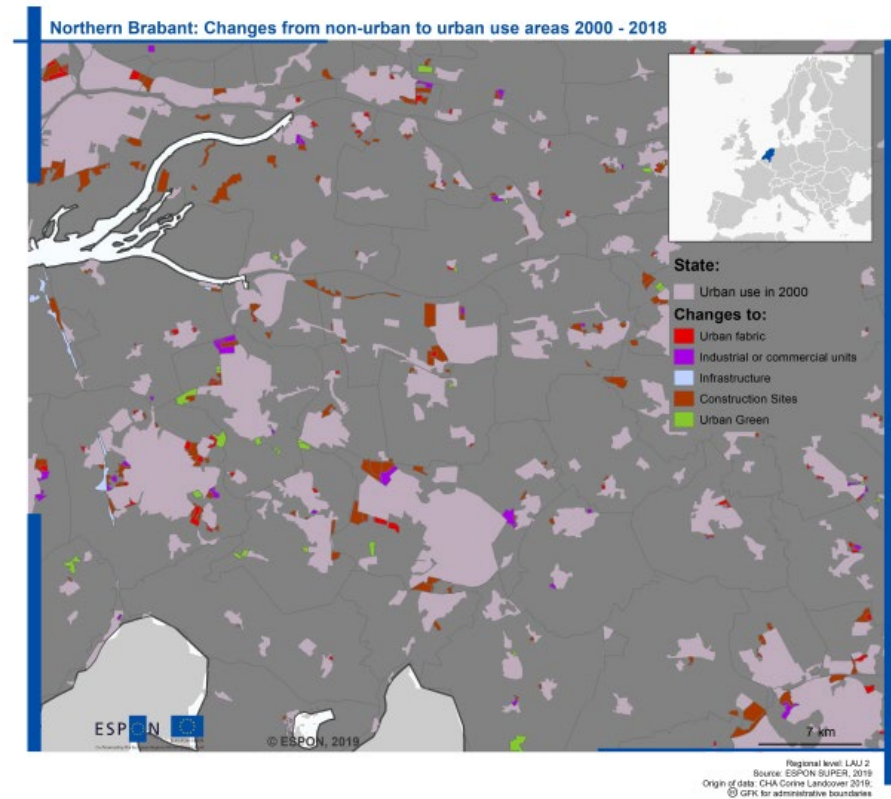
Map 2.2: Location and phasing of urban development in the Netherlands



Map 2.3: Location and phasing of urban development in the Netherlands



Map 2.4: Location and phasing of urban development in the Netherlands



Urban development typical of this period in the Netherlands becomes clearer when zooming in to a few areas. In the highly populated Randstad, we see especially the southern part around Delft urbanizing significantly up to the present (construction sites). What does not show up on these maps is the Randstadrail, a new light-rail line between Rotterdam and the Hague which is driving this construction; much of this can be therefore classified as transit-oriented. This is somewhat different in Noord Brabant where, especially to the northwest, there seems to be more scattered construction sites and more industry, perhaps linked to the growth in logistical complexes. In both cases, it is also significant that urban green areas are being realized on the urban fringe, probably to replace sites sacrificed for infill development.

2.2 Basic institutional conditions

In the Netherlands, urban development occurs in strict accordance with the planning system; illegal or informal development is virtually non-existent. Building permits are automatically issued if the initiative is in line with a zoning plan, because these plans grant legal development rights. Zoning plans must be made in accordance with provincial and national regulations, which often specify areas where development can or cannot occur and under what conditions. They should also conform to the non-binding spatial strategy drawn up by the municipality, but this is not a hard requirement. The statutory system may suggest that the system is 'plan led' but actual practice is different: plans are made to accommodate initiatives (Needham, 2007).

Figure 2.2: Vacation homes in Kamperland (ZE).



Source: Photo by Kersten Nabeilek

2.3 Initiative

Land acquisition in existing urban areas is complicated due to the fragmented ownership and often involves some type of public-private partnership. This also explains the attractiveness of greenfield sites. Private property developers generally seek out unbuilt or derelict locations at

edges of urban areas. They will approach the landowner, typically a farmer or business, and either buy the land or purchase an option to buy the land. Sometimes the land is bought by speculators with the intent to sell to developers. It is not uncommon that land changes hands several times before it is rezoned and built. Not only private parties are involved in this: municipalities also purchase agricultural land with the intent to develop it later, a practice called 'land banking'.

2.4 Planning permission

The next step is to get the land rezoned, something which requires municipal cooperation. If the municipal spatial strategy indicates that this area should remain unbuilt, this can be a difficult endeavor and require extensive political lobbying and pressure. If the municipality does not refuse cooperation, a new zoning plan for the initiative needs to be drawn up. If it is a small initiative – 5 homes for instance – it is often called a 'postage stamp plan' (cf. spot zoning in the USA). Even in such cases, new zoning plans require extensive research (e.g. on environmental impacts, water management, archaeology, traffic) as well as checks for compliance with European, national and provincial regulations. If a plan is not in conformance with such regulations, it is extremely difficult to proceed, and most professional developers would have taken this into account before purchasing land.

The municipal planning department is charged with preparing the plans. Except for some big cities, consultancies are hired to write these plans, which consist of rules (legal provisions on zoning), a map, explanatory notes, and appendixes (e.g. impact studies). As we will explain in more detail later, larger plans – e.g. over 10 homes – must also apply the sustainable urbanization procedure (ladder). The various investigations and procedures sometimes lead to a modification of the initial initiative, for example, by shifting locations or numbers of buildings. The first product is a draft plan which is subject to weeks of public consultation. Affected parties are given the opportunity to object or suggest changes. Sites on the urban fringe generally draw little attention and are also valued for this fact. In rare instances (e.g. for noncompliance with regulations), higher tiers of government can issue a 'reactive directive' that suspends the planning process.

If this process is successful, the municipal council officially adopts the plan and – pending any appeals to the administrative court – the new zoning becomes legally binding, granting development rights. A building permit can then be issued, and construction can begin.

Figure 2.3: Soestduinen (Gemeente Soest)

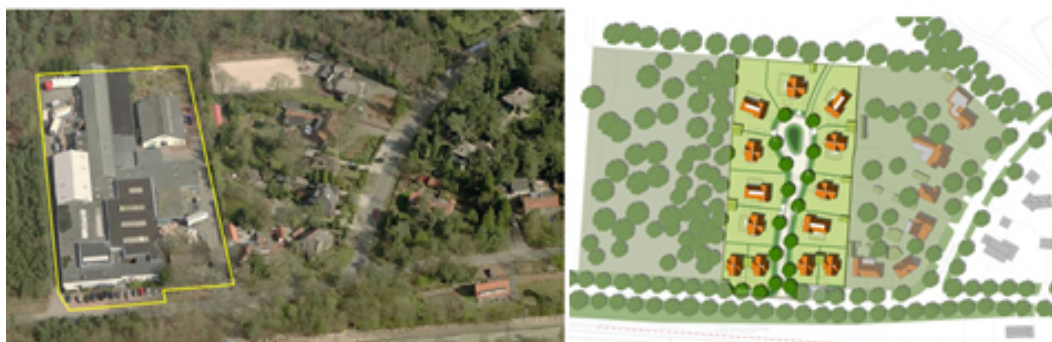


Figure 2.4: Oostvoorne (Gemeente Westvoorne)



2.5 Development process

When the land is in private hands, the most common form of development is that landowners sell to the development site to municipality so that it can provide infrastructure and public facilities (Halleaux et al 2012). The sales contract contains a stipulation that it must be sold back to the same party afterwards (the 'building claim' model). This exchange of land ownership entails negotiations about the price as both parties want to maximize their profits and reduce risks.

Municipalities use land development as a source of income; they are active participants in the development process as well as being the authorities granting planning permission (which should be performed on the basis of the public interest and good planning). The Netherlands is highly fiscally centralized; local governments have very few options to collect taxes or impose levies (and these can lead to a reduction in the municipal fund). The Dutch building-claim method allows municipalities to share in the profits of development, but it also exposes them to the risks as well. After the crisis, many faced severe financial problems resulting from the ownership of high-priced land slated for development, but where no market interest existed (Needham, 2007; Tennekes et al., 2015; van der Krabben & Jacobs, 2013).

Most buildings on the urban fringe are subsequently sold to occupiers, generally homeowners. Housing developments within cities are often carried out by non-profit housing associations that provide affordable housing. Dutch housing associations were set up over 100 years ago to provide quality homes to middle and working-class people and in the post-

war era were responsible for executing a major portion of reconstruction and planned suburban development (growth centers). In 1990, they were privatized and branched out into more profitable housing-market segments until the European Commission (DG Competition) confined their activities in the late 2000s to low-income housing.

Since the financial crisis, fundamental drawbacks to the Dutch model of public-sector land banking had become apparent, such as putting public money at risk, intermunicipal competition for development and a consequent prioritizing of short-term financial gain above public interests (Lefcoe, 1977). Even shrinking regions were eager to attract urban development (Warbroek, 2010). This physically manifested itself as greenfield development along highways on the urban fringe rather than more 'sustainable' locations in towns and cities and high vacancy levels for commercial property (Hamers & Piek, 2012; van der Krabben, 2009). The intervention examined in this case study specifically addresses these development practices.

2.6 Current issues

- Since 2000, national planning has been deregulated and decentralized. By 2012, all urbanization policy was abolished except for the instrument of this case study. At present, the tide seems to be turning. The draft national strategy was published in June 2019 which advocates compact urbanization and building at multimodal sites.
- Current prognoses estimate that approximately 1 million additional homes are needed in 2030, but this is unevenly distributed across the country. The Randstad – Amsterdam in particular – has a palpable housing shortage, whereas other parts of the country are shrinking. The degree to which this housing demand can be accommodated within existing urban areas is contested (ABF 2019)
- The Netherlands is seeking to transition off gas heating, requiring the adaptation of millions of homes and the creation of alternative energy sources, transport and storage.

3 Sustainability of objectives

3.1 Thematic dimensions

The main thrust of the document that introduced the ladder (SVIR) was the deregulation and decentralization of national planning (Zonneveld & Evers, 2014). The ladder was introduced at the request of Parliament which was concerned about the wholesale abolition of national urbanization policy. The section opens with an explanation that having a good spatial planning system is in the national interest, including making prudent and transparent decisions on infrastructure and spatial development. This should enable integrated decision making on all scales and the balancing of current and future interests. It also invokes the three principles (loosely borrowed from Vitruvius) of use value, future value, and experiential value. In its explanation of the intervention itself, the SVIR states, “Demand-led scheduling and realization of urban development by provinces, municipalities and private parties is necessary to facilitate [economic] growth, prepare for stagnation and to keep shrinking regions liveable. Moreover, land needs to be used in a prudent manner and oversupply should be avoided” (Ministerie IenM, 2012c, 2012b, p. 60). Interestingly, the main concerns cited above are socioeconomic rather than ecological, even though the name of the intervention carries the name ‘sustainable’ within it.

According to the handbook drawn up by officials at the ministry, the goal of the ladder is to promote “good spatial planning by making optimal use of land in urban areas¹. The sustainable urbanization procedure strives to ensure prudent and transparent decision-making on all urban development and infrastructural decisions” (Ministerie IenM, 2012c, 2012b, p. 4). In this interpretation, the intervention is directed towards good governance and planning more than sustainability per se, although if we interpret the ladder as part of good spatial planning, we could include temporal sustainability (future value). As we will see below, the more substantive goals of the ladder – i.e. its three rungs – do point to different thematic aspects of sustainability.

In terms of text, the intervention itself is less than a half a page long. It consists of a change to a single article of a bylaw providing a definition of what constitutes an urban development (art. 1.1.1, Bro) and another article section (art. 3.1.6, section 2 Bro). This amendment contains three clauses stipulating argumentation which should be provided in plans providing for new urban development (the three ‘rungs’ of the ladder). In 2017, the rule was amended whereby the third rung was abolished and the first simplified. Below is a translation of the main part of the ladder (pre-2017), on which the majority of this case study is based.

¹ This is a vague principle. Case law suggests that it means that prior to zoning, thorough research needs to be carried out regarding the site and relevant policies at various levels of scale as well as sufficient public consultation (Van Buuren et al., 2008). Planning practitioners usually attach substantive values to this concept as well, such as avoiding incompatible land uses and avoiding ‘wasting space’. The explanatory notes to the Spatial Planning Act also make a link to sustainability, which is also supported by case law (Boeve & van Middelkoop, 2010)

Spatial Planning Decree (Bro) Article 3.1.6, Section 2

Section 2: The explanatory notes of a zoning plan enabling new urban development must contain the following:

- a) A description of how the foreseen urban development satisfies a current regional need;
- b) If the description in part a shows that a current regional need exists, a description shall be provided of the extent to which this need could be accommodated in the existing urban area of the region in question by reusing, refurbishing or transforming available space;
- c) If the description in part b shows that the urban development cannot be accommodated within the existing urban area of the region in question, a description shall be provided of the extent to which this need will be met at locations that are, or can be, suitably connected by different modes of transport.

Source: (Besluit Ruimtelijke Ordening (Bro), 2014), own translation.

From the legal text, it can be argued that the primary sustainability dimension is ecological. The demand for extra argumentation for greenfield plans (second rung, Bro art. 3.1.6 section 2b) reflects this aspect, as does the demand for argumentation regarding multi-modal accessibility (third rung, Bro art. 3.1.6 section 2c). Although one could debate whether all infill development is ecologically beneficial, this seems to be an implicit assumption in this legislation. Hence, the term 'sustainable' in the title.

In addition, the ladder also aims to prevent the oversupply of urban functions, and hence vacancy of buildings (first rung, Bro art. 3.1.6 section 2a). This is primarily an economic concern and can be traced back to ideas of correcting market failures. Of course, unneeded urbanisation and underutilization of space has ecological aspects as well, albeit more indirectly.

It is more difficult to make a case for the social dimension. The ladder could improve the vitality of cities through concentration, but this is generally a by-product rather than a primary aim.

3.2 Temporal balance

The ladder is not specific about promoting temporal sustainability. Implicitly, however, this is the main goal of the intervention: to ensure that decision-making on urbanization is judicious insofar as the future consequences of that decision are taken into account. This is also shown in the text introducing the ladder in the SVIR: "...land needs to be used in a prudent manner and oversupply should be avoided" (Ministerie IenM, 2012b, p. 60) and the use of the word "prudent" in the handbook. Finally, it is also implicit in the principle of 'future value' within national planning.

4 Impact assessment

4.1 Pre-intervention

4.1.1 Identification of the problem

Many stakeholders were unclear about how the intervention was introduced and what the exact trigger was. Some respondents expressed a feeling that it had appeared out of nowhere, especially those at the municipal level who were responsible for its correct implementation. Experts and national officials were more aware about the history of the intervention, with some providing a detailed account of its origins in the interviews. In actuality, the ladder built on the so-called SER-ladder, a three-step procedure governing the siting of business parks, introduced in 1999 (Heutink & Bloemendaal, 2013). This intervention had emerged at the request of the private sector in order to overcome market failures and was generally considered successful. Following a decade of decentralization of national planning, in 2010, the national government stated that it would intensify this trend and abolish all remaining urbanization policy (Ministerie IenM, 2012c; Roodbol-Mekkes et al., 2012; Savini, 2013; VVD & CDA, 2010; Zonneveld & Evers, 2014). As a reaction to this, some members of parliament put pressure to extend the SER-ladder to all forms of urban development as a regulatory last resort.

In contrast to its origins, the stakeholders were largely in agreement about what the ladder sought to achieve: an end to the uncoordinated urban development practice which resulted in oversupply and extensive car-oriented greenfield development.

Table 4.1: Main issues according to interviewed stakeholders

Focal issue	# instances
Good spatial planning / efficient land use	7
Infill instead of sprawl	5
Governance / transparency	5
Economic sustainability	3

As can be gleaned from the table, despite its name, the ladder was not a sustainability measure but a planning measure. Several respondents explicitly mentioned this fact and one municipal officer noted the intervention should have been called 'the ladder for sensible urbanization' instead (Evers & Blom, 2016). Several respondents indicated that it had a high degree of overlap with the notion of 'good spatial planning' articulated in the Spatial Planning Act and similar requirements regarding transparency and good governance. Few felt that the intervention had led to more sustainable plans in the environmental sense or bore any resemblance to environmental policies or strategies. If anything, the ladder was seen as a means to achieve economic sustainability. The goal of reducing vacancy rates or building only according to a demonstrated need was mentioned several times. No relation was seen with social sustainability. In short, these responses confirmed the document analysis in Section 3.

4.1.2 Inception of goals/action

All respondents acknowledged the problems the ladder sought to address – preventing oversupply and promoting infill development – but not all agreed that the ladder was necessarily, adequate or appropriate to address these problems. The ladder does not explicitly prohibit or enable anything: it takes the form of a so-called ‘motivation clause’ requiring zoning plans to justify their decision to allow a particular development at a particular site. No higher public body would check these plans for compliance. Instead, third parties could take municipalities to court if they felt that the provided justification was wanting. Enforcement was essentially delegated to civil society.

In the eyes of national officials, the ladder was rather innocuous: the non-binding explanatory notes of plans only needed to contain argumentation about their choices for allowing the development, which should be inherent to good spatial planning. Some municipalities and most provinces echoed this view. However, once the courts started striking down plans for noncompliance, NGOs and local opponents (usually competing business interests) began to view the ladder as an addition to their legal arsenal. As will be explained later, this made the operation of the ladder highly contentious, even if most parties agreed about its aim. In this sense, it is a curious instrument: very light in appearance, but with potentially heavy consequences (Salet, 2014).

Finally, many respondents felt that the timing of the introduction was somewhat arbitrary. Some felt it came too late, while others acknowledged it as part of a package to decentralize national spatial planning. Some respondents were ambivalent about this question, noting that the market also goes up and down and that policy cycles exist, and that any intervention will be viewed as too early or too late by some.

4.1.3 Pre-intervention conclusions

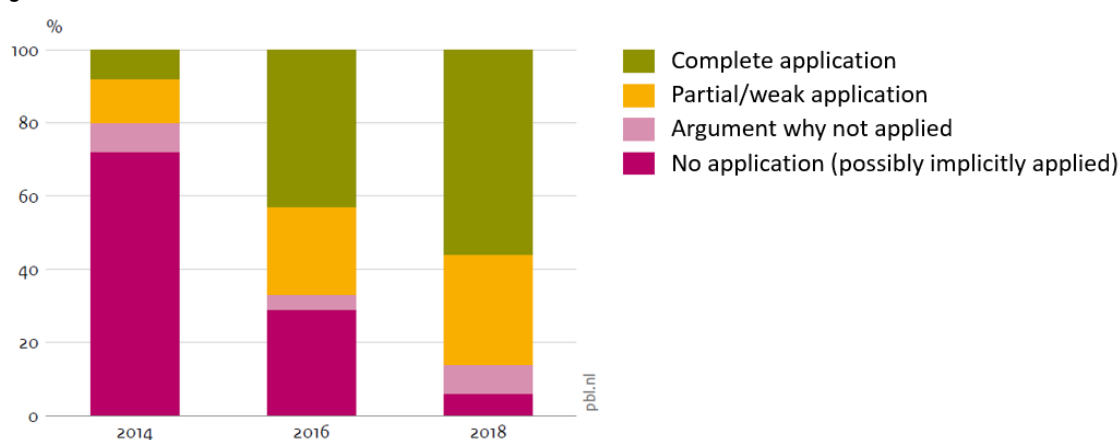
The fact that the intervention was not well known when it was introduced hampered the subsequent implementation: early plans largely ignored it. In contrast, the process to reintroduce the ladder was seen as inclusive and well-communicated. It is hard to say if this will lead to higher levels of compliance, as the ladder had already become imbedded into planning practice.

Another point regards the choice for enforcement via the courts. Perhaps the vague language employed by the Ministry in its articulation and the general perception that ‘motivation clauses’ were weak instruments contributed to the lack of attention to its introduction. This may also have contributed to the shock and confusion among builders and municipalities when the rule was found to be decisive in legal battles. In hindsight, the vague language which had made the rule seem so flimsy at first was viewed as a liability, necessitating extensive jurisprudence to clarify. This aspect of the ladder has been universally denounced.

4.2 Implementation

Research by PBL showed that compliance in the first two years was extremely low: most plans ignored the rule completely (Evers et al., 2014; PBL et al., 2014), a finding which raised questions in parliament (Vragen van de Leden Karabulut En Smaling.Pdf, 2014). When plans were legally contested and annulled by the administrative court (Council of State), compliance increased dramatically, see figure below (PBL et al., 2016, p. 19) and, as a result, it became a factor to contend with when performing new urban development, and presumably this led to substantive impact. In 2015 it was estimated that a third of municipal plans were in line with the ladder, another could be if modified and a third in conflict with its principles (Stec groep et al., 2015).

Figure 4.1: Penetration of the ladder over time



Bron: PBL o.b.v. ruimtelijkeplannen.nl

The 'success' of the intervention can further be gauged by the fact that by 2015 there was increasing backlash and vocal calls to relax the rule by development interests (Buitelaar, 2016; Feijtel & De Zeeuw, 2016; Rietdijk, 2015) and a motion was made in parliament to this effect (Motie van Het Lid Cegerek, 2016). This led to an extensive public consultation procedure led by the Ministry of Infrastructure and Environment in 2016. Unlike the introduction of the intervention, this process was viewed positively as an inclusive process. In 2017, it was decided to reform the most contentious part of the ladder (current regional need) and abolish the already neglected third step (Aerts & Rijcken, 2016; Buitelaar, 2015; Lam & Gerritsen, 2017). This seems to have quelled most criticisms although the most vociferous opponents continue to call for a complete abolition (De Zeeuw, 2019; *MOTIE VAN DE LEDEN RONNES EN LAAN-GESELSCHAP*, 2018).

The growth and decline of the concern with this intervention among planning professionals can be gauged by the number of times it was a subject in the online newsletter disseminated by the national organization Nirov/Platform31. Even though it was mandatory in 2012, it only gained attention in 2014 with the first successful appeals and the publication of the first ex-post study (PBL et al., 2014). The following year saw an explosion of interest and litigation,

leading to the public debate in 2016 and the reform in 2017. Since then, attention has subsided.

Figure 4.2: Mentions of ladder in online planning newsletter



Source: IKC-RO nieuwsflits/Platform31 nieuwsbrief, own calculation.

4.2.1 Technical capability

As stated above, the vagueness of the rule – intended to enhance discretion – became a liability as parties sought legal clarity through the courts. Consequently, legal expertise was required to determine whether a particular initiative was ‘ladder-proof’ (van Bommel & van Velzen, 2014).

Over time, various rulings provided ways to ensure that a plan could protect itself from being struck down for noncompliance. For example, the courts specified minimum thresholds for an ‘urban development’ (e.g. 10 homes) and thus the requirement to apply the ladder. For larger plans, developers could provide justification similar to that which had held up in previous lawsuits. Regarding the latter, this generally regarded the first rung on current regional need where official estimates or accepted research methods (generally quantitative) were successful (van der Heijde & van Oosten, 2015). Although the second rung regarding location was not deemed a significant hurdle (few plans were struck down on this ground), all plans in existing built-up areas according to official delineations or redevelopment plans were safe, as were greenfields already zoned as urban before the ladder’s introduction. Again, the third rung regarding multimodality was widely regarded as unproblematic and ineffective.

During the implementation, various workshops and masterclasses were set up to educate municipal officials and other parties about the ladder. Consultancies played a major role in this and were responsible for most of the more elaborate ladder texts in zoning plans. They also carried out much of the quantitative research to demonstrate regional need.

4.2.2 Data and information

Aside from the general complaint about the unclear formulation of the rule upon its introduction (especially the notions of 'urban development', 'regional need' and 'existing urban fabric'), there were more specific complaints about how this related to existing policies, data and research.

With respect to regional need, there was confusion about the scope of the region, as this is not an official jurisdiction. How far did this extend? Because regional need not only depends on an estimation of demand, but also on the supply of plans already in the pipeline, coordination of information was vital. A thorny issue regarded plans that had been put on the back burner (and were maybe defunct), blocking other plans going forward. In professional parlance this was called 'ladder room' (demand minus supply). Municipalities in provinces which had defined regions and allocated building quotas (e.g. number of homes, square meters of retail) had an obvious advantage. One municipal officer claimed that it took him 20 minutes to write a ladder justification because the regional figures were readily available, whereas others reported severe costs and delays due to the need to commission research. All in all, the ladder was praised for stimulating regional coordination and exchange of information about plans.

Another point regards the delineation of existing urban areas. Some provinces had provided this which made it easy for municipalities to know if the initiative (usually on the urban fringe) fell inside or outside this boundary (and therefore in conformance with the second step). In the province of North-Holland, which bans virtually all out-of-town development, the ladder was a moot point.

4.2.3 Participation

As stated, there was little participation or public debate when the ladder was introduced. It was done at the request of the Dutch parliament to compensate for the decentralization of national spatial planning and based on an existing (non-mandatory) guideline for siting business parks (SER-ladder), which was included in the previous national policy (*Nota Ruimte*) as well as provincial strategies. Various respondents bemoaned this process, a notable exception being the respondent from the association of property developers, who argued that business interests had provided leadership to politicians in introducing the ladder. From the approximately 70 submissions on the ladder during the public consultation, none resulted in a substantive change to the rule. It is clear from this list of concerns and grievances that there were many concerns regarding the ability of the ladder to ensure sustainable urban development in light of the decentralization of national spatial planning (Ministerie IenM, 2011).

The consultation regarding the reform of the intervention was seen as inclusive by all parties interviewed. One national officer lamented the fact that environmental NGOs had chosen not to participate. The interviewed municipal officers were less convinced about the necessity for reform, as most had become accustomed to working with the ladder in its current form.

Figure 4.3: Influence and affectedness of stakeholders

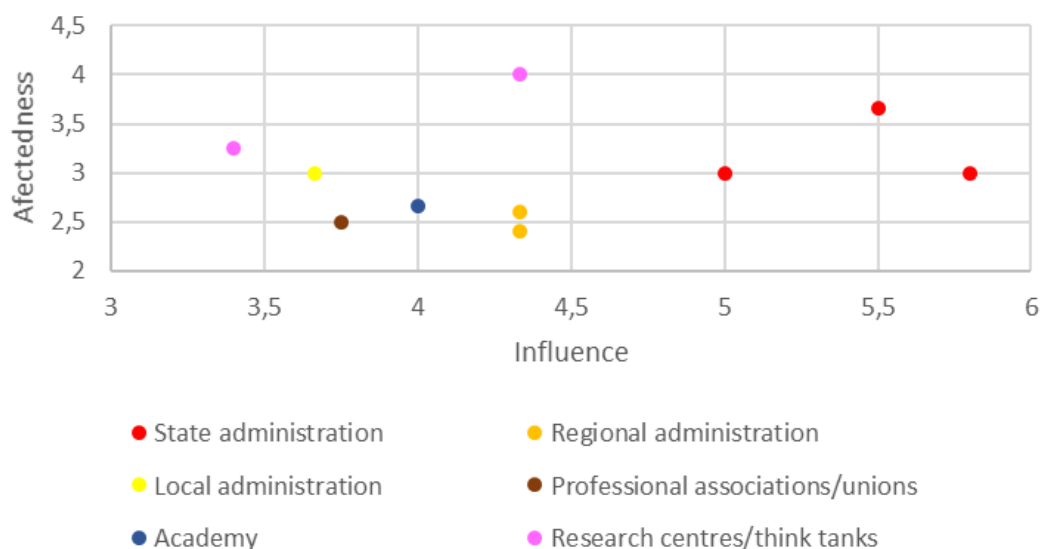


Figure 4.3 shows the result of the opinions of the stakeholders regarding who was most affected by the ladder and who had the most influence over the ladder. Interestingly, the national government was seen as the most influential of all stakeholders, whereas the governments who had to apply the ladder in practice were seen as the least influential of public bodies; the provinces occupied a middle position. With respect to those who were affected by the ladder, researchers cited very high, presumably because of the amount of consultancy work that the ladder produced, some of which was seen as influential (the research on compliance carried out by the Netherlands Environmental Assessment Agency was mentioned by various stakeholders in this light).

4.2.4 Strategic vision

The ladder neither is nor provides a strategic vision of future development. It is a rule that attempts to nudge development according to principles of efficient land-use. Its application is inherently incremental: every plan for new urban development must justify itself. Many municipalities have moreover argued that the ladder does nothing more than prescribe something that should already be standard planning practice. This being said, it has been proven that the application of the ladder is greatly facilitated by the existence of a regional strategy that describes future demand for urbanization, existing plans in the pipeline and delineates existing built-up areas.

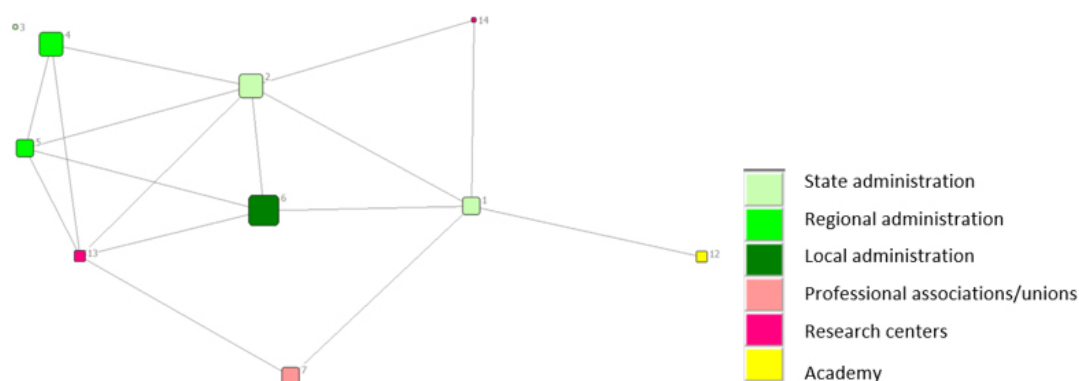
The notion of sustainability, although in the title, is rather distant. At most, it regards institutional and temporal sustainability to ensure that plans are well thought out and

transparent. The ladder was part of a wider decentralization operation and intended, in part, to give municipalities a clear framework for decision-making on initiatives for new development. Another aspect is economic sustainability by demanding that the envisioned urban development meet a demonstrated regional need.

4.2.5 Institutional coordination

Institutional coordination was deemed very weak at the time of introduction. The Ministry had included it in the SVIR and written a handbook on how to apply it, but this was widely disregarded in practice, given the first ex-post evaluation in 2014 (PBL 2014). In addition, several provinces drew up their own versions, most of which went above and beyond the national ladder, and most other provinces had similar restrictions in their ordinances already (Gierveld, 2015). This, and the fact that these supplementary requirements were not always easy to find, added to the confusion. The coordination gap was at first filled by private consultancies, which hosted training sessions and symposia and drew up handbooks explaining case law and providing examples of successful ladder text. On the other hand, the central role taken on by the Ministry in the reform of the ladder was seen as quite strong.

Figure 4.4: Network of cooperation



When asked about the kinds of relationships that stakeholders had to each other, by far the most common response was cooperation. Even actors within hierarchical relationships used this to describe their interaction, which may be a reflection of Dutch consensus-oriented society in general. For this reason, only cooperation could be elaborated enough to provide insight into network structure. As Figure 4.4 shows, municipalities were considered central actors with respect to the ladder, cooperating with other tiers of government and to a lesser extent, researchers (most likely consultancies). It also shows the dominance of public-sector actors with respect to this intervention; one municipal officer colourfully calling it ‘a government shindig’. According to the interviewed stakeholders, the main private-sector stakeholder mainly worked together with the national government and researchers and not municipalities, reflecting its status as an umbrella organization.

4.2.6 Institutional leadership

This was already answered in the section on coordination. The national ministry was seen as showing inadequate leadership with respect to the introduction of the ladder, but good leadership during the public consultation process on its revision.

4.2.7 Political will

The ladder was the result of a political intervention of mostly opposition parties regarding the decentralization of national spatial planning. There was not much debate, given the positive experiences with the SER-ladder. After the problems surrounding the implementation became apparent, it became a frequently debated topic in parliament. One national official reflected that politicians had underestimated the impact the ladder would have.

At the provincial level, the ladder was seized as a way to control urbanization, and sometimes given a more rigorous legal standing and stricter interpretation via their ordinances. This interventionist stance was decried by some municipalities and the respondent from the national developers' association, but respondents from provinces maintained it was necessary given the lax attitude about sustainable urbanization at the local level.

At the municipal level, it was noted that the ladder impacted local decision-making, primarily by providing a counterweight to overzealous politicians from economic, real estate development or financial departments championing dubious initiatives from a spatial planning point of view (Evers & Blom, 2016). The ladder forced proponents to provide explicit argumentation about the need for the plan and the appropriateness of the siting, which was not always possible.

4.2.8 Implementation conclusions

The response to the ladder was rather mixed. In general, higher tiers of government were more sympathetic to the ladder whereas municipalities were more divided. The private sector was generally critical. Much of this can be explained by the interests of these parties. It is hard to draw a clear line between the positions of the stakeholders and the 'success' of the ladder.

4.3 Sustainability assessment

4.3.1 Economy

A number of economic advantages of the intervention were cited by the respondents. Generally, this boiled down to preventing excessive vacancy rates by ensuring that a need existed prior to approval of the plan. Others mentioned that the ladder had helped to promote efficient use of land or encouraged long-term urban vitality by protecting inner-city areas and

encouraging brownfield redevelopment. These were mainly public-sector respondents and consultants. The respondent from the developers' association felt the ladder was unsustainable in all dimensions, arguing that it drove up real estate prices, reduced development opportunities and restricted consumer choice. A consultant added that writing-off bad plans in order to create more room for other plans to go ahead could be costly. Finally, some municipal officers noted that the ladder had increased the planning burden and heightened risks and uncertainty, particularly when it was not clear how many plans in the regional pipeline were likely to go ahead.

It is of course difficult to say how significant these impacts are, as there was disagreement or uncertainty about them among the respondents. A national government official, a consultant and the developers' representative felt it did have a significant impact (although they were diametrically opposed regarding the desirability of this). A provincial officer and another consultant, however, suspected that other factors were much more important and that the impact of the ladder should not be overemphasized.

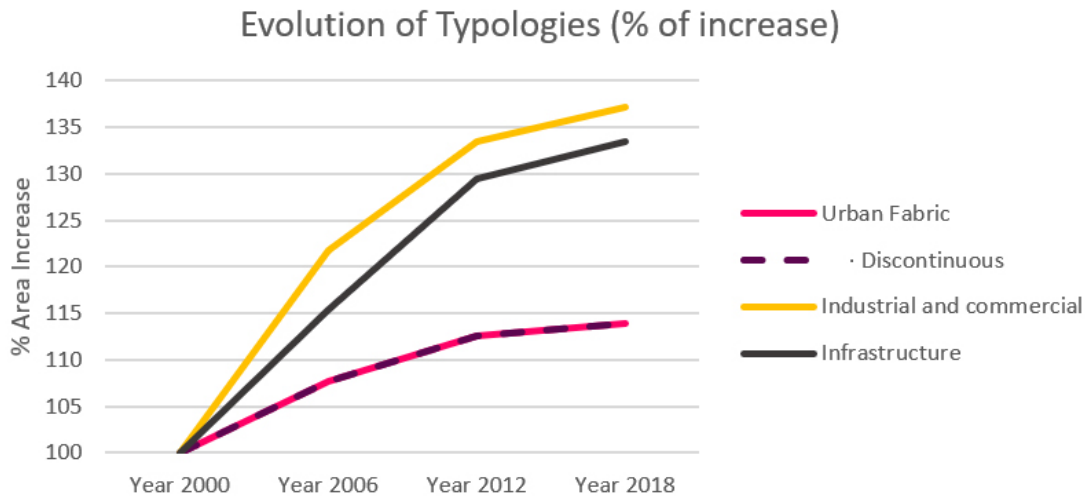
4.3.2 Ecology

On balance it seems like the respondents were positive about the ecological effects, although some felt these effects were secondary, were offset by negative side effects. Only the respondent from the developers' association argued that it had a negative ecological impact because it increased pressure on inner-city ecological systems, adding that much land on the urban fringe has a low ecological value (e.g. intensive farming) and would be better off being urbanized in a way that included urban green spaces.

Most respondents agreed that it was hard to determine what the environmental impacts of the ladder were, partly because of its limited substantive impact. Some municipal officers recalled that the intervention neither prevents nor obliges development; it simply mandates that plans write a justification. One respondent from a consultancy argued that the ladder does not change plans, just their description, a sentiment echoed by some municipal offices. This stance was however contradicted by the other consultant who listed plans that had been modified because they were seen as hard to justify in their original form. This demonstrates that not all respondents were aware of the impacts the intervention had outside their own scope of action.

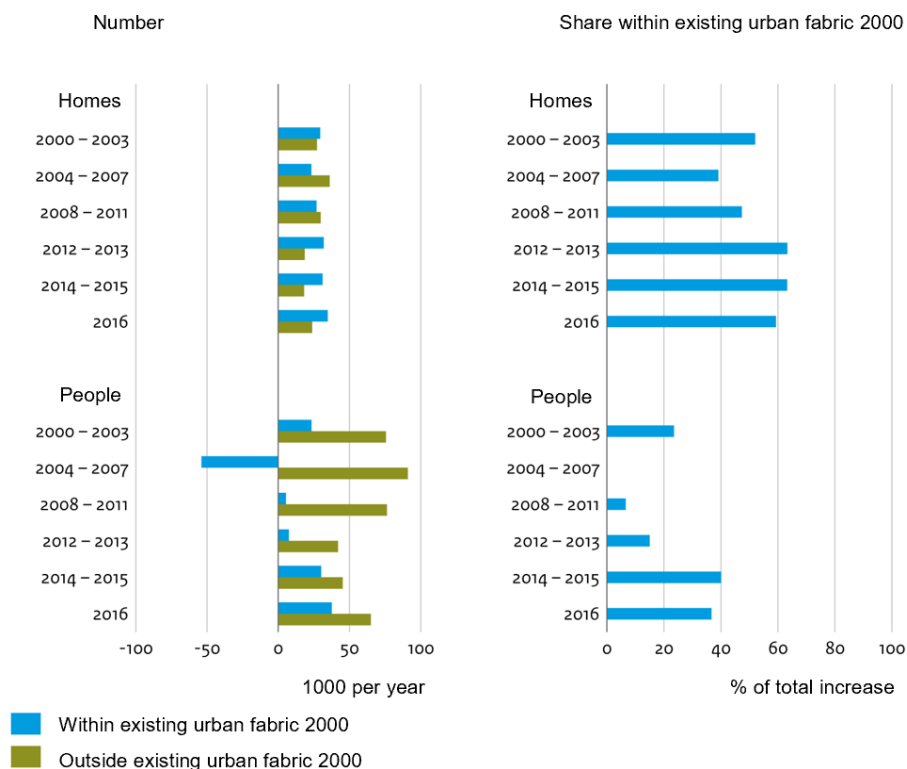
From the Corine data, we see a relative but marked slowdown in urbanization in the Netherlands starting from the date the Ladder was introduced (see Figure 4.5). It is highly doubtful that this trend was a direct result of the intervention, however, but more the result of the economic crisis (2012 is the first measurement since 2008). Nevertheless, it is also probably more than mere coincidence as well: the ladder most likely did contribute to this change given that all new development on already urban land (e.g. brownfield regeneration, densification, etc.) is not registered.

Figure 4.5: Growth in urban land cover (CLC data)



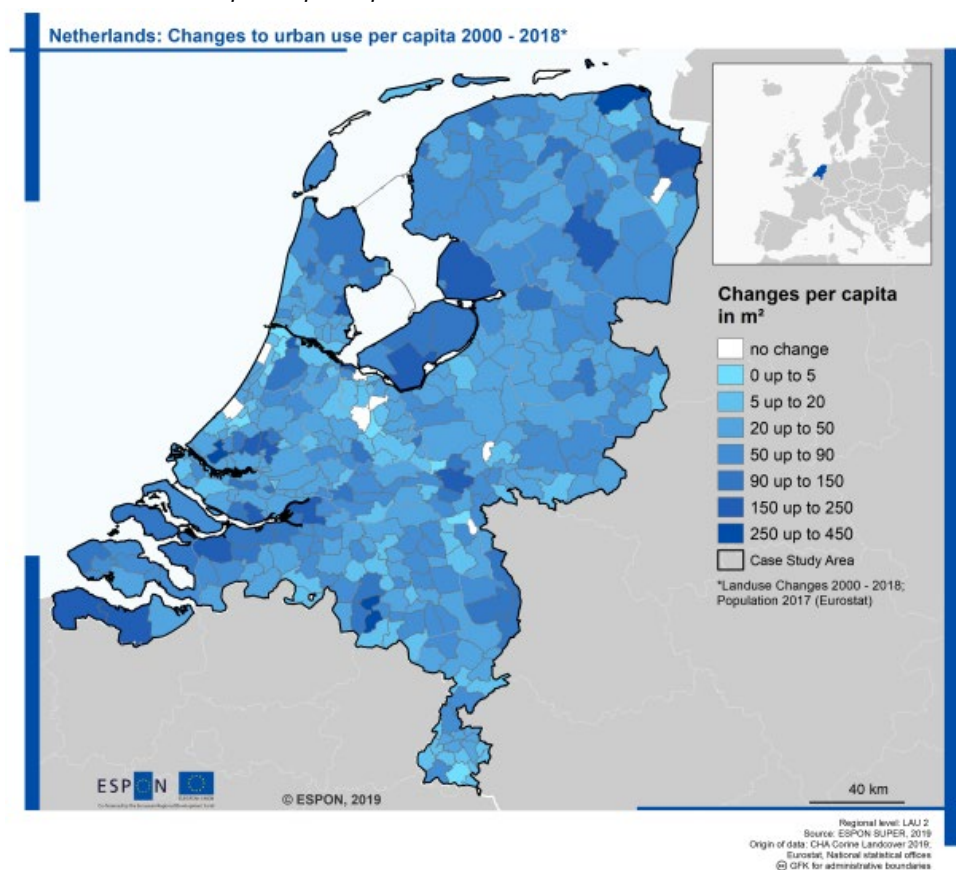
The suspicion that a greater share of development was occurring in existing areas since 2012 is partly confirmed by the literature (Meijer & Jonkman, 2020). More comprehensive analyses show that the share of people in existing urban fabric is lower, indicating that housing units in redeveloped areas on average contained less people than greenfield developments. In 2004-2007 there was even an absolute decrease of people from urban areas (see Figure 4.6).

Figure 4.6: Number/share of homes inside/outside existing urban fabric



Source: PBL et al., 2018

Map 4.1: New urban development per capita



Finally, we can see in Map 4.1 that rural or suburban areas had lower densities of development. This was also a result of the location of business parks and other urban uses, which do not necessarily follow population development.

4.3.3 Equity

Most respondents felt that the ladder was, on balance, positive in terms of social sustainability. Arguments included it helped shrinking regions maintain vitality and quality of life, including preventing excessive vacancy. The fact that it gave people a means to object to plans was raised in a positive light by several municipalities and a consultant, while also noting that these objections usually are unsuccessful. Finally, some municipal officers felt it gave planning departments support vis-à-vis economic departments. Again, the respondent from the developers' association felt that the ladder was socially unsustainable because it forced people to live in close quarters, which undermines the quality of life, and was intrinsically unfair in restricting people's right to live where they want.

The equity dimension can be further explained in terms of who benefitted the most and who lost out from the intervention. Both national respondents reported that the Netherlands as a whole benefitted from the ladder. Others felt this was the province due to the increased attention for strategic programming and the regional scale and the opportunity to expand their influence. Notably, consultancy firms and legal experts were also mentioned, given the need

for studies and legal advice. The image that developers suffered was qualified by the fact that it only regarded part of the market. More important are those who had bought land to develop or for speculative purposes, including municipalities. Finally, some noted that the end user would be disadvantaged by higher prices or undesirable locations.

Like the other dimensions, few respondents felt that the impact of the ladder could be easily demonstrated; it was more of a side-effect. The developers' representative however felt that the negative effects were palpable.

4.4 Impact on planning and development culture

4.4.1 Innovations

The intervention was innovative in various ways, both in the way it was designed as well as how stakeholders worked with it in practice. With respect to the former, it can be recalled that it is a use of soft power to effect change: the ladder does not forbid greenfield development outright, but merely asks that such development be explained (with the implicit threat of being struck down if this explanation is wanting). Plans that find it difficult to argue that a current regional need exists or why empty spaces within the existing urban fabric were not utilized experience the ladder as impediment, which is exactly what was intended. The harder it is to provide a credible explanation, the riskier the initiative becomes if challenged in court. A plan that is fully in line with the ladder can comply with the ladder with just a few lines of text. On the other hand, plans like one for an out-of-town factory outlet centre near the town of Assen (which had some of the highest inner-city retail vacancy rates in the nation) along the motorway require lengthy and elaborate consultancy reports to work its way through the ladder. In this case, the initiative was challenged by a 'second opinion' study, which convinced the province to deny the development. In such instances, the ladder gives municipal planning departments grounds to refuse an initiative, even when other political interests within the municipality favour it (Evers & Blom, 2016). Municipalities have also used the ladder to convince developers to develop inner-city locations (Evers & Blom, 2016, p. 22) and one respondent pointed out that some developers seem to have internalized the philosophy of the ladder. Finally, the ladder can improve the quality of plans because, by demanding clear reasons why this development at this location should be approved, it 'holds up a mirror' to decision-makers (Evers & Blom, 2016, p. 19). This was particularly important for shrinking regions.

Another design-oriented innovation regards the enforcement of the intervention. As stated, the ladder was introduced as Dutch national planning was being decentralized and deregulated. Given that no national urbanization policy remained (save the ladder), the government abolished the national planning inspectorate as well, leaving no national public body to ensure that municipalities complied with the ladder (Kuiper & Evers, 2011). Instead, enforcement was 'privatized' by allowing citizens to take municipalities to court if they did not comply. This use of the courts and reliance on civil society for enforcement can be considered

an innovation. The fact that plans were stuck down in court on this ground is probably responsible for the improved compliance. As will be discussed below, the consensus is that this innovative strategy largely backfired.

The most contentious and impactful part of the ladder was the first rung (current regional need). After plans were struck down not only for failing to provide any justification at all, but also for providing insufficient justification, panic erupted regarding how much work was needed to make plans 'ladder-proof'. Solving this resulted in some practice-oriented innovations. One regards new ways to measure hard versus soft planning capacity in regions (Evers & Blom, 2016, p. 21). Three respondents argued that, as a result of the ladder, the overview of regional supply and demand has improved greatly. Another innovation regards the ways to argue that a qualitative need exists, which is particularly vital for shrinking regions with a negative quantitative demand. Finally, the province of Overijssel drew up a template for arguing current regional need, which gave developers more confidence.

The ladder also affected planning processes. A national-level respondent reported a more dubious innovation in this regard: scheduling development in a piecemeal fashion so that individual plans fly below the 'new urban development' threshold. This incremental strategy can be more adaptive to system shocks, but at the same time can undermine strategic urban development and contribute to urban sprawl (PBL et al., 2016). The ladder was also used to structure planning processes and is being introduced at an earlier stage as a means to determine the desirability of plan – as intended – rather than being performed after the fact.

4.4.2 Challenges and warnings

The intervention was fraught with challenges, failures and setbacks. These can be divided up into a few categories: the growth of litigation in planning (judicialization), proliferation of research burdens, negative effects on governance and ineffectiveness vis-à-vis other factors.

To begin with the last first, the innovation of designing the ladder as a procedural rather than a substantive rule meant that it can only control substantive matters (location and size of development) indirectly (Evers, 2017; Salet, 2014). On the other hand, many developers and municipalities still hold large tracts of land at the edge of the cities and have a very pressing financial imperative to develop these as fast as possible. Inter-municipal competition for development is also a very powerful force, making it unwise to charge them with regional coordination. Given that the ladder just asks for a justification, powerful interests can usually find a way to draw up a convincing argument for any development, as argued by two respondents. Some stakeholders see the instrument only as a checklist afterwards rather than a means to evaluate the desirability of a development. This led some municipal respondents to argue that the ladder produces better argumentation, not better plans (Evers & Blom, 2016, p. 19). Finally, it seems like judges – see next point – are becoming more

flexible in what they regard as a good justification, further decreasing the importance of the instrument.

The innovation of enforcing compliance via the courts also became viewed as a major drawback. A provincial respondent noted that with the decentralization of national planning, provinces were identified as the main body for coordinating spatial development, but the implementation of the ladder de facto places this responsibility with the judge (Evers & Blom, 2016, p. 22). Even when provinces and municipalities are positive about a plan, an unexpected legal hitch can undermine it. The ladder, as a legal technicality, became a new weapon for opponents. The problem was compounded by the fact that, legally, the ladder was not well specified upon introduction, causing undue confusion, case law and defeated plans. One municipal officer noted that in this sense, the intervention runs counter to the spirit of the new Environment and Planning Act which seeks to simplify and streamline (Evers & Blom, 2016, p. 26). Much of the initial confusion has been settled through jurisprudence, such as the minimum size to qualify as an 'urban development' requiring a ladder justification, and the definitions of what constitutes a greenfield in a legal sense. Regarding the latter, this has not always resulted in satisfactory definitions in a spatial sense (see Figure 4.5). One reason for this is that greenfields once zoned for development are considered within existing urban fabric (PBL et al., 2018).

Figure 4.7: Greenfield (left) versus 'inner-city' site (right).



Source: (Evers & Willigers, 2016)

Another problem was the escalation of research requirements to justify 'current regional need'. Once retailers discovered the ladder as a way to prevent competitors from establishing nearby, this became a common tactic. The same was true for property investors who wished to safeguard the value of their real estate by restricting additional supply. As a result, judges were forced to decide on studies and second opinions, which inevitably drove up standards and costs. In the battle between studies, quantitative methods generally triumph, which runs counter to the spirit of creating spatial quality, as noted by three respondents. Municipalities viewed this research as just an extra hurdle in the planning process, an extra box to tick.

The intervention also created governance challenges. The role of judges rather than planning departments in 'approving' plans was already noted, as was the difficulty of regional coordination in the face of intermunicipal competition. Some municipalities felt that the intervention was totally unnecessary because municipalities should decide what a good plan is. Others argued that if the national government was truly serious about promoting sustainable urbanization as enshrined in the ladder, it would not have opted for implementing it in the way it had.

Finally, given the fact that the ladder was evaluated and reformed a few years after its introduction, some words need to be said regarding this process. The national respondents reported that this process in 2016 improved interaction between the various stakeholders in urban development. Even though, in their eyes, the ladder did not change very much, this participation was very valuable. It was also seen as a compensation for the poor communication upon its introduction in 2012, which was echoed by a provincial respondent. The respondent from the developers' association was also positive about this process, feeling that most complaints had been resolved by the reform.

4.4.3 Impact on sustainability

The most important question as regards the success of the intervention is whether it changed Dutch urbanization practices in a more sustainable way. The best way to do this is to ask the counter-positive question: what would have happened if the ladder had not been introduced?

According to one national government respondent there would have been more development without the need for that specific development or at undesirable places, arguing that now most municipalities make more careful and sustainable considerations when allowing land to be developed. The other national government respondent indicated that consultants felt plans would be worse without the ladder. The focus of governments, and hence developers, on concentrating development would have been much less, something that was both lauded and decried. The provinces were more sceptical: one felt that since most any development could be justified with research, it did not impact spatial development much, whereas the other indicated that the ladder was superfluous to their strict urbanization policy. The municipalities were fairly evenly split on the issue with some noting real impacts on municipal spatial strategy and citing examples of plans being altered or rejected, whereas others felt the ladder had no effect or just reinforced existing municipal policy. With respect to the procedural/governance aspects, the ladder was widely seen as improving and consolidating regional cooperation, although the regional thinking did not always become embedded in practice. Some provinces were already doing this, so the ladder was a support rather than a trigger. The respondent from the developers' association felt that the ladder had altered governance relationships by giving provinces too much power.

Looking back, the national officials were the only parties that felt the ladder had met their expectations. Others noted it was introduced so hastily that it was impossible to formulate expectations. The consultants and developers' association, who were knowledgeable about the intervention upon its introduction were disappointed with it. More specifically, the provincial respondents believed it was necessary because they did not see municipalities coordinate development adequately otherwise and that the national government had offloaded its urbanization policy. The respondent from the developers' association reiterated the unnecessary costs and power grab by provinces resulting from the ladder.

Looking forward, a few respondents provided suggestions for the future (although some of them were formulated as hindsight assessments). Given the experience with the problematic implementation, it is important to formulate policy in tight legal terms, rather than using vague policy language. The national respondents felt that implementation should be accompanied with a stakeholder engagement strategy, given the low level of compliance in the early years. It is also important not to undermine provincial policies by imposing weaker national rules, according to a provincial respondent. The respondent from the developers' association felt that the 'dogma' of concentration needs to be rethought, and the 'obsession' with quantitative need abandoned. Finally, the consultants suggested that it needs to be ensured that this assessment takes place early in decision-making, not as an afterthought or a box-ticking exercise.

4.5 Conclusions

The sustainable urbanization procedure (ladder), despite its name, is primarily a planning rule promoting transparent, efficient and orderly urban development. Most of the respondents were hard pressed to find impacts on sustainability and many interviewed municipal planning officers reported that their colleagues in the environmental department were either unaware of or uninterested in the statement (Evers & Blom, 2016). It should therefore be seen in a different light: its success is not necessarily equivalent to sustainability.

Still, excepting the respondent from the developers' association and a handful of municipal officers, all those interviewed believed that the ladder was in line with the principle of 'good spatial planning', which is mandatory for designating a land-use function (zoning). This has similarities with sustainability, such as the efficient use of land (economic and ecological sustainability) and taking long-term effects into consideration (temporal sustainability). Some planners felt that the ladder was more restrictive in prescribing the compact model, rather than allowing room for sustainable low-density development of greenfields, like ecocities (Salet, 2014). Others pointed out that there was a trade-off between compact development and consumer preferences and environmental qualities and that the ladder imposed a preference from above.

The ladder should be assessed in terms of its unique design: as a procedural rule attempting to produce a substantive impact, namely compact development (Evers, 2017; Salet, 2014). In this sense, it can be considered a form of metagovernance. As such, it is very difficult to establish direct causality between the intervention and land-use changes in the Netherlands. As was clear from the 44 interviews of municipal officers, the main impact was not substantive or procedural but on governance and mindsets (Evers & Blom, 2016). The impacts of the economic crisis, for example, were felt to be much more profound in determining the shape and magnitude urban development.

One of the main lessons regards the dissatisfaction with the way it was introduced: as a legally binding rule which can be challenged in court. The hard world of law (i.e. governed by an adversarial system, juridical hair-splitting and the black-and-white character of rulings) clashed with the original spatial-planning spirit of the intervention, which was intentionally kept vague in order to offer municipalities latitude in providing argumentation and reflecting on the quality of plans. Even the consultants who profited from the proliferation of work in this area admitted that this strategy had backfired. Rather than this vagueness being a strength of the intervention, it was considered a liability by stakeholders and a great deal of case law was required to create the desired clarity. This should serve as a warning to other countries contemplating land-use interventions based on written justification.

The developers' association repeatedly argued that rather than binding zoning plans, the ladder should be applied to non-binding strategies (e.g. Fokkema, 2014), which would have rendered it toothless. More recently, MPs suggested it should no longer be applied to homes, which would be tantamount to abolition. One of the interviewed consultants remarked that it was only the risk of litigation that served for compliance, an opinion supported by the PBL evaluations. During a workshop with respondents to discuss the results of this case study, the alternative of administrative oversight was discussed as an alternative to the courts. A respondent from the national government pointed out that this would require the instalment of an agency (and the appropriate staffing and budget) to monitor zoning plans and take action in cases of non-compliance. Given that the national planning inspectorate, which had carried out such roles in the past, was abolished with the introduction of the ladder, this was viewed as a political impossibility.

The ladder has not proved particularly durable over time, at least in its original form. Within a few years of its implementation, it was relaxed. However, most stakeholders seem content with the new version, but if history provides any lesson, it could be again reformed if it is viewed as impeding development. At present, Dutch environment and planning legislation is undergoing a major reform, and the expectation is that the ladder will be carried forward when the new Act enters into force in 2022, having secured a similar legal status in the bill on environment and planning quality. The fact that this kind of intervention – a legal requirement to provide justification – is gaining popularity in the Netherlands as other ladders (e.g. for

solar farms, participation, waste) suggests that the ladder for sustainable urbanization will remain in place in the coming years.

4.6 Implications for sustainable urbanization and land use

This case study sought to illuminate the black box of development practices within a particular territory in Europe, focusing on a particular intervention which changed, or attempted to change, these practice to more sustainable ends. The primary source material was in-depth interviews with stakeholders directly involved in decision-making on spatial development, on crafting or applying the intervention, or both. Through their candid explanations, it was possible to provide a nuanced, and often critical, account of the origins, mechanisms and impacts of the intervention. As can be read above, the results show stakeholders in agreement on some issues and disagreeing on others.

The purpose of this final section is to give voice to the case study researchers by asking them to specifically reflect on the key questions posed to the project at its inception. The ideas and opinions expressed in this final section – printed in italics – are, therefore, solely those of the authors.

To what extent can the observed land-use changes in the case be considered sustainable?

Plans in the 2010s seem to be smaller than those in the 2000s and 1990s. This has more to do with the economic crisis and the risks involved in large-scale development than a conscious policy decision. More attention is being paid to the need for development (or the requirement to demonstrate this) when drawing up plans. This can partly be attributed to the ladder, but also to the hard lessons learned after the crisis where structural vacancies and permanently empty buildings were commonplace.

To what extent did short-term thinking weigh up against concerns of long-term economic, ecological and social vitality?

Spatial planning seeks to address long-term impacts of land-use decisions. However, these decisions are often guided by short-term political considerations. The ladder has done little to change this. It has forced plan-makers to be more explicit in explaining the rationale for the plan, which sometimes forces reflection.

To what extent were trade-offs avoided between economic, ecological and social values (e.g. urban green spaces in densifying areas)?

Dutch spatial planning always seeks to do this. Some argue that the ladder helped to strike the right balance, while others argued that it is biased against the social.

Was there a tension between sustainability at different levels of scale (e.g. a locally sustainable development having unsustainable attributes at the regional level)?

Not with respect to the ladder. There was tension between demonstrating a local versus a regional need. Sometimes an initiative met a local need because there were buyers for the homes to be built, even though the project lay in a shrinking region with overcapacity and vacant real estate. This was one reason behind abolishing the 'regional' criterion. There is a general consensus that the ladder helped promote regional-level thinking.

To what extent is there a correlation between urban form (e.g. high-density contiguous urbanisation versus low-density scattered development) and sustainability?

The ladder explicitly strives for compact urban form and assumes that this is more sustainable. This is also in line with development practices in the Netherlands, which are relatively large-scale and compact.

How much impact did various interventions have in producing sustainable urbanisation and land-use outcomes?

This was treated extensively in Evers and Blom (2016). Opinions of municipal officers on impact were very mixed. Many saw no impact because the ladder was just 'ex-post box ticking' or because it just prescribed standard practice. Others reported some plans being reduced in size or delays. There were very few examples of different locations being chosen because it was hard to justify in terms of the ladder (instead, more extensive justification was provided).

To what extent were place-based approaches and territorial cooperation responsible?

The regionalization of planning is a direct effect of the ladder. To ascertain if a regional need existed for a particular project, an inventory needed to be made of other plans in the pipeline and research to quantify demand. This prompted formal and informal collaboration regionally.

How sustainable are the measures themselves over time?

Not very. The ladder was relaxed 5 years after implementation and is constantly in danger of being weakened further.

Do they produce economic benefits?

In general, the stakeholders believed so. However, the ladder also adds costs for consultancy work if not straightforward. And there are extra risks if taken to court. It can be argued that the further removed the initiative is from the spirit of the ladder, the costlier and riskier this is.

To what extent do they enjoy popular support or consensus among stakeholders?

The goal of the ladder is widely supported, but the implementation via the courts widely decried. Interestingly, more and more policy is being introduced in this manner. An immediate benefit, in terms of costs, is that it can be given a hard regulatory status without having to regulate conformance.

How can urban sprawl be contained and which instruments can be used to do that?

The Dutch have a long tradition of directing urban development at the national level using a variety of instruments. Most of these were abolished since 2000 and the ladder was introduced as an emergency brake. Compared to earlier substantive policies (e.g. restrictive retail policy, Green Heart, Buffer Zones) it is less effective.

How can the impacts of land take/soil sealing be limited?

Probably by introducing substantive policies, rather than procedural rules like the ladder.

How can we benefit economically from measures to limit land take/soil sealing?

Economists say that agglomeration economies are more efficient. Also, compact cities can provide better public transportation and efficient public services. Most respondents echoed this view.

How can financial, fiscal and economic mechanisms be used to limit urban sprawl?

These were not considered in the Dutch case. One suggestion would be to rethink the system of municipal involvement in land development, as this can provide financial incentives for greenfield development rather than infill.

How can external costs be internalized? For example: it is often cheaper to develop greenfields instead of brownfields, but the costs of for instance the ecosystem services lost by developing a greenfield are not included in the development costs.

At present, the Netherlands Environmental Assessment Agency is investigating how to improve the business case for redevelopment and the benefits of nature-based solutions. One important matter is that public benefits are often long term (and therefore given less weight), while the costs are incurred in the short term.

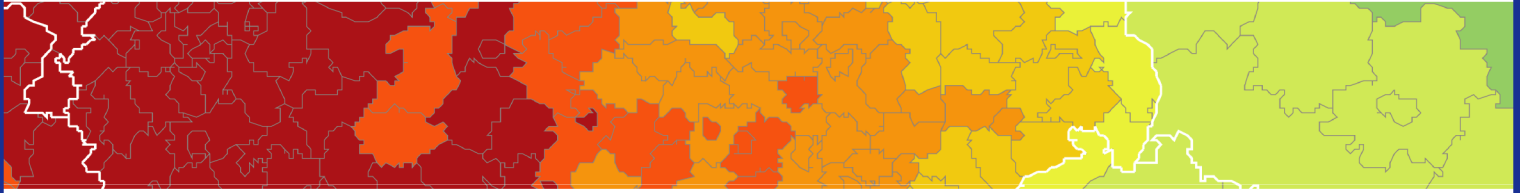
How can green and open spaces in urban areas be maintained for the quality of life, despite the (laudable) effort to densify settlement areas?

The ladder is criticized on precisely this point. On the other hand, the ladder does not mandate that such areas are sacrificed. Greenfield development could be justified in a ladder statement on the grounds of preserving green and open space in built-up areas.

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