# THE CONNECTING LANDSCAPE

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Council
for the Environment
and Infrastructure

**About the Council for the Environment and Infrastructure**

The Council for the Environment and Infrastructure (*Raad voor de leefomgeving en infrastructuur*, Rli) advises the Dutch government and Parliament on strategic issues concerning the sustainable development of the living and working environment. The Council is independent, and offers solicited and unsolicited advice on long-term issues of strategic importance to the Netherlands. Through its integrated approach and strategic advice, the Council strives to provide greater depth and breadth to the political and social debate, and to improve the quality of decision-making processes.



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# PREFACE

This advisory report is about the role the Dutch government plays in caring for the landscape in which we live, work and recreate. There are changes coming that will drastically change the landscape, while at the same time landscape policy has been deregulated. The role of the government has become unclear, precisely at a time when the landscape is in transition. We see that the landscape can spark emotions, for example during discussions about coastal development, wind power, sustainable agriculture and water safety. And even though the (central) government is no longer responsible, the minister is still held accountable.

In this advisory report, the Council looks at the quality of the landscape from all angles and concludes that 'landscape' is an ambiguous concept. Landscape values are only partly open to objectification and people will always have differing views on the landscape. New uses and natural conditions will continue to change the landscape in the future. The Council argues that it would be a mistake to regard the landscape as an exclusively sectoral phenomenon, or as one that is open to objective measuring. That would insufficiently recognise the wealth of meanings people attribute to the landscape. The Council further believes that citizens' knowledge of and connection to the landscape should be better utilised for the development of the landscape of the future.

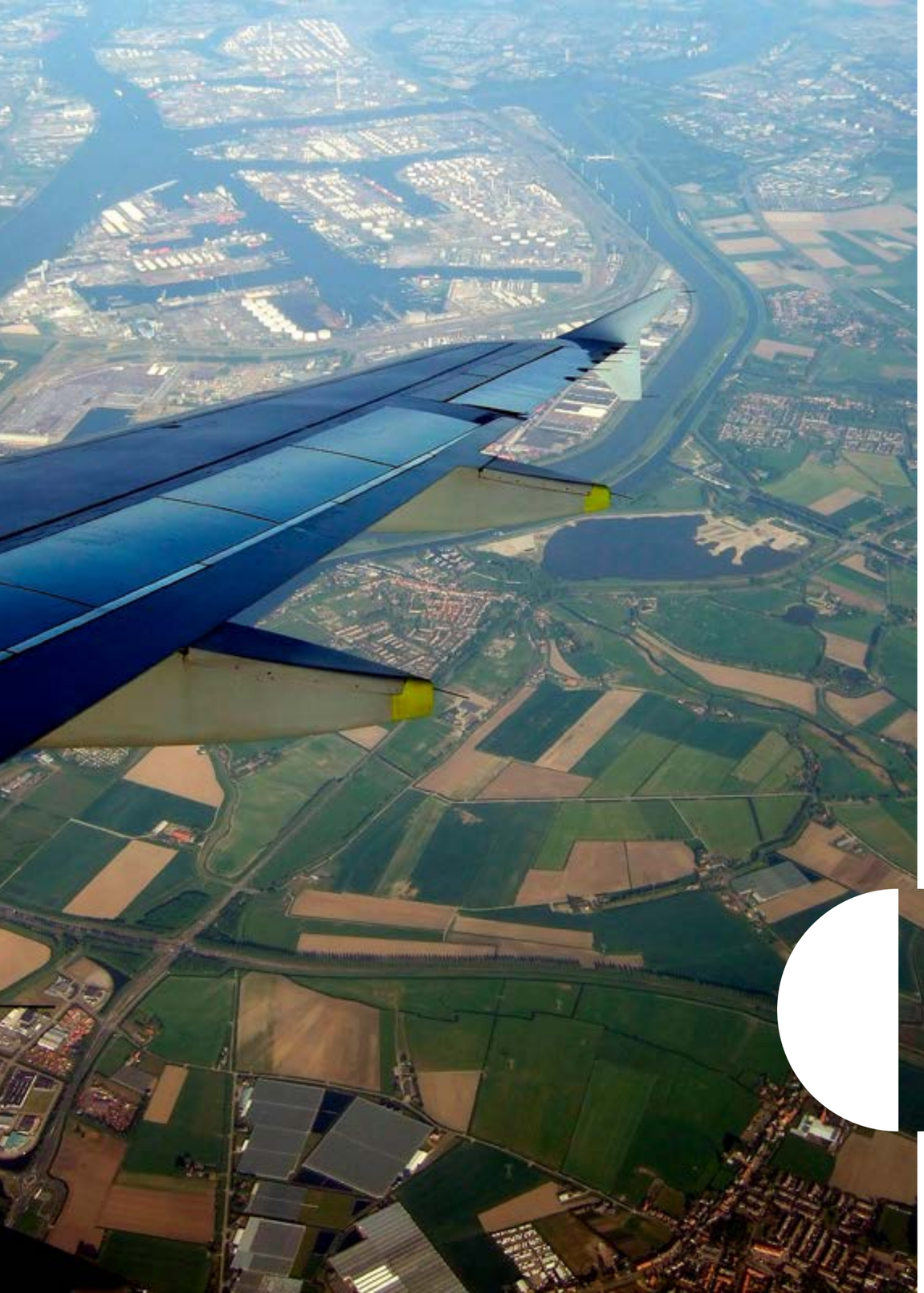
Creating this advisory report, the Council actively sought to enter into dialogue with residents to explore the landscape of 2070. This led to impressive discussions in De Ronde Venen and in the Westland. In addition, the Council asked educational institutions and design offices to give their views on the future of the landscape. Talking to them, the Council realised how much passion, creativity and energy becomes available when the subject of the landscape and the changes it will undergo is broached.

The Council wants to fan the fire lit during the creation of this advisory report by making a passionate plea for the careful guidance of the quality of our landscape. This plea is directed at everyone working on the major sustainability challenges our society faces. We are convinced that the landscape has plenty of connective force to offer and we hope to convince you of this as well.

*'People do not resist change. On the contrary, they resist the loss of values without there being any new values to replace them' (Coeterier, 1987, p. 3).*

# CONTENT

# PART 1 | ADVICE



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# INTRODUCTION

*Almost every Dutch person knows the feeling of 'coming home', as the Boeing 747 slowly approaches Schiphol and the well-manicured landscape with its lined-up polders and straight ditches unrolls below like a carpet. The land division pattern is dissected by highways and railways and there are orderly residential areas and landmarks such as ports, piers and blast furnaces. Glistening in the sun are the major and minor waters that jointly make up our fine-meshed water system. If visibility is good, hills and woods are discernible in the distance.*

*This is the same feeling the people aboard the De Havilland DH.16 from London must have had on 18 May 1920, when KLM's first civilian aircraft landed in Amsterdam. Though the view was completely different at the time, the experience was no less impressive. A Zuiderzee without an IJsselmeer dam, Rotterdam without a Maasvlakte, only a few railway lines and a Randstad without highways. It was a country still unmarked by war damage and reconstruction, on the eve of comprehensive land consolidation, and also a country that had yet to drain its major polders. The aerial view of that flat and empty land on the North Sea must have been spectacular.*

*Once your feet are firmly on the ground, you can see how the landscape opens up many more perspectives: you can be in it and see it and smell it, it is palpable, tangible and concrete. Some views go on forever; sometimes you cannot even see the horizon. And it is not only the landscape that changes over time, but the often undefinable and personal perceptions of the landscape change as well. The 1920 air travellers not only saw a different landscape, their perspectives were different from ours as well. The appreciation of beauty and the belief in progress were different then, and they will change again in the future. What we find ugly today may one day be important cultural heritage. It appears that the beautiful picture we see from the air can be experienced from many perspectives and seen in many ways: 'Beauty is in the eye of the beholder.'*

*The value of the landscape comprises more than what we see: it is a living culture-historical archive, meanings are attached to it, memories retrieved by it; landscape is the subject of art and associations. And it serves us, people, in a functional way. People make money with it and it comprises the natural expression of our activities. All in all, the landscape contributes to our cultural identity (see Part 2, Chapter 2 and 3).*

*The Dutch landscape mirrors and echoes our collective history. At the same time, it is the canvas on which future developments will be painted. And the landscape is likely to change drastically in the future, just like today's landscape has changed drastically since the time that DH.16 landed. How it will turn out will partly result from our own actions. Therefore, the question is not only how the landscape will have changed by 2070, but also whether we have been willing to guide those changes, and how we will perceive the landscape and experience these changes in 50 years' time.*

Zaanse Schans

## 1.1 Request for Advice

There are numerous developments that will have great impact on the Dutch landscape. The transitions necessary to achieve a sustainable society will certainly be among them. Sometimes the transformation of our society will change the landscape gradually and sometimes more abruptly. Decentralisation and deregulation have substantially changed the role the government plays in guiding these changes. Environmental and planning policy now constitutes the framework in which spatial challenges are integrated. One of the subjects this policy focuses on is the quality of the landscape, but neither responsibilities nor policy tools have crystallised so far.

The combination of drastic spatial changes and a smaller government involves risks. Necessary sustainability transitions may not be realised at the desired pace; opportunities for the development and preservation of characteristically Dutch landscapes may not be seized; useful initiatives in society may receive insufficient space or support.

To create this advisory report, the Council focused on the following request for advice:
How can we anchor the care for the quality of the Dutch landscape now that we expect landscape dynamics to increase due to changing spatial functions? What role will the (central) government play with respect to this care for the quality of the landscape?

Many of the dynamics in the landscape are connected to the major sustainability transitions the Netherlands faces. The Council therefore specifically addresses the question whether and how changes in the landscape that result from these transitions can and must be guided by the central government, given its public responsibility to realise these transitions.

This advisory report is not about the question of whether certain landscapes ought to be preserved or whether this deserves special policy. Nor is this an advice about (environmental) planning policy. This advice is

about the landscape as both the starting point and the result of any spatial development connected with sustainability transitions. The Council wants the main message of this advisory report to inspire all parties involved in transition tasks.

The Council examined the changing landscape over a longer period of time during two local area sessions with residents, looking back on developments in the landscape from 1950 and looking ahead until 2070 (see Part 2, Chapter 4). Looking back creates an understanding of the ways the landscape changed in a couple of generations. Looking ahead to the distant time horizon of 2070 creates an understanding of the dynamics and insecurities of the future. In addition to the meetings with residents, the Council invited educational institutions and design offices to shed light on future changes in the landscape (see appendix 2).

The Council uses the definition of landscape as stated in the European Landscape Convention of 2000 (Treaty Series 2005, 23, p.23): '"Landscape" means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.' The definition of landscapes in the Environment and Planning Act is also based on this definition. The chosen definition makes no distinction between rural and urban areas. To wit, a port landscape is also a landscape, just like an urban landscape or an energy landscape in which activities related to recovering and generating energy are clearly visible.

Dakpark Rotterdam

*'The city of 2070 is smoothly continuous with the landscape.'*
*(Source: ZUS)*[1]

*'The city (Groningen) arose at an interface between landscapes, wedged between the water on its flanks and closely connected with the spatial and economic development of the region as a whole.'*
*(Source: LOLA)*

1 The quotes in this advisory report originate from the local area sessions and the Challenge Landschap 2070, see Appendix 1.

## 1.2 Major Transition Challenges Determine the Landscape until 2070

In the future, with 2070 as a time horizon, major transition challenges that are necessary to achieve a sustainable society will guide the policy for the physical habitat. The tasks are urgent and expeditiousness is necessary. The RIi (2016a) has identified five main challenges, two of which will change the landscape dramatically. Climate change is the first main challenge, which consists of the prevention of climate change through sustainable energy production on the one hand and adaptation to the water-related effects of global warming on the other. Both will have an enormous impact on the landscape. The second main challenge with major implications for the landscape is the necessity to make the rural area more sustainable. This concerns both the sustainability of agricultural operations and the realisation of the objectives of nature policy. These challenges, which are also interconnected, are outlined below.

### Energy Transition

To limit global warming to 2 or even 1,5 degrees Centigrade, as agreed during the Paris Climate Agreement, the Netherlands will have to reduce its greenhouse gas emissions by 90 per cent compared to 1990 in 2050 (RIi, 2015a; RIi, 2016b). The completion of this task requires the use of a mix of the available sustainable energy sources and a considerable reduction of the energy consumption (RIi, 2015a). Our society's need for energy concerns heating, transport and mobility, lighting and the use of electrical equipment.

The development of different energy sources such as wind, sunlight, water and biomass will have a great impact on the landscape. Illustrative is the land use associated with supplying electricity to households using wind power. The direct land use of onshore wind turbines may be small, but their indirect land use is substantial. The sound they make and their visibility exclude intensive land uses such as housing in their vicinity (Planbureau voor de Leefomgeving [PBL], 2013). Sijmons et al. (2014) calculated that though the direct land use involved in supplying wind power-based electricity to 1 million households is 0.15 km$^2$, the indirect

Analysis of the complex challenge for an energy-neutral region (Fabric)

land use is about 25 km$^2$ (for comparison, the Second Maasvlakte is 20 km$^2$). This calculation does not take sensory aspects, such as the emotions wind power evokes in people, into account.

**Adaptation to the Effects of Global Warming**

Even if we manage to produce energy sustainably, global temperatures will continue to rise for some time. The effects – sea level rise, an increasing number of peak discharges of river water and periods of heavy rainfall that alternate with long periods of droughts – require extensive spatial adaptations such as dike reinforcement and the construction of water collection locations. In 2014, 35 per cent of dikes and other primary flood barriers failed to meet the applicable requirements (PBL, 2014). In addition, subsidence aggravates the water problems considerably.

*'If we continue to raise the dikes and artificially regulate the water level, subsidence will turn the Netherlands into a big, dangerous bathtub. An undesirable situation we cannot afford.' (Source: ZUS)*

**Achieving Sustainable Agriculture**

Agriculture and horticulture are under pressure from the fierce competition in the global market and from fluctuating prices. At the same time, society makes ever greater demands on the sector, for example to reduce emissions, ensure food safety and provide animal wellbeing and integrated spatial quality. Accomplishing these tasks requires continuous innovation and increased efforts to realise sustainable production. On the one hand, this leads to expansion and intensification; on the other there is a trend towards smaller extensive agricultural businesses. This applies to all types of businesses, with different business types each facing their own economic, ecological or social sustainability challenges (Rli, 2013). The challenges peatlands face are even more complex, because the use of agricultural lands is accompanied by a lowering of the water level and thus contributes to the subsidence of the soil. This not only causes acute problems, such as sagging sewers and damage to road infrastructure, in the long term it threatens agricultural businesses as well. Subsidence can only be stopped by the drastic introduction of sustainable agriculture and horticulture (Wageningen UR, 2015; Woestenburg, 2009).

**Achieving the Objectives of Nature Policy**

Though the deterioration of nature in the Netherlands has been delayed and partly stopped, it is failing to recover. At the same time, there is a growing social need to experience nature. Nature requires space in order to ensure its future quality and to increase its social significance. Much of Dutch nature would benefit from more extensive agriculture and a better separation from intensive agriculture (Rli, 2016a). Another challenge is the realisation of a better connection of nature to other social issues, such as health care, food supply and economic functions (Rli, 2016a; Tweede Kamer, 2016a). In short, rural areas need good conditions in which ecosystems and landscapes can develop in the preferred direction and in which they can connect to other social issues at the same time.

Markerwadden

*'The constant battle against nature requires a lot of maintenance and often results in unforeseen problems such as flooded villages and deteriorated natural areas. With new challenges ahead, including climate change, urbanisation and the energy transition, the traditional attitude of the Dutch to nature seems untenable.' (Source: karres+brands)*

**The Intractable Character of Sustainability Transitions**

The intractable character of said transitions complicates their realisation. Transitions are unpredictable and their development is often intermittent. Periods of gradual change are interspersed with periods of rapid and profound change. These changes can be accompanied by chaos and conflict (Loorbach, 2014). Drastic changes in the landscape can easily evoke tension and resistance. Take, for example, the realisation of a wind farm: with the support of the government, farmers and developers take the initiative for the construction of wind farms, but they meet with resistance from other residents of the area (Bouma, 2016). Another example: making rural areas more sustainable, conflicts arise about the scale increase and industrialisation of agricultural businesses, which is often at odds with the need for accessibility and quality of rural areas for recreation (De Gelderlander, 2015a, 2015b, 2016; see Part 2, Section 2.2). Valuable landscape development centres on the question of how to properly guide and shape the interventions in the landscape without slowing the pace of the transition.

Mega-stables

## 1.3 Current Responsibilities and Powers

The 2012 Structuurvisie Infrastructuur en Ruimte (National Policy Strategy for Infrastructure and Spatial Planning) abolished landscape policy by the central government (see Part 2, Section 2.1). Provinces can implement landscape policy, but they are not supported by national policy or funding. The Dutch Environment and Planning Act includes a general duty to care for the physical habitat of which landscapes are part. This means everyone – governments (including the central government), businesses and citizens – has a duty to care for the landscape. Among other things, the Act aims to achieve and maintain a good landscape quality and to promote the efficiency of the management, use and development of the landscape (Tweede Kamer, 2014). The environmental and planning policy that follows from the Dutch Environment and Planning Act provides the framework within which the sustainability tasks have to be realised spatially. However, the new environmental and planning policy does not specify what effective steering towards quality landscapes comprises. The new environmental and planning policy is characterised by decentralisation, deregulation and the active involvement of citizens.

The current policy anchors certain landscape elements in sectoral policy. The Strategy for Heritage and Spatial Planning (Ministry of Education, Culture and Science, 2011) for example, protects certain areas as cultural heritage, like the Hollandic Water Line and reconstruction areas. Agricultural and nature policy protect certain types of landscapes, such as meadow bird areas and the National Ecological Network. Provinces, for example, steer towards quality landscapes by demolishing inappropriate buildings through space-for-space arrangements.

## 1.4 Starting Points for this Advisory Report

The Council has based this advisory report on a number of starting points that are explained below.

**The Landscape Is Constantly Changing**

The Dutch landscape is constantly changing due to new uses and natural conditions. It is important to 'lovingly guide' those changes to the landscape and to conserve and further develop the quality of the landscape. That means both historical values and the worth of future landscape have to be taken into account. In some cases, protection will be necessary. But even then, the quality of the landscape is not a given; its quality has to be maintained and developed, for example for new practical uses (see Part 2, Section 2).

**The Landscape Is More Than a Sectoral Interest**

Landscape is often approached as one of many sectoral interests that, in spatial planning issues, has to be balanced with other interests such as integrated spatial quality, accessibility and economic development. Thus, landscape sits at the negotiating table to actually compare itself with other interests that require space in areas. In that situation, experts mostly confine themselves to advocating the interest of the landscape.

The Council acknowledges that there are specific, valuable landscapes, such as the Hollandic Water Line or the Defence Line of Amsterdam, that need to be conserved. In addition, there are landscape elements the protection of which must be anchored in policy and regulations. However, a focus on conservation often results in efforts to make landscape interests objectifiable and measurable to facilitate the balancing of interests. This leaves little room for aspects of the landscape that are difficult to measure, such as experience, beauty, significance, emotion, stories and cultural value.

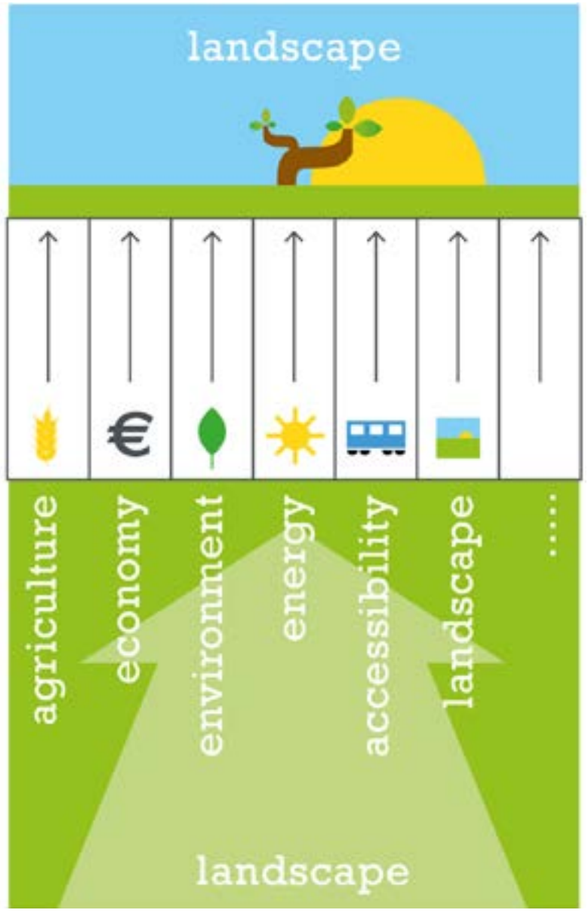
The Council also believes that the significance of landscape in the spatial policy or in the forthcoming environmental and planning policy far transcends that of adding a sectoral interest. In this advisory report, the Council uses an open approach to the concept 'landscape' to reflect the different meanings the landscape has (see Part 2, Chapter 3). Landscape is thus positioned as the connecting link between past, present and future; between the need for change and the desire to conserve and develop its individuality, its character and its connection to the region.

The landscape is the canvas on which nature and people created their surroundings in the past and where spatial development will be given their shapes and colour in the future, too. Almost every resident of the Netherlands can tell you something about 'their' landscape, about the changes that took place in it and the elements that are of value to them. 'Landscape' is an accessible and powerful concept, much older than modern policy terms such as 'spatial planning' and 'environmental and planning policy'[2].

2 Petrarca's description of climbing the Mont Ventoux in 1336 and the view, in Epistolae familiares, is often used to illustrate the 'invention' of the concept 'landscape'.

‘Landscape’ is thus a connecting link between different sectoral policy issues looking to settle in the Dutch space. The landscape is both the result of (sectoral) spatial development and its starting point (Figure 1).

**Figure 1: Landscape as sector, result and starting point**




**The Expertise of Residents, Visitors and Professionals Is Indispensable**

For landscape policy to reflect all aspects of the landscape, it needs the input of professionals as well as that of residents and visitors. The Netherlands has a long tradition of professionals concerning themselves with the quality of the landscape on the basis of general knowledge and expertise. Many residents/visitors have local knowledge and they are often emotionally attached to the landscape: they talk about experiences, memories and expectations. As (co)owners or initiators, moreover, they can influence the quality of the landscape, for example with respect to wind power and landscape management and maintenance. Both groups, which incidentally can also overlap, can make a valuable contribution to the landscape policy.

Local area session De Ronde Venen

*'The childhood stories are dear and very recognisable to many participants, to both the oldest and the youngest of them. They make everyone aware of the changes that took place in the landscape over the past 50 years.' (Source: report area session De Ronde Venen)*

*'By 2070, rather than being formed by interventions that go against the dynamics of the environment, the (North) Netherlands (along with its residents) will have to find the specific opportunities of the region.' (Source: Academy of Architecture Groningen)*

**The Landscape Has Multiple Levels and No Boundaries**

The landscape connects scale levels. Through the landscape one can easily, continuously as it were, create connections and coherence between local, regional and national landscape elements: from ditch to basin, from hedge to hill crest. The landscape has a tangible, spatial expression at every level. The highest scale level determines the lower scale levels. For example: the river landscape determines the layout and use of floodplains, levees and dikes and even the use of materials and plants. Conversely, the construction of the lower scale levels together determines how the landscape is experienced at higher scale levels. Thus, the scale levels are connected and even intertwined.

The territorial boundaries necessary for the development and management of the landscape hardly ever coincide with existing administrative boundaries. The territorial boundaries are determined by, among other things, the constitution of the landscape (College van Rijksadviseurs [CRa], 2015a; see Part 2 Section 3.2), by social connections and communities and by the sustainability challenges an area faces. Governments need to be aware of the landscape boundaries and to that end, they will have to look beyond their own administrative boundaries. Together with their neighbours and/or co-governments, they will have to decide on the scale of collaboration and on the landscape boundaries. The central government is in a similar position, as it has to take the challenges arising from the European Landscape Convention or from cross-border landscape parks and nature reserves into account.

Rottumeroog, on the border of the Dutch and the German Wadden Sea areas

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# THE ESSENCE OF THIS ADVISORY REPORT

The essence of this advisory report is that necessary and urgent sustainability transitions provide opportunities for a valuable development of the landscape and, conversely, that adding value to the landscape is a condition for the success of those transitions. This means society is closely involved in both the transitions and the landscape, which brings the Council to its main recommendation, which addresses all parties (governments and non-governmental parties) involved in the realisation of sustainability transitions.

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***Main Recommendation:*** *Position the landscape at the very heart of the spatial design of sustainability transitions, thereby connecting society with these transitions and with the quality of the changing landscape.*

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Achieving sustainability transitions requires the involvement of many parties, from governments to private parties and from network administrators to terrain management organisations. Whether we are talking about constructing a wind farm or making agriculture more sustainable, these are developments that change the landscape and require careful realisation. The Council therefore recommends that all relevant parties base spatial interventions on three key points (also see Figure 3 at the end of this Chapter):

1. Use the sustainability transitions to create valuable landscapes;
2. Explore the meaning and the values of the landscape in an open discussion with residents and visitors;
3. Use a design approach for the spatial translation of transition challenges.

In the following Sections (2.1, 2.2 and 2.3), the Council explains how parties can achieve these key points. In Chapter 3, the Council develops the essence of its advice into recommendations on government policy and tools.

## 2.1 Use Sustainability Transitions to Create Valuable Landscapes

Using sustainability transitions to add value to the landscape makes it possible to meet the major transition challenges in such a way that people will appreciate the new developments in the landscape and feel connected with them. This is in keeping with the Dutch tradition in which major interventions lead to new qualities in the landscape and it provides space for the further development of this tradition (see Part 2, Chapter 2). Care for the landscape is our common concern. This is a cultural task in the broad sense of the word. It is a care task that must be fulfilled by not only governments, but also by private parties and citizens.

Residents value their landscapes. The goals of the sustainability transitions cannot be achieved without embedding them in society and without taking the way residents experience the landscape they live in into account. For sustainability transitions will irrevocably change that landscape. From this perspective, landscape is the connecting link that can ensure that these challenges are met expeditiously. Transitions are complex processes of change that require connections with other developments and that are often interconnected. A transition cannot be considered in isolation, it will

not respect the boundaries of its 'own' policy area and will not be confined to the spatial domain. The above-mentioned sustainability transitions, climate adaptation and mitigation and the establishment of sustainable rural areas have spatial, social, economic and temporal components. The landscape naturally connects these components and is therefore eminently suited to use as a carrier for these transitions. The landscape connects: experience and functionality, professionals and residents, different sectors and the past, present and future.

Long-term strategies, sectoral plans and concrete initiatives will have to take the values that people associate with the landscape into account. This requires an approach in which process and content are closely connected (see Section 2.2 and 2.3 below). Connecting transitions to landscape quality may, but does not necessarily have financial consequences for the initiators (see Part 2, Text Box 10 on Room for the River).

## 2.2 Explore the Meaning and the Values of the Landscape in an Open Discussion with Residents and Visitors

**Choose the Landscape as a Starting Point for the Launch of Sustainability Transitions**

The landscape is the best starting point for a discussion about the spatial translation of challenges connected with the transition to a sustainable society. The landscape is close to people's hearts and therefore it can be used to start discussions with residents and visitors about a future that would otherwise remain abstract. It can help to reduce resistance in society, and thus reduce the risk that ambitions are not realised due to this.

Residents and visitors of the landscape, as users, co-owners and co-producers, can make a vital contribution in the early stages of the process in particular. Their expertise and experiences in the landscape are needed to enrich an environmental and planning strategy or plan. They possess unique practical knowledge, memories and a kaleidoscope of associations and emotions with respect to the landscape. During two local area sessions, the Council experienced in discussions with several generations how more than 100 years of knowledge and insights about landscape development were shared. The conversation about the question of what, in light of the future changes of the landscape, people need to stay connected with the landscape, benefits from an awareness of the dynamic of the landscape (see Appendix 2).

Discussing the landscape with residents and visitors thus adds new elements that are difficult to measure, yet vital to the environmental and planning policy and the sectoral plans. The professional assessment of spatial quality is thus enriched (see Part 2, Chapter 3) and the input of residents and visitors creates greater insight in the opportunities to develop the quality of the landscape. This can help to increase support for sustainability transitions. A discussion about the landscape certainly does not automatically inspire resistance against its change, that is, it does not lead to the advance organisation of conservative forces.

Water light, landscape and emotion, Daan Roosegaarde

**Start With an Open Discussion**

It is important to explore the values and meanings that residents and visitors of the area associate with the landscape in an open discussion. An open discussion means a discussion in which the challenges related to sustainability transitions are explicitly addressed, without a pre-developed plan. A discussion with an open agenda, process and perspective not only enriches the range of possible ways to address the challenges, it strengthens the co-ownership, increases support and adds speed and quality.

During the discussion, shared values are identified as the key values of the landscape. These key values are part of an evaluation framework for environmental and planning strategies, plans, explorations of the future or sectoral policy documents and thus form the basis for the spatial development of sustainability transitions. The key values can be translated into guiding principles that give designers and policymakers something to go on when they invent solutions, shape their designs, prepare environmental and planning strategies or make plans. These guiding principles give direction and substance to solutions and plans (see Part 2, Chapter 4).

*'The meeting provides insight in the deep commitment of residents to the landscape. It shows the value of an open discussion without a preconceived plan, that allows a nuanced discussion about changes in the landscape.' (Source: report local area session De Ronde Venen)*

**The Discussion about the Landscape Is a Necessary Addition**

The Council believes that the discussions with residents and visitors are a necessary addition to the usual participation processes that mostly take place in the context of a planning process that has already been launched. In such cases, most participants are direct stakeholders (supporters and opponents) and the focus is on the weighing of interests rather than on the appreciation of the landscape.

During the two local area sessions, the Council experienced that discussions in which the landscape is approached as a collective and living heritage provide opportunities to look for solutions and to increase public

support for change. However, this does require the investment of time and resources, not only to hold a proper discussion but also to identify the abovementioned key values and principles on the basis of this discussion (see for examples of dialogues with citizens: Part 2, Section 4.2).

**Thoroughly Prepare the Discussion**

It is very important to properly prepare for the discussion in terms of content and process. It requires both a mix of participants, of different ages and from different backgrounds, and a facilitator of the conversation who provides a familiar, safe environment. An open discussion and a joint look at possible changes in the landscape also provide residents and visitors with inspiration for new initiatives and ideas.

**Make Residents Co-Owners and Co-Producers**

It is important to ensure that such discussions in the context of an environmental and planning strategy or sectoral strategies are not free of obligations. The representation of residents and visitors will have to be anchored throughout the process to ensure they will co-own the whole process.

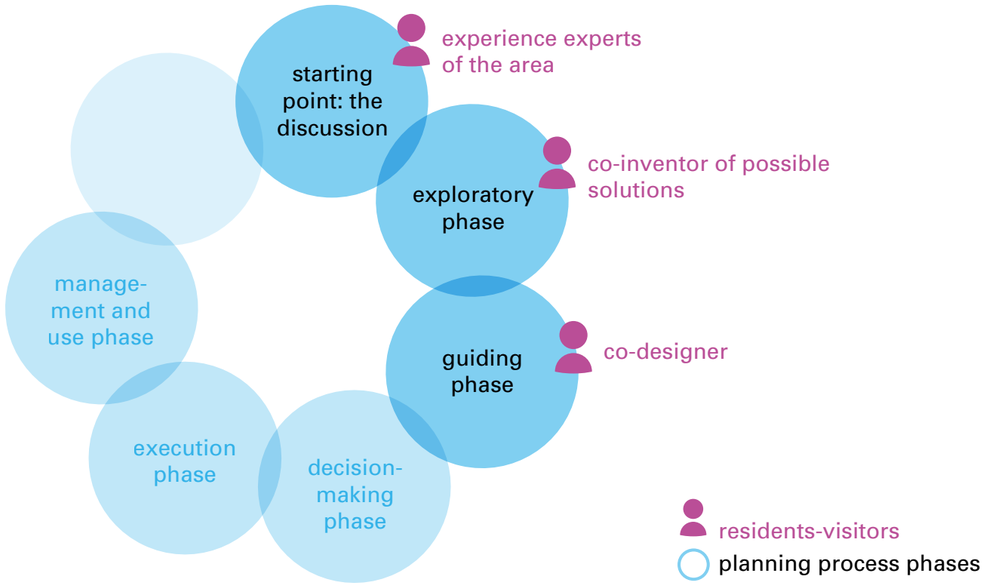
The transitions require the efforts of many and in addition to businesses and governments, residents must also have the opportunity to become the co-producers of the sustainability transitions in the landscape. This means that discussions about the landscape have to be open to new collaborations or area cooperations. After all, the landscape is partly formed and managed by socioeconomic networks.

Co-producing participants, local area session De Ronde Venen

However, the roles and responsibilities of residents and visitors do change during the strategy development and planning process. The Council identifies six main joint planning process phases that have to be completed (see Figure 2). Starting point is the discussion in which the key values are identified, followed by the exploratory phase in which the arena and possible spatial solutions are explored and next the guiding phase in which the data are synthesised and narrowed down to specific, desirable solutions. In this advisory report, the Council confines itself to these three strategy-forming phases, noting that the following three phases (decision-making, execution, and management and use) also deserve further

development. Incidentally, not every planning process has to be kick-started by a discussion about key values: once the key values with respect to an area have been set down in an environmental and planning strategy or sectoral policy in collaboration with the residents, they can function as input for subsequent planning processes. It is necessary in each case, however, to consider whether the key values require updating.

**Figure 2: Roles of residents and visitors during the strategy development phase**




*'It turns out the landscape is not only very valuable to residents, the discussion also gives rise to ideas about a joint role to help give meaning to it.' (Source: report local area session De Ronde Venen)*

## 2.3 Use the Design Approach for the Spatial Translation of Challenges

**The Design Approach Is a Work Process**

The design approach makes a valuable contribution to the spatial translation of challenges. This approach comprises a thinking and working process that combines the analyses of professionals and the expertise of users into syntheses that portray different solutions (for example in sketches, models or 3D animations). The combination of analysis, imagination and syntheses and the participation of different parties also contribute. Not only to combine separate sectoral interests like building blocks, but also to find integrated solutions by making new connections. The design approach centres on the work process and not necessarily on the outcome. This approach supports the process, for example by the sharing of values and the making of choices, but that does not mean that each process should always begin or end with a spatial design.

The design approach can translate the values that the involved parties derive from and project onto the landscape into images. Using visualisation, map images or reference images, these can be developed into spatial variations and syntheses. Moreover, this approach can couple values that are cherished in an area to the functions of the landscape such as its ecological, agricultural or cultural-historical functions. In the design approach, connections are found and a range of problems is creatively integrated into spatial discoveries, variants and syntheses. Because it is an iterative process, where proposals can be introduced at different moments, non-professionals can contribute to solutions more easily.

**The Design Approach in Practice**

The central government uses and encourages the design approach in many shapes and forms. Recent examples include the O-team, a design team established by the Minister of Infrastructure and Environment (IenM) to support local governments in their search for innovative solutions to complex spatial problems, the Action Agenda Architecture and Spatial Design 2013-2016 (AARO), the Atelier Making Projects and the Q-team (quality team) Room for the River (see Part 2, Section 4.3).

The Challenge Landscape 2070 (see Appendix 1), in which seven design offices and three university teams present spatial proposals and strategic interventions, provides insight in the role the design approach can play in the exploration of the future.

The Seven New Netherlands, karres+brands, Challenge Landscape 2070

The Netherlands 2070: Take It With a Grain of Salt, Team Groningen, Challenge Landscape 2070


**Figure 3: Use the sustainability transitions to create valuable landscape, have open discussions and use the design approach**

3

# RECOMMENDATIONS ON GOVERNMENT POLICY AND TOOLS

In this chapter, the Council develops the essence of its advice (Chapter 2) into specific advice to governments: to the central government (Section 3.1) and to provinces, municipalities and water boards (Section 3.2).

## 3.1 Recommendations to the Central Government

By linking the responsibility for the landscape to transition challenges, the care for the quality of the landscape becomes the responsibility of all governments. After all, all of the authorities are expected to contribute to the realisation of these transitions. The Environment and Planning Act furthermore includes a general duty of care with respect to the physical habitat of which the landscape is part and this also applies to the central government. The Council therefore believes the question of whether the central government should take the landscape back under its wing is irrelevant.

In addition, the Council believes that the centralisation of the responsibility for the landscape is undesirable. For landscape and environmental and planning policy are inextricably linked. Centralisation of the responsibility for the landscape would imply that the central government would also become responsible for spatial planning and transition challenges and this would comprise the reversion of the decentralisation of spatial policy. In addition, centralisation of specific responsibilities for the landscape would strengthen the sectoral importance of the landscape at the expense of the broader approach the Council advocates in this advisory report.

Nevertheless, the central government does have independent responsibilities. Its first task is to enforce the implementation of international agreements. Compliance with tasks that transcend national borders or that result from international agreements such as the European Landscape Convention that the Netherlands ratified in 2005 (Treaty Series 2005, 233) are the responsibility of the central government. In addition, the central government is responsible for the development of a strategy, at least in the National Environment and Planning Strategy and in its own sectoral plans. Finally, the central government has to play a coordinating role with respect to issues that transcend province borders and that are linked to a national interest (for instance, the coastal area). The central government has to acknowledge the fact that the landscape has many scale levels.

***Recommendation 1:*** *Anchor the link between sustainability transitions and the landscape in environmental and planning policy*

The central government bears the responsibility to ensure that the sustainability transitions, which require the efforts of many, can be realised expediently. The Council therefore advises the central government to anchor the fact that sustainability transitions can contribute to a valuable experience of the landscape and, conversely, that a valuable experience of the landscape is a necessary condition for a successful transition policy, in its environmental and planning policy. This means that the three key points mentioned in Chapter 2 have to be included in its environmental and planning policy.

The central government ought to include an inspiringly worded passage comprising these three key points about steering towards the quality of the landscape in the general section of the National Environment and Planning Strategy, which describes general starting points, principles and assessment frameworks (Rli, 2015b; see Part 2 Section 2.1). In this way, the central government commits itself to this method and helps other governments to steer towards the quality of the landscape and towards the expedient realisation of sustainability transitions in environmental and planning strategies and in sectoral policy. This offers authorities and initiators a framework under the terms of which they can substantiate their duty of care towards the landscape as part of the physical habitat. Moreover, this puts flesh on the intention of the Environment and Planning Act to involve citizens in the development of strategies and planning at an early stage.

***Recommendation 2:*** *Elaborate the responsibility for the landscape in the National Environment and Planning Strategy*

The Council advises the central government, if it is the initiator of major national sustainability transitions itself, to elaborate the responsibility for the landscape. This means that the central government itself bases the further development of the National Environment and Planning Strategy and the identification of the most important integrative challenges on the three key points mentioned in Chapter 2.

This also means that the central government has to take the opportunity to experiment with ways to involve Dutch citizens in the discussion of the landscape on a national level. On a national level, it is not immediately clear who is to participate in discussions about the identification of shared key values. The central government can organise such discussions by theme, for example about the future of peat meadow areas or the coastal landscape and for specific areas, for example the southwest delta. Conditions are: the concrete transition challenges are the starting point for the discussion and the group of participants must be diverse to create a reliable picture of the key values.

Internationally, governments have already gained experience with the involvement of citizens in the spatial consequences of major sustainability transitions at the national or supraregional level (see Part 2, Chapter 4). The central government and other governments already have experience with the design approach.

***Recommendation 3:*** *Restrict a separate landscape strategy by the central government and provinces to sectoral tasks and link them to the National Environment and Planning Strategy*

In response to the wishes of the House of Representatives, the Ministry of Economic Affairs (EZ) and the provinces are working on a shared landscape strategy about, among other things, the conservation and restoration of meadow bird populations and the conservation of valuable landscapes (Tweede Kamer, 2015a and 2015b). The Council acknowledges

that there can be a need for a new landscape strategy at the central government level to introduce, for example, new conservation regimes or new sectoral instruments. Given that the essence of the Council's advice is to position the landscape as a connecting link in transitions, however, the Council advises the central government to restrict any landscape strategy of the central government to sectoral tasks and to link it to the National Environment and Planning Strategy. This clears the way for the valuable development of the landscape and the expedient realisation of the transitions.

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***Recommendation 4**: Take responsibility for the landscape in sectoral plans*

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For the benefit of the different sustainability transitions, the central government pursues policies in areas including energy, water, agriculture and nature. In sectoral policy, the transition challenges are developed in tasks concerning, for example, the share of renewable energy, $CO_2$ emissions, river water discharge and nitrogen deposition. The Council advises the central government to take the landscape as the starting point for sectoral strategies and plans as well, and to include the three key points of the advice in them. This is a continuation of the Dutch tradition of creating new landscapes.

In connection with this, the Council recommends linking the relevant sectoral tasks with the quality of the landscape by starting discussions with residents and visitors at an early stage and by using the design approach. This has not been done often enough so far: not, for example, in the context of major adaptation tasks such as the Delta Programme Coast or the energy transition. The intention to start a careful discussion about the spatial integration of the energy transition, as expressed in the Energy Report Transition to Sustainable Energy (Ministry of Economic Affairs, 2016; Tweede Kamer, 2016b), is a good start. In this advisory report, the Council gives pointers for its further development.

Formulating the challenges and objectives of the sustainability transitions in specific areas, it is important to leave sufficient opportunities for discussion in the region. For example, by prescribing how many gigawatts of renewable energy have to be generated, but without prescribing the renewable sources that have to be used. The central government has to make sure that goals like these are accompanied by conditions and obligations and has to provide opportunities for experimentation to allow regions to organise the landscape in ways that lead to the improvement of its quality.

The Council also advises the central government and other governments to be excellent commissioners of projects to realise sustainability transitions. Good commissionership begins with the ambition of the central government to meaningfully translate transition challenges into landscape, with the use of the design approach throughout the process and with continuous attention to integrated goals, design proposals and quality. Integrating work on complex spatial issues with the design approach not only results in more quality in the landscape, it also saves time and money (see Part 2 Text Box 10).

***Recommendation 5:*** *Create material and immaterial opportunities to experiment and learn*

The Council advises the central government to create opportunities for experiments, either conducted by the central government, other governments or by private parties, and to set up material and immaterial conditions to that end. After all, the approach the Council advocates in this advisory report requires opportunities for experimentation as well as financial support, for example to share knowledge and experiences in a community of practice. Especially at the national level, there is little experience in discussing the landscape, developing key values and using a design approach. Therefore, the central government needs means, people and resources to conduct such experiments, to further develop this way of working and to share acquired knowledge. It needs people to guide this work process, people that can connect the values of citizens and visitors with the necessary transitions.

The Council also recommends that the new Government Advisor for the Physical Environment is charged with following the approach proposed here in practice. As an independent advisor, the government advisor can monitor whether the process steps are followed in cases of major spatial developments, and whether they lead to the improved quality of the landscape. The Council believes that this fits well with the tasks of the Government Advisor for the Physical Environment, who is specifically charged with advising on landscape and water. He can assess (how are things going), schedule and give advice (how can we do better) and consequently ensure the further development of the care for the landscape.

## 3.2 Recommendations to Provinces, Municipalities and Water Boards

***Recommendation 6:*** *Use the connective force of the landscape in environmental and planning policy and local and regional sectoral plans: cross borders and collaborate*

The decentralisation of much of the authority in planning policy and in nature policy to provinces and municipalities has given both these governments and the water boards a wide territorial responsibility. That is why the Council advises provinces, municipalities and water boards to use the three key points of this advisory report when drawing up environmental and planning strategies and sectoral plans. To this end, these governments will have to look beyond their administrative borders and follow the coherence in the landscape. They will have to consult with each other and establish cross connections, mutually, with agricultural entrepreneurs, with actors in the energy sector and with other parties in the area. They will, for example, have to determine the appropriate scale level and decide on the appropriate landscape boundaries for a discussion about the key values of the landscape.

***Recommendation 7:*** *Organise the knowledge and advice function about the landscape*

Many provinces have already established a knowledge and advice function in the field of landscape and spatial quality. Sometimes at a distance and independent, in the form of provincial advisers for spatial quality; sometimes in ateliers or inside the administrative organisation in some other way. It would be commendable if a learning community were to be established in which provinces can exchange knowledge and in which cross-border thinking is encouraged. This way, the different forms of counsel in the field of spatial quality can enrich each other and cross-border coordination and cooperation can be established.

# PART 2 | ANALYSIS

Part 2 contains the arguments behind, and the further substantiation of, the advice in Part 1 divided over several chapters. Chapter 1 addresses the reason for the advice, Chapter 2 discusses the formation of the Dutch landscape in the past and future, Chapter 3 is about meanings and characteristics of the landscape and Chapter 4 goes into the governing of the landscape.

1

# RATIONALE OF THE ADVISORY REPORT

Most people experience the landscape on foot or by bicycle, from a car or train, on their way to shops, work or school. The landscape is of value to them, they feel connected to the landscape, whether it is their daily habitat or one they like to visit in their spare time or on holidays. They appreciate the landscape for its beauty; it is of value for the economy, our health, the ecosystem, our quality of life and numerous other factors. The landscape is not a sum of functions. It is much more than that. As a result of both its history and the values and meanings people ascribe to it. This has been true in the past – the concept 'landscape' dates back a long time – and it is true today. People attach meanings to it because to them, certain areas or sites in the landscape harbour memories and evoke emotions. History is often visible in the landscape as well and this adds an extra layer to people's experience of that landscape.

Landscape memories: snowy landscape

At the same time, the landscape is always changing in our densely populated delta. Spatial developments and social challenges create its dynamic. There are distinct periods in which social transitions result in radical changes of the landscape: industrialisation, urbanisation, suburbanisation, the introduction of the car, increased mobility and infrastructure, agricultural modernisation and the advent of leisure culture. In the past, these were associated with spatial interventions that were based on big ideas and plans and controlled by (central) government(s). Those days are over. Governments now play a far less prominent role in the care for the landscape.

In the future, various developments will continue to have great impact on the landscape, either gradual development or more sudden and abrupt interventions in the landscape (see Part 2, Section 2.2). The most drastic are the sustainability transitions mentioned in Part 1 of this advisory report. In this advice, the Council argues that the major transitions that face us give rise to a new perspective of the landscape and require the landscape to play a specific role in new environmental and planning policy and in sectoral strategies and plans.

*'By 2070, rather than being formed by interventions that go against the dynamics of the environment, the Netherlands (and its residents) will have to explore the specific opportunities of the region.' (Source: Team Groningen)*

*'We will have to neutralise a number of threats to ensure that the landscape is still habitable and productive by 2070: sea level rise, more extreme peak discharges, tectonic subsidence, salinisation and subsidence in combination with an expanding metropolis.' (Source: ZUS)*

Deregulation has changed the role of the central government towards the landscape substantially. In the public domain, deregulation reduces administrative burdens and makes it easier for social parties to jointly realise plans. There are more opportunities for administrative assessment and it is easier to adopt a more integrated and joint approach to regional challenges. At the same time, deregulation means that governments have less direct impact on the substantiation of spatial functions. In addition, the role of citizens has changed a lot over time. Citizens have become more assertive; they are better organised and often choose 'the landscape' as a platform for discussion. Only recently the short, intense debate about building in the coastal area demonstrated how much emotion the concept 'landscape' could evoke – unlike the concept 'integrated spatial quality' (see Text Box 1). The landscape is also an important subject in the public debate about, for example, wind turbines and solar farms. Thus, the public focus on the landscape is increasing while the governmental focus on the landscape is decreasing. The landscape could very well become the arena for the discussion of major operations the government initiated itself, such as the Delta Programme and the energy transition.

*'Governments should focus on the development of conditions that actually challenge society to co-create, that fuel bottom-up processes in society.' (Source: Bosch Slabbers/VenhoevenCS)*

**Text Box 1: The Public Debate on Building in the Coastal Area**

Towards the end of 2015, the Cabinet's plan to change the Decree General Rules Spatial Planning (Barro) and thus reformulate the conditions under which the Cabinet was willing to allow new initiatives in the coastal area (Tweede Kamer, 2016c) created social and political unrest. The opposition against the Cabinet's plan stemmed from resistance to development in the coastal area or damage to the coastal landscape. Following the unforeseen unrest, the Ministry of Infrastructure and the Environment decided in January 2016 to abandon the planned change and engage social and administrative parties in a consultation about coastal policy (Tweede Kamer, 2016d). The parties agreed to develop a 'coastal pact' on the basis of shared values for the future development of the coastal area. The following is a description of the events that led up to this incident.

The plan to change the Barro sprang from the new Coastal Policy (Ministry of Infrastructure and the Environment, 2015a), which was to replace the previous Coastal Policy of 2007. The Barro prescribes how national interests (water safety, drinking water supply) have to impact the spatial plans of regional and local governments. The

changes in the Barro were meant to re-regulate any development in the so called ‘coastal foundation’ (the zone vital for flood protection; bounded on the seaward side by the -20 m NAP line, it comprises both dunes and sea dikes on the landward side), for reasons of safety and coastal maintenance. Preparations for this change had included talks with stakeholders about national interests (water safety, drinking water supply) and other interests such as recreation, tourism, nature and mineral extraction (Consultation Infrastructure and Environment OIM, 2014). Of these, only the national interests were included in the proposal. Agreements about the other interests made earlier with regional and local governments were part of the National Strategy Coast (Deltaprogramma Kust, 2013).

Social organisations had previously been worried about the development of the coastal area, especially about new construction. It prompted Natuurmonumenten and other nature and environmental conservation organisations to launch the campaign ‘Bescherm de kust’ (Save the Coast) in October 2015. In the context of this campaign, a joint coastal strategy was released for the southwest Delta (Kuijpers & Raaijmakers, 2015), and all of the building projects along the coasts of Zeeland and South Holland were mapped. The concerns were not only related to the coastal foundation, but to the entire coastal area (view from the shore, coastal area seaward and inland from the coastal foundation). In the joint coastal strategy, the nature organisations advocated an integrated approach towards outdated recreational facilities, ecological values and water safety. This approach was expected to lead to an integrated coastal approach by the joint governments. Nature organisations consider the entire coastal area a single landscape and advocate a mix of measures such as zoning, a restructuring and reorganisation fund and a ladder of guiding (development) principles.

Coastal development

In the meantime, the public debate has broadened. Today, the coastal area is considered a national interest, not only for reasons of nature

and water safety, but also because of the quality of the landscape. Nature organisations conclude that landscape values such as silence, darkness, vastness and unspoilt character are not anchored in current nature policies or environmental and planning policies (Natuur en Milieufederatie Zuid-Holland et al., 2016; Kuipers, 2016). Some parties believe that the coast should remain subject to the central government, because this would better safeguard the national interest. Others have faith in provinces and municipalities, which can complement plans, outside the National Ecological Network, with conditions to safeguard spatial quality (Natuurmonumenten, 2016; Tweede Kamer, 2016d). The goal is for all of the parties to endorse the coastal pact after the summer of 2016 and record in it the shared values of the coastal area as well as agreements about the conservation and development of the coast.

2

# THE CHANGING LANDSCAPE: PAST AND FUTURE

The Dutch landscape has been formed by human activity and natural processes. This Chapter describes the past (2.1) and takes a look at the future (2.2).

## 2.1 The Dutch Landscape as a Reflection of Human Activity and Natural Processes

The Dutch landscape is the result of a reclamation history and intellectual history that spans more than 1,000 years. Formed by natural processes, the delta comprises a hugely varied range of undergrounds and geomorphologies. Its people have been gradually transforming this natural landscape into the man-made and urban landscape we know today since the early Middle Ages: an often attractive combination of varied agricultural man-made landscapes, reclaimed land, water systems, villages, country houses and estates, infrastructural networks, nature reserves and industrial areas. New landscapes and landscape elements are added every day, for example by Room for the River projects, energy landscapes with wind farms or solar farms. At the same time, new space is made available every day through the phasing out of landscape elements we no longer need or want, such as cluttered industrial sites, abandoned greenhouses, stables (Gies et al., 2014) or, in the future, power plants and perhaps superfluous infrastructural traffic capacity. This space can be redeveloped into new landscapes as well. This Section successively describes the role the central government plays in landscape development and landscape conservation and the legal embedding of the landscape in two recent laws: the Nature Conservancy Act and the Environment and Planning Act.

Example of landscape formation: reclaimed marshes along the North Wadden Coast

### Landscape Development

Every episode in the genesis of the landscape is characterised by dominant processes and/or commissioners. The twentieth century is characterised by a central government that was actively involved in landscape formation, fuelling processes (such as economic reform and post-war damage repairs), commissioning projects (such as land development, road construction and urban development) and designing the landscape (through, for example, unemployment relief reclamation in

the 1930s, land consolidation and land development processes, Randstad Green Structure, new forests and the Zuiderzee polders) (see Appendix 2). Geuze says that the Dutch landscape is characterised by a connection of the authentic and the artificial (Van Limpt, 2016) that, more than in other countries, has been conserved here over the centuries.

The landscape policy in force in the post-Second World War period consisted of a combination of elements. Between 1945 and 1985, the basic spatial planning policy that was in force, for example, spatially separated the rural and the urban areas. There was sectoral policy that attributed responsibilities for landscape and infrastructure design. Later, formal cultural political policy was developed and integrated in both the cultural heritage policy (see this Section, Text Box 2) and in the architectural policy (see Text Box 7 in Part 2, Section 4.3). Starting with the release of the Second Memorandum on Architectural Policy (1997), architectural policy subjected the higher scale levels to policy as well. More recently, with the release of the Spatial Planning memorandum in 2004, the central government's responsibility for the landscape became increasingly indirect.

In recent years, the central government has had little attention and made little policy for the landscape and the improvement of its quality. Whereas spatial quality was still a second, juxtaposed goal (beside water safety) in Room for the River, this attention to spatial quality was not continued in the Delta Programme, despite the good experiences with it in Room for the River (Tweede Kamer, 2012a). Another central government investment programme, the MIRT (Multi-year Programme for Infrastructure, Space and Transport) mainly focuses on infrastructure and has little attention for space-related tasks despite the fact that the R of 'Ruimte' ('space') was added to 'MIRT' almost a decade ago.

New landscape formation: island in the Waal River near Lent

**Landscape Conservation and Protection**

Besides active attention for landscape development, the central government has been paying attention to landscape conservation for a long time. So far, landscape conservation has been reasonably successful for country houses and estates. First, the Nature Protection Act effectively ended the cutting up and subdividing of estates in 1928 by offering the

owners tax benefits (exemption from inheritance tax) providing that they – partially – opened up their properties to the public. Country estates were not only kept going by a combination of monument preservation and grants, but also through half a century of active acquisition policy and fitting management from the central government and NGOs. And in many cases, these managed to insert new wealthy estate owners that were able to afford the costly maintenance.

The conservation of agricultural landscapes proved more difficult and therefore much less successful. Though land development projects often included small nature reserves (for example Het Aaltense Goor) where the memory of the small scale of the past was kept alive, everything around them was scaled up and modernised because the economic interest prevailed. From 1984 (when the Structure Plan for Nature Conservation and Protection of the Countryside was released), the modernisation and conservation issue was taken to a level that transcended that of the individual land development project. Categories were introduced to protect certain landscapes, such as GLEs (large landscape units), WACs (valuable agricultural man-made landscapes) and NLs (national landscapes). This type of landscape protection ended with the National Policy Strategy for Infrastructure and Spatial Planning of 2012 (Tweede Kamer, 2012b); today, only specific areas are protected on the basis of policy for cultural heritage (Ministry of Education, Culture and Science, 2011).

's-Graveland, Spanderswoud Estate

The reason for the failure of this type of landscape conservation is that farmers used the structural features of the landscape, such as drying fields for the production of fuel peat, hedges and hedgerows and gullies and ditches for the daily operation of their businesses. Conserving these cultivated landscapes, which today are appreciated for their beauty, in their current state would require the economic fixation of the agricultural business or limiting its operations in one way or another. Chris Kalden (2015), chair of the Stichting Groene Hart advocated an alternative approach, involving the collaboration of parties that focus on liveability

and experienceability. He also called for investment in the economy of the Green Heart (the rural area surrounded by the four major cities in the western Netherlands known as the Randstad), because the Green Heart has no future without economic support.

Social organisations such as the Vereniging Nederlands Cultuurlandschap (2016) are still making efforts to conserve or restore small-scale landscape features such as hedges, hedgerows and ditches in the agricultural landscape. These efforts will remain of limited significance, because the organisation of their management is difficult to sustain without economic support. The landscape elements involved are in most cases by-products of past agricultural use, while modern agricultural businesses often regard them as obstacles.

Experiences with the Belvedere Policy Document (Ministries of Education, Culture and Science; Food, Agriculture and Fisheries; Housing, Spatial Planning and the Environment; and Transport and Public Works, 1999) have updated the ideas about the conservation of monuments and led to the understanding that 'conservation by development' is the most fruitful perspective. Projecting this perspective onto the conservation of man-made landscapes, promising strategies would have to focus on entering into a dialogue with the agricultural sector about its transformation into a more nature-inclusive agriculture in the context of corporate social responsibility (license to produce). This is what Natuurmonumenten and the World Wildlife Fund pursue and so do the provinces and the central government, in accordance with their joint implementation agenda nature strategy/strategies (Tweede Kamer, 2016a). It is a way of working that results in a new production landscape (Ministries of Food, Agriculture and Fisheries and Housing, Spatial Planning and the Environment, 2009).


New Hollandic Waterline, RAAAF

Though the Strategy for Heritage and Spatial Planning (Ministry of Education, Culture and Science, 2011; see Text Box 2 in this Section) characterises landscapes that are part of the cultural heritage, it also argues that the management of heritage in urban and rural transformation processes can never be completely and exclusively determined by

governments and experts. Caring for heritage requires transparent procedures, well-founded decisions and the active involvement of citizens in the balancing of interests. Governments are furthermore required to exercise restraint in the top-down advancement of its values. 'A living culture benefits from the discussion of values, from disputes about taste and from opportunities for individual interpretation. Identifying (or not identifying) cultural meanings is the joint domain of citizens, businesses, interest groups and governments, which none of these parties can usurp' (Ministry of Education, Culture and Science, 2011, p.41).

**Landscape in the Nature Conservancy Act**

The Nature Conservancy Act comprises a separate objective about the protection of the landscape (Tweede Kamer, 2015a, 2015b, 2015c, 2015d). The new Nature Conservancy Act[3] requires the central government to record the outlines of central government policy in a national nature strategy aimed at, among other things, 'the protection of valuable landscapes, in a national and international context, and the conservation and if possible strengthening of the recreational, educational and experiential value of nature and the landscape, in conjunction with the policy to achieve a sustainable economy' (Law Gazette 34, 2016, Article 1.5 Paragraph 2).

In addition, the House of Representatives adopted a motion about the development of the role of a Landscape Observatory to safeguard continued sufficient attention for the landscape in September 2015 (Tweede Kamer, 2015e). The State Secretary of Economic Affairs and the provinces are working on a national landscape strategy to jointly shape and substantiate the policy objective for the landscape in the Nature Conservancy Act. The Nature Conservancy Act will be integrated in the Environment and Planning Act (Tweede Kamer, 2014 and 2015a).

**Text Box 2: Current Culture Policy: Strategy for Heritage and Spatial Planning**

Concrete elements of a culture-political agenda at the central government level with respect to the landscape can be found in both the Strategy for Heritage and Spatial Planning (Ministry of Education, Culture and Science, 2011) and in the AARO (Tweede Kamer, 2012c). The Strategy for Heritage and Spatial Planning from 2011 focuses on the care for existing and newly developed heritage through so-called 'development-oriented heritage care'. The AARO ensures its professional supervision. The Strategy for Heritage and Spatial Planning is explained below; the AARO is explained in Text Box 7 in Chapter 4.3.

The generic (cultural heritage) policy is linked to the spatial policy, because decisions about new spatial developments (in the drafting of zoning plans) require that special attention be paid to the values of cultural heritage (Tweede Kamer, 2011). The conservation of cultural heritage is also anchored in the Environment and Planning Act.

3 The Act comes into force on a date determined by Royal Decree, which is expected to be 1 January 2017.

With the Strategy for Heritage and Spatial Planning, the central government wants to encourage various parties to use the value of cultural heritage in the development of areas and the realisation of economic and social goals. This development-oriented approach represents a break with the past, when cultural heritage policy mainly focused on conservation. 'This is about the constant revitalisation of the cultural character of the Netherlands to keep the spirit of our country alive' (Ministry of Education, Culture and Science, 2011, p. 32).

The Strategy for Heritage and Spatial Planning includes five priorities for area-oriented heritage policy. Two of these priorities lead to the protection of specific areas:

- World heritage recognised by UNESCO, including the Beemster, the Wadden Sea, the Defense Line of Amsterdam, the New Hollandic Water Line and the Roman Limes.
- Post-war reconstruction areas. Thirty areas of national significance have been selected. The central government wants the period 1940-1965 to stay recognisable at the area level throughout the future development of the Netherlands.

In addition, there are three priorities that call for more attention for cultural heritage in spatial processes rather than lead to the protection of specific areas:

- Individuality and safety: the North Sea, its coast and the major rivers. This also highlights that the undeniably national character of these areas presents a cultural challenge. The North Sea because of its size and the central government's unique responsibility for it, the big rivers and the coast as line/strip-shaped structures that connect the territory of a number of provinces. Here, the cultural heritage consists of historical structures like water lines, defence lines, and old dikes.
- Reallocation of cultural heritage in growth and shrinkage areas.
- Living landscape (rural area). The central government sees two roles for itself: influencing European (financial) frameworks (such as the Common Agricultural Policy) and targeted use of knowledge and attention in distinctive cultural historical areas that face biodiversity or energy challenges.

**Landscape in the Environment and Planning Act**

The new Environment and Planning Act combines laws and regulations for spatial projects in the field of, among others, construction, environment, water, spatial planning and nature. The central objective of the Environment and Planning Act applies the concept of 'integrated spatial quality' (see text Box 3). The quality of the landscape is considered to be an aspect of integrated spatial quality. Integrated spatial quality pertains to both the human perception of the physical habitat and the intrinsic values society attributes to the identity of areas and to animal and plant species (Tweede Kamer, 2014).

In the Environment and Planning Act, therefore, landscape is one of the sectoral interests; details pertaining to landscape-related tasks of administrative bodies notably include the protection and conservation

of values. With respect to the implementation of the environmental and planning policy, neither the central government, provinces, water boards or municipalities have clear-cut ideas about landscape development yet. In Part 1, Section 1.3 of this advisory report, the Council advocates giving prominence to the development of the landscape, rather than approaching it as a sector only.

The Environment and Planning Act obligates the central government, provinces and municipalities to draw up an environmental and planning strategy. Each governing body determines its ambitions for the further development of the living environment in its territory in an integrated environmental and planning strategy. This involves a cyclic process aimed at the continuous improvement of the quality of the living environment. The environmental and planning strategy is updated whenever necessary.

The Rli (2015b) recommended selectiveness for the National Environment and Planning Strategy. A selective environmental and planning strategy dovetails with a decentralised system in which not only other administrative bodies, but also market and social parties increasingly carry responsibility for the environmental and planning policy. Central government policy is meant to inspire and challenge those involved in the living environment to contribute to finding solutions to the major challenges the Netherlands faces. The central government could confine itself to challenges to which value is added when they are included in the National Environment and Planning Strategy, rather than use a more sectoral approach or an approach by other administrative bodies. The Council also recommended that the environmental and planning strategy comprise a general part, a description of tasks and programmes around specific themes. In that case the general part of the National Environment and Planning Strategy would have to include starting points, principles and an assessment framework (Rli, 2015b).

**Text Box 3: The Landscape in the New Environmental and Planning Policy**

The Environment and Planning Act (Law Gazette 156, 2016) will become effective in 2019 (Tweede Kamer, 2016e).

**Duty of Care for the Landscape**

The Environment and Planning Act focuses on the physical habitat. According to this Act, landscapes are part of the physical habitat (Article 1.2, Paragraph g), just like cultural heritage and world heritage (Article 1.2, Paragraph i and j), which includes certain man-made landscapes. The explanatory memorandum explicitly states that the application of the Act is thus oriented towards 'achieving and maintaining a good landscape quality and towards the efficient management, use and development of the landscape' (Tweede Kamer, 2014, p.330).

Article 1.3 describes the objective of the Act: 'This Act is, with a view to sustainable development, the liveability of the country and the protection and improvement of the living environment, oriented towards, interdependently:

a. achieving and conserving a safe and healthy physical habitat and a good integrated spatial quality, and
b. the efficient management, use and development of the physical habitat for the fulfilment of social needs.'
It is not only the interdependence of the two objectives of the Act that is at stake, but also the interdependency of the specific interests in the physical habitat behind them, such as nature and water or infrastructure and landscape. In this objective, 'a good integrated spatial quality' refers to the importance of, among other things, the quality of the landscape (Tweede Kamer, 2014, p.63).

On the basis of Article 1.6 'Everyone takes sufficient care of the physical habitat', the duty of care of all also pertains to landscapes (Tweede Kamer, 2014, p.330). In addition, the landscape is named among the tasks and powers of administrative bodies (Article 2.1):
'e. the protection of landscape or urban development values,
f. the conservation of cultural heritage,
g. the conservation of the exceptional universal value of world heritage.'

**The European Landscape Convention in the Environment and Planning Act**
According to the explanatory memorandum, this Act implements the European Landscape Convention. First, because the landscape, as part of the physical habitat, is part of the objective of the Act – integrated spatial quality and the duty of care, as described above. In addition, participation by the public, which is one of the requirements of the European Landscape Convention, is set down in Section 16.3 of the bill.

## 2.2 The Driving Forces of the Future

In the past, economic development and determined commissioners have led to changes in the landscape and even to new landscapes and they will continue to do so in the future. The most radical spatial changes are likely the result of sustainability transitions, such as the energy transition, climate adaptation and the transition to sustainability in the rural area. These transitions lead to drastic and structural social changes. They are characterised by an unpredictable and ungovernable character and by the high pace at which they take place (Loorbach, 2014). The space these sustainability transitions take up and their manifestations involve major uncertainties. In addition, some transitions will lead to gradual changes in the landscape and others to more abrupt ones.

Climate change, demographic developments and the growth of recreation and tourism change the landscape gradually. Salinisation and subsidence, for instance, lead to changed land uses over time; rural-urban migration creates an increased need for housing in urban areas and vacancy in peripheral regions, and growing recreation gives rise to the gradual increase in facilities such as paths and hospitality businesses. To illustrate: in recent decades, the total area of agricultural land has decreased steadily (between 2000 and 2012 by approximately 61 km$^2$ per year). That space

is now mainly occupied by buildings and recreational facilities and to a lesser extent by forest and open natural terrain (Statistics Netherlands [CBS] et al., 2016). Other changes occur more intermittently and are, for example, connected to major interventions in the landscape or made possible by rapid technological developments (Rli, 2016c), such as the installation of wind turbines.

The transitions will lead to new claims for space in the landscape, for example for water safety (Ministries of Infrastructure and the Environment and Economic Affairs, 2015; Roggema, 2012; Jaar van de Ruimte, 2015), the production of renewable energy (PBL, 2010a and 2013) and possibly also to more space becoming available, for example when industrial landscapes associated with the large-scale use of fossil fuels are abandoned.

*'The overall prospect for 2070 is that some extraordinary landscapes will be returned to the Netherlands: post-fossil landscapes that can function as a productive, recreational and ecological delta lab.' (Source: OKRA)*

Since the nature and pace of spatial developments are uncertain, the land use will have to allow a substantial degree of flexibility (see Chapter 3, Part 2). In addition, transitions put existing structures under pressure and regularly lead to conflicts and tensions. Owing to the great spatial impact of the transitions, the landscape often forms the arena in which these conflicts occur (see Text Box 4).

**Text Box 4: The Energy Transition**

The SER Energy Agreement of 2013 defines the challenges related to the energy transition on a national level. The Paris Agreement highlights the objectives on an international level (Rli, 2016a). The Dutch energy transition has led to a number of conflicts about landscape quality so far, for example in connection with plans for wind farms.

The government presented its integrated strategy on the future energy supply of the Netherlands in its Energy Report of January 2016. In this report, the government concluded that the challenges associated with the energy transition will have major spatial consequence as well (Ministry of Economic Affairs, 2016) and that they would require the careful discussion of the spatial integration of production, storage and transport of energy with citizens, businesses and social organisations. Smart solutions are needed, because the production of renewable energy requires more space than the existing systems and agreements have to be made about the significance of regional tasks and the division of responsibilities, benefits and burdens.

The energy dialogue announced in the Energy Report has taken place in the first half of 2016. This dialogue did not specifically focus on spatial integration. The goal of the energy dialogue was to raise the general public's awareness of the transition challenges and to activate parties and make them commit to the making of a tangible contribution

to the energy transition. The dialogue focused on citizens, businesses, knowledge institutions, governments and social organisations.

The spatial integration of the energy transition is embodied by the strategy on environmental management of the Minister of Economic Affairs on behalf of the Minister of Infrastructure and the Environment (Tweede Kamer, 2016a). The Ministers see environmental management as a crucial tool for the realisation of the energy transition: new forms of energy production, storage and transport should be integrated in areas where people live, work and recreate. Moreover, energy production and storage are organised more decentralised and as a result, the interests of governments, citizens and businesses in the area converge. The objective of environmental management is to ensure that all parties talk to each other about their own role in the energy transition, with faster and better decision-making as a result. The idea is that local residents not only respond through participation, but also help think about possible solutions.

The trick is to use these developments and the dynamics they bring with them in such a way that they lead to new, meaningful landscapes (Sijmons, 1998). In addition, it is important to ensure that the diversity, identity and unique qualities of the landscape grow stronger, rather than decline (Geuze, 2016; Slabbers, 2016).

Vision of the future 2070, Bosch Slabbers and VenhoevenCS, Challenge Landscape 2070

Adaptive landscape: Water Park, LINT, Challenge Landscape 2070

A shift towards landscape development in terms of ‘building with nature’, that is: based on natural processes, is now clearly discernible (Waterman, 2010; De Vriend & Van Koningsveld, 2012). This shift is reflected by, among other things, the outcomes of the Challenge Landscape 2070 in which design teams (among other OKRA, karres+brands, ZUS) propose to base the development of the landscape on the dynamics of nature.

Example of natural processes that form the landscape: Blauwe Kamer (Blue Room)

*‘Axioms that have developed through centuries of working against nature now have to be replaced by a spatial development on the basis of the natural system.’ (Source: karres+brands)*

*‘What changes is the attitude: the belief in technological and social engineering has been replaced by the awareness that we need more balance. Technological approaches have been replaced by thinking in terms of resilience and dynamics. In thinking, cycles have taken the place of linearity.’ (Source: OKRA)*

*‘(We have to) embrace the dynamics and see changes as vehicles that can add new quality and provide opportunities to reinvent parts of our landscape.’ (Source: Bosch Slabbers/VenhoevenCS)*

3

# THE MULTI-INTERPRETABLE LANDSCAPE

The major transition challenges will change the landscape and guiding those changes requires a good understanding of the landscape. Rather than unambiguous, the concept 'landscape' is open to many different interpretations. In Part 1, the Council bases its recommendations on the multiple concept of the landscape and on the use of the knowledge of residents and visitors in addition to that of professionals in the assessment of the quality of the landscape. In this Chapter, the Council will elaborate on this. Section 3.1 and 3.2 describe the value and the quality of the landscape successively. Section 3.3 discusses the characteristics of the multiple concept 'landscape'.

## 3.1 The Value of the Landscape

The biography of the landscape, as described in Section 2.1 (Part 2), plays a role in the appreciation of both residents and visitors. This appreciation goes beyond the functional significance of the landscape as a place to live, work or recreate and is connected to both existing and new landscapes.

The landscape provides identity and belonging (Coeterier, 1987).
The landscape plays a part in the health and happiness of the people that inhabit it (Groenewegen et al., 2006; Van den Berg et al., 2010; Groenewegen et al., 2012). In addition, it has been shown that staying in a natural environment, even if only briefly, has a significant positive effect on affection, memories and recall (Bratman et al., 2015). Green and blue functions also contribute to the increased value of dwellings (Luiten, 2016). On the basis of international examples, a recent study of the Delta Metropolis Association found that the landscape contributes to the location factors that are important to attract talented and highly skilled workers and for the development of a knowledge economy. In addition, examples illustrate that care for the landscape on a regional scale requires administrative collaboration, the use of regional planning instruments and good accessibility of the areas (Nefs, 2016). In its advisory report 'Beyond Mainports' (RIi, 2016c) the Council therefore recommends to attach more value to soft location factors, such as a safe, healthy, varied and enjoyable living environment.

The landscape as a location factor: Omval, Amsterdam

A key value of the Dutch landscape is the diversity of its nature, habitats and forms of agriculture. In the Netherlands, these different landscapes are found inside a relatively small territory. Increasing the diversity in the landscape raises the amenity value of the space, intensifies its identity and creates conditions for biodiversity (Ruimtemettoekomst, 2016). The underground partly determines what functions are possible. As their carrier, the landscape accommodates spatial functions such as recreation, living and traffic (Sijmons & Feddes, 2002). Finally, the landscape provides

ecosystem services such as a green infrastructure (PBL, 2010b), a source of drinking water (CBS et al., 2015) or a regulator of the effects of climate change (Roggema, 2009).

## 3.2 The Quality of the Landscape

The subject of this advisory report is the Dutch landscape, more particularly the care for its quality. The quality of the landscape is generally described in terms of values. In this context, both the values that residents and visitors ascribe to the landscape and the way professionals (including policymakers) describe those values are important. This Section focuses on the professional approach to landscape values.

Professionals try to manage appreciation of the landscape by using the concept 'spatial quality' and by using the terms 'future value', 'use value' and 'amenity value' in their explanation of this concept. These values were first put in writing by Vitruvius in his *De architectura, as firmitas* (solidity), *utilitas* (usefulness) and *venustas* (beauty). In the 1997 (Dutch) translation (p. 38-39) these terms are defined as follows:

Future value (*firmitas*): 'Sustainability is safeguarded by laying deep enough foundations in solid ground and by a careful choice of building materials... without skimping on the costs.'

Use value (*utilitas*): '...requires the perfect distribution of the spaces without hindrance to the users, and a practical situation, adapted to the location that is the best for each type of room.'

Amenity value (*venustas*): 'External beauty has been taken into account if the work is attractive and graceful to the eye and the dimensions of the articulations rest on a correct calculation of balanced proportions.'

In the Fourth Memorandum on Spatial Planning (Ministry of Housing, Spatial Planning and the Environment, 1988), the terms 'future value', 'use value' and 'amenity value' were first used as governing principles for spatial quality. The content of the terms the then Ministry of Agriculture, Natura and Food Quality used to describe landscape values in, among other things, the Memorandum Landscape (1992), is very similar to that of Vitruvius's. The landscape had to:

- be ecologically valuable (naming the degree of variation, consistency and a good environmental quality);
- provide a good and sustainable economic-functional basis for the different forms of land use;
- be of aesthetic value (experience of its genesis, orientation possibilities and beauty).

The Netherlands Advisory Council of Housing, Spatial Planning and the Environment (VROM-raad) introduced its own version of this in 1998, notably four criteria for good spatial development: ecological sustainability, economic efficiency, social fairness and cultural identity (VROM-raad, 1998).

Most publications say that it is not possible to give an absolute, sound, objective definition of spatial quality. The VROM-raad (2011), for example,

wrote that this definition is location and challenge related. Hooimeijer et al. (2001) provide a framework for analysis to operationalise spatial quality that is based on three values (future, use and amenity value) compared to the four aspects of the VROM-raad from 1998 (Table 1). This framework for analysis is intended as a flexible framework for the accommodation of the different aspects of spatial quality. If required, it is up to users to adjust the matrix.

**Table 1: Analysis framework sustainable spatial quality (Hooimeijer et al., 2001, in VROM-raad, 2011)**

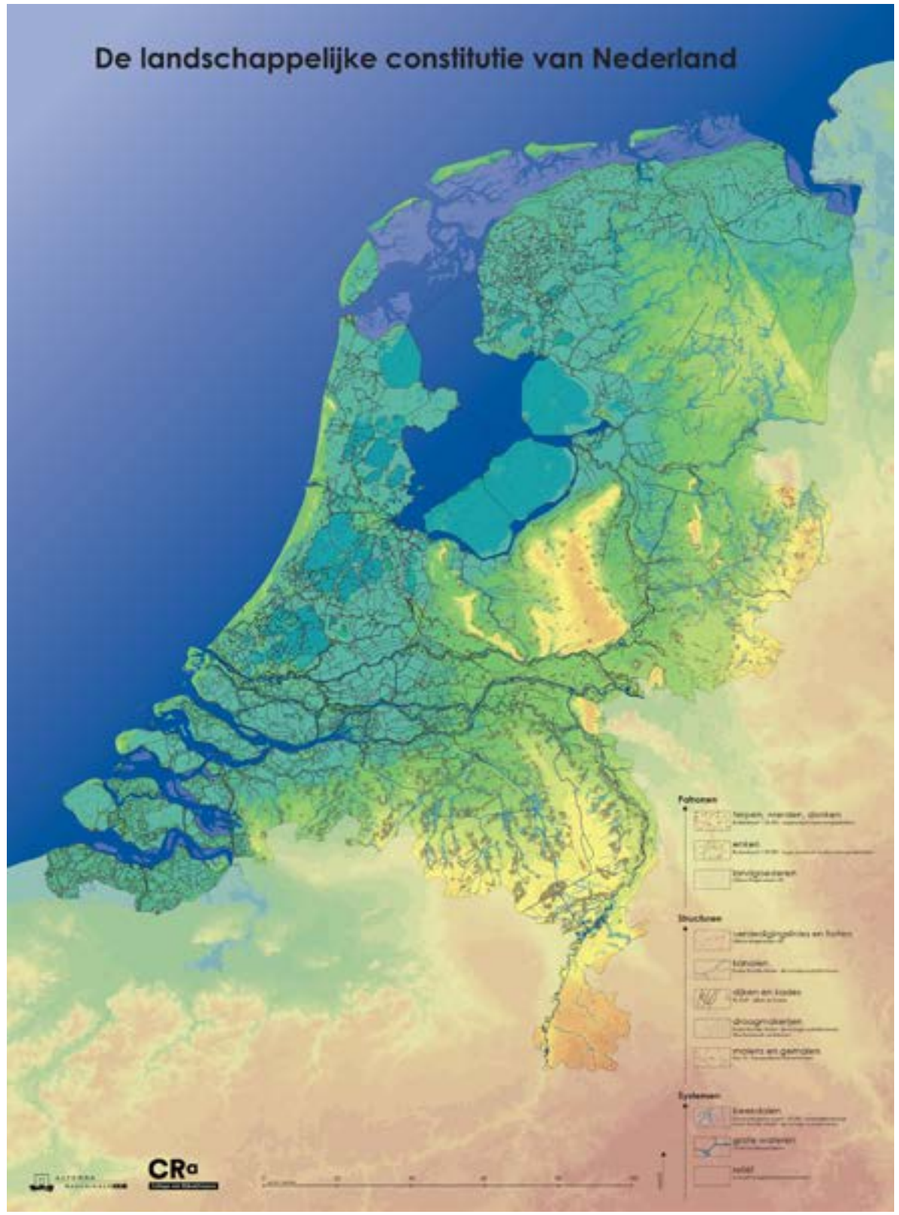
| **Analysis Framework Sustainable Spatial Quality** | | | |
|---|---|---|---|
| **Dimension** | Use Value | Amenity Value | Future Value |
| **Economic** | Allocation Efficiency<br>Accessibility<br>External effects<br>Multipurpose | Image<br>Appeal | Stability/Flexibility<br>Agglomeration<br>Cumulative appeal |
| **Social** | Access<br>Distribution<br>Participation<br>Choice | Inequality<br>Connectedness<br>Safety | Inclusiveness<br>'Cultures of Poverty' |
| **Ecological** | Safety, Hindrance<br>Pollution<br>Dehydration<br>Fragmentation | Space, tranquillity<br>Beauty<br>Health | Resources<br>Ecosystems |
| **Cultural** | Freedom of Choice<br>Variety<br>Encounter | Individuality<br>Beauty<br>Contrast | Heritage<br>Integration<br>Innovation |

In professional practice, it appears that the usefulness of these values for the assessment of spatial quality is limited. It remains difficult to attribute objective criteria to them, for example, and due to the political emphasis on 'hard' economic aspects, the amenity value in particular often remains underexposed. Moreover, amenity value is often interpreted too narrowly, that is: only from an aesthetic point of view (VROM-raad, 2011).

When we connect the concept 'landscape' with the concept system in Table 1, we see that every aspect is either found in the landscape, can be related to it, or is part of it. Yet the landscape is more than a context-dependent sum of a number of aspects. The landscape also represents the memories, expectations and associations people have, as was argued in Part 1. Moreover, the landscape is the synthesis of specific and location-dependent aspects in a certain area. Thus, the landscape is both more and less than spatial quality and the experience of people is not the same as amenity value. Amenity value is used in connection with spatial quality, whereas the broader concept of 'experience' is used for the experiences of residents.

The recently developed environmental and planning policy introduces yet another new concept: integrated spatial quality. This has been defined as a combination of spatial quality and environmental quality (CRa, 2015b). In addition, the concept 'integrated spatial quality' has a stronger focus on humans, plants and animals than the concepts 'spatial quality' and 'environmental quality'. After all, the environment is not autonomous, but can only be considered in connection with something or someone in the

**Figure 4: Constitution of the Dutch landscape (CRa, 2015a)**



space. In the end, what matters to the residents in an area is the quality of their immediate habitat (Witsen, 2015). The Government Advisor on Landscape and Water[4] odeveloped a national landscape fundament (see Figure 4) to stimulate 'a coherent approach to essential, national landscape systems, structures and patterns' (CRa, 2015a, p. 1).

## 3.3 Multiple Characteristics of the Landscape

Working on the quality of the landscape requires the recognition of the multiple characteristics of the landscape: long-term, uncertainties, multiple scales, organic development, ambiguity and subjectivity. And it is important to make the quality of the landscape, with all of these characteristics, manageable for strategy and planning processes. Below, the characteristics are discussed successively.

**The Landscape is a Long-term Issue**

Developments in the landscape often span decades and that is why it is not always clear today what will happen in the long term. Thinking about the future of the landscape, it is important to take this into account. Developments are uncertain and the impact of current developments is often visible only in the long term. One example is the slow but steady subsidence in peat areas. Adjustments are required in the short and medium term and the current agricultural use will not be possible anymore in the long term. The landscape development of today has to take such long-term developments into account. In practice, there is not always an opportunity to do so, especially because the economic costs and benefits of plan development have to be balanced in the short term.

> *'We will have to conceive and plan the new contours of the Netherlands on the basis of a long-term horizon and a pan-European analysis, not as a Pavlovian response to a disaster that has already happened, but proactively, to prevent the consequences of latent threats.' (Source: ZUS)*

**Uncertain Developments and the Landscape**

The pace of developments that impact the landscape are accelerating and uncertainties are becoming more substantial (Rowe, 1994; Millar et al., 2007). Unexpected events regularly put the landscape to the test, such as the unexpected floods in Limburg and De Betuwe in the 1990s and the sudden slide of the Veendijk in Wilnis in 2003. Therefore, concepts are needed that can deal with these uncertainties, such as adaptive planning concepts. One possible approach is to identify so-called breaking points (Kwadijk et al., 2010; Jeuken and Te Linde, 2011). Breaking points occur when current strategies are no longer adequate. It is often uncertain if and when a change will take place, but the definition of adaptation paths allows timely anticipation of these breaking points (Ministries of Infrastructure and the Environment and Economic Affairs, 2015). In addition, it is important to create sufficient space in the landscape, the budget and policies for unexpected events that may literally or figuratively require space. In Swarm Planning (2012), Roggema advocated the

4 As of 1 September 2016, this title was changed into 'Government Advisor on the Physical Habitat'.

'planning' of the unplanned space, which for example allows the spatial anticipation of the consequences of a flood despite the fact that it is uncertain when and where it will take place.

Breached dike in Wilnis, 2003

**The Multiple Scales of the Landscape**

The landscape does not respect administrative boundaries. The river landscape extends across several provinces and countries. A small neighbourhood park in the city is part of the city landscape that is part of a much larger regional (national or international) urban landscape. And a sandbank in the Wadden Sea or a dune area on one of the Wadden islands is part of the much larger Wadden landscape that stretches from the Netherlands via Germany to the Danish peninsula Skallingen. Many spatial developments and tasks have a transnational and integrated character as well and will therefore be addressed on multiple scale levels (Getimis, 2012). Developments on the scale of continents or countries have an impact on the local scale and vice versa. Therefore, rather than on a single scale or within static boundaries, the developments in the landscape always have to be considered in combination with the surroundings and at different scale levels.

**The Landscape as an Organic System**

Landscapes can be understood as organic systems that continuously adapt to change (Favis-Mortlock & De Boer, 2003). Landscapes are formed by nature and by people. Countless relationships exist within a landscape, for example socioeconomic networks, ecological relationships and historical connections. These relationships are dynamic and developments or consequences of interventions are difficult to predict.

**The Ambiguity and Subjectivity of the Landscape**

Professionals and residents or frequent visitors look at the same landscape in different ways. Both ways of looking are subjective by definition.

From a disciplinary angle Doherty (2015), for example, distinguishes 15 possible approaches to the landscape, including literature, painting, ecology, urban development, technology, history, philosophy and landscape architecture. The discipline, the affinity and the task at hand in a

specific location may cause differences in the professional's assessments. The landscape is clearly an ambiguous research and design subject.

The landscape has different, subjective, but also multiple meanings to residents or visitors (Scott, 2002; Sullivan, 1994; Aoki, 1999). They are often emotionally connected with the landscape, for example because they grew up in it, had experiences in it and associate it with memories. The same landscape will evoke a different set of memories and emotions in different people. Moreover, people look at the landscape in a culturally determined way and therefore their perception of a landscape changes over time: things people considered ugly in the past may have become cultural heritage by now.

The ambiguity of the landscape

**Making Multiple Characteristic Manageable in Strategy Development and Planning Processes**

Planning processes require shared key values with respect to the quality of the landscape. Key values that combine the subjective perception of quality with its professional valuation (Hooimeijer, 2001), so they can be used as the public values of the landscape. This combination can only be achieved in a dialogue with the residents and visitors of a landscape. In the current era, which focuses on transparent objectives and calculable targets, this is difficult to achieve.

*'A good relationship between people and the landscape is essential for the future.' (Source: team Groningen)*

The sharing of values, local area session Westland

Not all of the public values of the landscape can be measured and described in an environmental impact assessment report or in a social cost-benefit analysis (Sijmons & Feddes, 2002; CRa, 2014). The Commission for Environmental Assessment (Commissie voor de milieueffectrapportage) evaluates the effects of plans on, among other things, landscape values and examines new ways to use the values of the landscape to stimulate, rather than hinder, its qualitative development (Commissie m.e.r., 2016). For its assessment, the Commission uses the landscape values that some municipalities and regions include in so-called landscape development plans. However, these landscape values do not always have a formal status and are based on the connection between ecology, economy and aesthetics without discussing the subjective appreciation of residents.

A good plan is a plan that is supported by – or even drawn up by and with – the residents and visitors of a landscape. The shared appreciation of that landscape produces a shared view within a particular area (see reports of local area sessions in the Westland and in De Ronde Venen, Appendix 1). Residents are more than able to help think about changes in a landscape, they are self-reliant and enterprising, and they do not insist on the conservation of the existing landscape. Residents are not a conservative force by definition. Their connectedness with the landscape can be used in a positive way by involving them in the discussion of future developments at an early stage; this will improve the plans.

The landscape is a shared and living heritage; people have been working on it for thousands of years and it will need work in the future as well. The landscape can be the medium that makes it possible to launch a discussion about things that are difficult to measure, such as meaning, beauty, emotion and cultural value, and to integrate the values people experience in connection with the landscape with plan development. The characteristics of a landscape in transition have similarities with steering mechanisms that are commonly used in transition management (Loorbach, 2010), see Table 2.

**Table 2: Characteristics of the landscape and of transitions**

| Characteristics of the landscape | Characteristics of transition management |
|---|---|
| Subjective | Co-creation |
| Ambiguous | Integrated |
| Organic | Development-oriented |
| Long-term | Designing |
| Uncertain | Experimental |
| Multiple Scales | Across Scales |

4

# GOVERNING THE LANDSCAPE

In Part 1, Chapter 2, the Council argues that the central government, as a major initiator of sustainability transitions, has a responsibility towards the landscape. This Chapter discusses two key issues from the main message of the advisory report: starting a dialogue (Section 4.2) and the use of the design approach (Section 4.3) and provides several practical examples. First, in Section 4.1, it discusses the question of why the central government has to play a part at all.

## 4.1 The Role of Government in the Landscape

The central government has formulated aspirations for a number of major sustainability transitions (Rli, 2016a; Ministry of Infrastructure and the Environment, 2015b). Particularly the aspirations in the policy fields of the Ministries of Infrastructure and the Environment and Economic Affairs, such as water safety measures, the transition to a sustainable agriculture or the transition to renewable energy, may lead to radical changes in the landscape. The government has a responsibility to give shape and form to these aspirations in such a manner that the quality of the landscape improves, or at least does not deteriorate. Once the government, as the initiator of concrete projects, is active as a player, it has a duty of care towards the landscape (as described in Part 1). Moreover, if its substantive aspirations are not embedded in governance with respect to landscape development and in popular support, there is a risk that they will not be achieved.

Although the new environmental and planning policy has not yet defined a management philosophy or toolbox for governance aimed at the quality of the landscape, the new system does provide a framework for its development. Steering towards the quality of the landscape is essentially a cultural task that allows the use of different management philosophies that depend on, among other things, the type of development and on time, scale and location factors.

*'The central government is responsible for safety, accessibility and ecological resilience. In addition, the central government is expected to produce a strategy on spatial quality and economic competitive strength.' (Source: Bosch Slabbers/VenhoevenCS).*

*'Coordination and harmonisation have not been (exclusively) happening top-down for a long time now, they are increasingly a co-production of the central government, citizens, businesses and social organisations. It is in this arena that the challenge to jointly reinvent the rules of the game while it is simultaneously being played is met.' (Source: column Bart de Zwart, lecturer Brainport, Team Eindhoven)*

*'A sustainable approach of the landscape requires a new administrative logic that is based on the landscape.' (Source: karres+brands)*

## 4.2 Governing the Landscape: The Dialogue

The dialogue with residents is a crucial part of steering towards the quality of the landscape. The new environmental and planning policy emphatically focuses on the early consultation of residents. At the same time, the Environment and Planning Act creates opportunities to flesh out this consultation in different ways: for example, to limit it to participation in concrete initiatives or to consultation of stakeholders to discuss potential conflicts of (sectoral) interests (Van den Broek et al., 2016).

Perception of the landscape is a good angle for the discussion of change in the landscape with the residents of an area and with frequent visitors and users of the landscape. They have knowledge of the landscape's past and present and they have expectations of the future. In addition to the data professional tools can collect, the input of residents is important because the quality of the landscape is a subjective concept. Addressing this knowledge in an open discussion can result in shared landscape values.

*'It was a wonderful discussion in which different generations talked about changes in the landscape over the years and about their affectionate connection with that landscape.' (Source: report Local Area Session De Ronde Venen)*

*'The discussion gave the Rli committee a good impression of the close connection between the Westland people and their environment and of the sense of community that is so characteristic of the area. But also of the concerns about the disappearance of valuable sites and the inevitability of social and technological change.' (Source: report Local Area Session Westland)*

Local area session De Ronde Venen

**Added Value of the Dialogue: The Council's Experiences**

The value of a dialogue transcends that of merely collecting and sharing knowledge and information: a dialogue also sets something in motion. A discussion creates knowledge, a common language and a shared

understanding of important key values and leading design principles that pertain to changes in the landscape. Discussion not only aims to converge or to create support, it above all aims to increase joint and mutual understanding. Thus, it provides a basis for the extension of the problem-solving power of governments and society with respect to complex issues in the landscape. A good way to foster dialogue is to use the design approach and repeatedly (iteratively) submit syntheses and designs to residents.

In the context of this advisory process, the Council has talked about the landscape with the residents of two areas: De Ronde Venen and the Westland (see Appendix 1). The participants were invited to discuss their appreciation of the changing landscape with the RIi. Nearly all participants were local residents and they represented different generations. The ages of the participants ranged from 17 to 80 years old. Looking back and looking ahead at changes in the landscape, it was possible to cover a period of no less than 100 years. The assessment of the landscape from the perspective of different generations inspired a discussion about quality care in a changing landscape. In advance, all participants received a landscape analysis of the area as well as an overview of trends and challenges. During the discussion and during a tour of the area, the participants shared valued sites with each other.


Local area session Westland

The concerns about and assessment of future changes obviously differed within the groups, but the dividing lines were not sharp and participants saw a lot of possibilities to jointly choose a direction. Sharing the experience and appreciation of the landscape also increased people's understanding of each other's positions. The participants had a very open attitude, unencumbered by preconceived opinions or predetermined positions, which sometimes occurs in dialogues within the framework of a municipal or area-based planning process. The area sessions demonstrated that having people share stories about the values

they experience in the landscape can be an important basis for the establishment of key landscape values and leading design principles in relation to future developments and social challenges. These discussions can take place even when there is no clear reason to do so, in the absence of a prospective planning process and even if it is not the build-up to the start of a planning process.

During the discussion, ideas arose about joint action to help address challenges and changes in the landscape. For example, during the discussion ideas were shared about co-ownership in regard to nature maintenance or energy production. Residents help shape the landscape and they maintain it in other ways than, for example, farmers that work the land or recreation entrepreneurs and other private organisations that maintain nature and the landscape. The discussions furthermore created an understanding of the forces involved in changes in the landscape. For example, how existing dwellings in the coastal municipalities are being turned into second homes of (foreign) tourists, what this change means to the social community and, indirectly, to the maintenance and management of the landscape.

*'Concerns about and appreciation of future changes naturally diverge within the group. But the dividing lines are not sharp and participants say they see a lot of options to jointly choose a direction. Sharing stories about the values that everyone experiences in the landscape formed an important basis.' (Source: report area session De Ronde Venen).*

**Dutch Examples of Discussions with Citizens about the Landscape**

In practice, the Council has found different examples of such dialogues, some of them older, that play or did play a prominent part in the development of strategies and plans. For example, the discussions with residents and involved organisation in the preparations of plans for Leidsche Rijn[5]. In addition, there are recent examples of regions organising dialogues with citizens in the context of environmental and planning strategies, such as Planet Texel, Flevoland and Leiden and the surrounding municipalities (see Text Box 5).

**Text Box 5: Examples of Dialogues with Citizens**

**Case Planet Texel**

The Planet Texel project is one of the Project Ateliers organised as part of the International Architecture Biennale Rotterdam (IABR) 2014. Planet Texel (Gemeente Texel, 2014) is the environmental and planning strategy *avant la lettre* that followed Texel's aesthetic master plan (municipality of Texel & la4sale, 2012). This aesthetic master plan formalised the key values for the island of Texel as formulated by a group of citizens, united in the Task Force Key Values Texel in 2011. The key values serve as the starting point for spatial developments in the island's rural area. The key values are: tranquillity and space, a wealth of natural and man-made landscapes, a large variety of landscapes and land uses, Texel identity, specific island character, nocturnal darkness and maritime monuments.

5 Source: interview Rli with Riek Bakker and Dick Boogaard, 2016

In Planet Texel, these key values were used to create prospects that were described as aspirations or beckoning perspectives and then introduced in the discussion with residents. Central to the Project Atelier was the question of how the sustainability aspirations of the municipality could be combined with the fact that the (increased) attractiveness of the landscape was the basis for the touristic product 'Texel'. The designing of the prospects ran analogous to many discussions with resident groups, the 'smaaktesttexel.nl' and Texel Talks. The Texel Talks comprised the gathering of the opinions of people on Texel, including tourists, by inviting them to vent their ideas and opinions about Texel, sustainability, beauty and landscapes on camera in an oversized 'T'. The smaaktesttexel.nl asked residents and visitors of Texel on the ferry to give their opinions about the value of different images of Texel and of reference images and edited images. Every image was graded from 1 to 10 and the average of all of the grades said sometime about the appreciation of that image. On the basis of these numbers, the Texel Principles were formulated, which can be used for an initiative, plan or design.

The principles are: start from nature and the landscape, combine beauty with beauty, go for real Texel and Texel's own, move along with the seasons, clean up and revitalise, cherish unity in diversity, and continue to beach comb, pioneer and innovate. The principles are a translation of spatial and environmental aspects into landscape-related terms. It is a collection of interventions, objects, actions and aspirations that can be transformed into concrete projects. In the Texel Toolbox, these principles have been translated into landscape-related terms (*re-wetting, re-leafing, de-rooming, de-hardening, innovating, re-naturalising, softening, de-signing, darkening and moving along*) and architectural building blocks (*Texel bicycle shed, Texel caravans, Texel units, Viewmaster, Glassbarn, Energy tarps and pergolas, Energy-producing verandas, dismantlable greenhouses and iconic letters*). This Toolbox is the product of its age by definition and can change over time.

**Case Flevoland**

The Province of Flevoland started to draw up an integrated environmental and planning strategy in 2015. The province decided to use the invitational planning approach and wanted to realise the strategy in three phases in collaboration with its environment (Provincie Flevoland, 2015):

1. Atelier Flevo Perspectives
2. Environmental Strategy
3. Regional Social Tasks

The first phase explores trends and developments. The province furthermore specifically wants to address what is going on in the province, in organisations, governments, experts, entrepreneurs and individuals. The result is a range of possible developments for Flevoland, and insight into which organisations or individuals would commit themselves to developing them. In this first phase, interviews took place about the future of Flevoland, 'with experts from inside and outside Flevoland,

with committed amateurs, with farmers, city and country people, with entrepreneurs, freelancers, social organisations, governments and private individuals' (Provincie Flevoland, 2016a). There is also an online platform where anyone can join in the conversation, and the Atelier went on a tour of prominent places in the province to gather input.

The Atelier initially explored the challenges together with experts and professionals inside and outside the province. The findings (major challenges) were presented during a broad public session (April 2015). Then followed an exploration of the way citizens and entrepreneurs in Flevoland received those findings, through 'meetups' in the libraries of six municipalities in Flevoland, and by approaching people directly. In this context, the Atelier tried to approach 'unusual suspects' as well. The 'Flevo Perspectives' and the responses of residents and organisations to those perspectives were subsequently presented to all interested parties. Next, Provinciale Staten determined which of the strategic main challenges would be further developed by the province in collaboration with the involved parties after the summer of 2016 (Provincie Flevoland, 2016b).

The second phase included drawing up the formal environmental and planning strategy that comprised, among other things, the social tasks from the Flevo Perspectives that the province will take on in collaboration with partners. In phase three, the province wants to 'harvest': translate the social challenges and possible solutions in effective implementation in collaboration with partners. The joint commitment and aspiration are, for example, laid down in an administrative agreement (Provincie Flevoland, 2015).

**Case Leiden and the Surrounding Municipalities**

Around Leiden, ten municipalities are jointly working on an Environmental and Planning Strategy 2040. As a prelude to this strategy, an interactive process took place in 2014 to lay down the shared values of these municipalities in their 'Manifest for the Metropolitan Area Leiden' (Vereniging Deltametropool, 2014). These values are the basis for the formulation of objectives for the entire region. The values are: open, beautiful, complete and strong. Open in the sense of an approachable and accessible area. An attractive area to stay in, live in, work in and recreate in, with 'beautiful' defined by beauty, attractiveness and safety. A complete region with a comprehensive package of economic, social and cultural activities. A strong area in all of its facets, big to small: collaboration is paramount, hierarchy retreats into the background. These values initiated the description of the challenges that the region will face in the future.

Next, the Rijnlands Architectuur Platform started retrieving ideas among residents of the region in a small-scale study (Rijnlands Architectuurplatform, 2015). It organised discussions with residents about issues that the region faces and that need a place on this spatial agenda. It made a distinction between discussions with 'ordinary' citizens and local professional 'space makers'. The subjects of discussion were the spatial consequences (in the region) of social

developments such as aging, the energy transition, technological developments and new networks in society. The outcome is a number of recurring themes.

The discussions with residents were held in four sessions of each about ten people; the subject of discussion being the meaning of six social trends (vitality, diversity, natural capital, care, connection and DIY). Participants answered four questions about those trends: What do you want to preserve? What do you want to end? What has to change? And What needs to be developed? In conclusion, the participants described their personal vision of the future.

Local 'space makers' were asked to help translate the knowledge and ideas of the residents into the language of professional planners and policymakers. Forty people accepted the invitation, from architects to energy experts and developers. The result was an 'order list' of objectives the strategy should include, with 'orders' for the development process and for the mutual relations in the coming years.

From this, recurring themes were distilled about the What (content strategy), the Who (forces involved) and the How (process and form):

- What: movement and dynamics necessary, sustainability and conservation of green, connecting, local if possible, regional if necessary.
- Who: constant interaction necessary to ensure profitability of social capital, participants want to stay involved.
- How: learning capacity is central, strategy not a final image but a platform.

**International Examples of Dialogues at a National or Supraregional Scale**

At the regional and local scale level, the dialogue with citizens is far from commonplace, but there are various examples known (as demonstrated by the examples in Text Box 5). There's not a lot of experience with this on a national scale, which is why the Council recommends that experiments be conducted. Internationally, there are examples of dialogues that closely involved the citizens in the formulation of shared values with respect to changes in the landscape on a higher scale level (see Text Box 6).

**Text Box 6: International Examples of Dialogues at a National or Supraregional Scale**

**Future Melbourne 2026**

Future Melbourne 2026 is a strategic plan for long-term developments with a spatial impact on the urban landscape of Melbourne (some 4 million inhabitants), on the suburban areas and on the landscape of the rural area around the city. The population of the area is explicitly involved in producing ideas and establishing priorities.

Anyone that wanted to do so, either from inside or outside the city, could contribute an idea or comment for the future of Melbourne for two months (February and March 2016) through the 'online engagement hub' (City of Melbourne, 2016). During these two months, a series of events to encourage discussion and the creation of ideas was organised as well. The events ranged from workshops, discussions and debates, breakfast sessions and fora to a children's republic, a city hack and so on. The subjects were widely varied: digital infrastructure, how do we build the city, creativity, climate change, water, diversity, an 'honest' city, a child-friendly city and so on. The events were attended by, among others, developers, citizens, children, students and communities (Capire, 2016). In advance, six goals had been presented about which people could contribute ideas: a city for the people, a creative city, an affluent city, a knowledge city, an eco-city and a connected city. It was also possible to contribute ideas that fell outside these categories. In total, more than 4,500 ideas were submitted.

Six independent ambassadors were appointed to monitor the society's aspirations and priorities and to safeguard their proper embedding in the plans. The ambassadors reported their findings to all parties involved after the publication of the concept Plan Melbourne.

Priorities were set for each goal. These together with the responses of governments and interests groups subsequently formed input for the development of the report 'Future Melbourne 2026: Bringing your ideas together' (Global Research, 2016), which was assessed by a civilian jury of 60 randomly selected residents of Melbourne that, guided by the ambassadors, had to reach a decision about which objectives and principles would eventually (in August 2016) become part of the government plan.

**Rebuild by Design – New York**

The Rebuild by Design project (Bisker et al., 2015) was set up after hurricane Sandy flooded and destroyed parts of New York (state) in 2012. In addition to reconstruction plans for the affected areas in New York, the project comprised the launch of a process that involved many of the residents of New York: a total of 585 organisations and 181 government departments.

The Rebuild by Design project consists of four phases. First, participants concluded that the problem was a complex one, a task force was installed and possibilities for philanthropic support were explored. This was followed by a global call to designers, who were invited, challenged and selected to participate in the project. The ten interdisciplinary teams that were picked had to be able to work on physical and social vulnerabilities. The central government financed the implementation of the final designs and private parties raised cash prizes for the winning design teams.

The second phase focused on research into vulnerabilities and into opportunities to become resilient. The teams carried out intensive field work for three months, getting to know local parties and residents to

create a shared understanding of the effects of the storm and the buried problems that it had uncovered. The research teams worked together, they attended seminars and lectures, criticised each other's designs and spent a lot of time getting to know locations and communities. The result of this phase was a presentation by each of the teams of about three to five design concepts and a compilation of the research results.

In the third phase, the designs were made. For this purpose, the design teams organised a coalition that included stakeholders and residents that engaged in four months of co-design. During round-table discussions, community workshops, charrettes or design workshops (see Text Box 8) and other encounters, the designs were further refined into widely supported designs that would be able to deal with possible disaster (*resilience*) as well as improve daily life. After a final public presentation, the designs were judged by a jury.

Implementation is taking place in the fourth phase, which is ongoing. First, the funding necessary for the implementation is being organised. The central government has set strict rules to safeguard the involvement of the population in the implementation phase as well. In this phase, the teams will continue to work with governments and residents to fine-tune the designs. The region will become more resilient once the implementation has started.

## 4.3 Governing the Landscape: The Design Approach

In Part 1, the Council recommends the use of the design approach for drawing up environmental and planning strategies and sectoral plans, because this approach eases the spatial translation of challenges. This Section explains the design approach and includes some examples.

In the Action Agenda Architecture and Spatial Design (Tweede Kamer, 2012c), the central government focuses on the strengthening of the position of design (see Text Box 7). The increasing complexity and urgency of tasks, such as the sustainability transitions, require changed roles and processes. The strength of design is its capacity to connect values, visualise different solutions and make 'discoveries': creative solutions for complex spatial problems. In this way, design contributes to a better and faster process. Thus, the problem-solving power increases in different ways (Tweede Kamer, 2012c). The Board of Government Advisors (CRa) recommended that the Netherlands Enterprise Agency (RVO) establish an Atelier Groene Groei (Green Growth) to encourage the transition to a strong, sustainable delta, 'by engaging in a dialogue in concrete areas, with the support of research by design' (CRa, 2016, p.3).

In Part 1, the Council emphasises the value of the design approach as a work process, which does not necessarily start with or result in an actual design. Thus, it is not the intention to have a designer withdraw and, after some kind of autonomous process, come up with a plan on the basis of a brief. But design can help processes along in various phases. It creates an awareness of a wider range of possible solutions

and allows more opportunities to be seized to develop the quality of the landscape and the creation of more support. The connective and visualising strength of design must be used in collaboration with the commissioners, professionals and residents in an area. This can occur in various relationships and to various degrees: from residents that make designs for their area under the supervision of designers, to a minimalistic approach involving commissioners that direct designers and only discuss the challenge and the outcome with residents at the beginning and at the end of the process.

**Text Box 7: Action Agenda Architecture and Spatial Design (AARO)**

The AARO reflects the contribution of (architecture and) spatial design to spatial and cultural developments and to the reinforcement of our international economic position (Tweede Kamer, 2012c). In the AARO, the central government describes its role as consisting of:

- Excellent commissionership (MIRT, Rijksvastgoedportefeuille [Central Government Real Estate Portfolio], Uitvoeringsprogramma Visie erfgoed en ruimte [Implementation Programme Strategy for Heritage and Spatial Planning]), early involvement of design and designers in its own (policy) processes.
- Excellent projects through a design dialogue in 'Atelier Making Projects'. Programmatic approach directed towards innovative design concepts and concrete implementation perspectives.
- Continuation of the Board of Government Advisors (CRa) to safeguard knowledge and independent advice for national tasks and central government projects.

In addition, the AARO lists action aimed at garnering more attention for design challenges and strengthening local and regional design quality and power:

- Compact cultural basic infrastructure: a single promotion fund and a single institute that complementarily support and encourage the design disciplines architecture, design and e-culture (electronic culture).
- Programmatic development and sharing of knowledge within three innovative design tasks: Care and School Building, City and Region, and Urban Transformation.
- Innovation in roles and processes. Approach focused on the transference of knowledge, (international) visibility of our design sector and timely anticipation of opportunities and effects of new environmental and planning law. Excellent commissionership will be spotlighted through the introduction of a National Award for Inspiring Commissionership (the 'Golden Pyramid') and the Scholenbouwprijs (School Building Award).
- The network programme Design Education and the establishment of the Chair of Design and Government strengthen the connection between education, research and government.

Research by design can be an important part of the design approach in various phases of the process (see Text Box 8).

**Text Box 8: Research by Design**

Research by design is increasingly recognised as a third method of knowledge production, in addition to the natural sciences and the humanities (Cross, 1982). The approach uses a unique combination of model-making, pattern recognition and synthesis. It is applicable in both the exploration of the past and the present and it is also a way to investigate the future (Salewski, 2012). For example in competitions, such as the regional competitions of the Eo Wijers foundation (De Jonge, 2008, 2016), the foundation Nederland Nu als Ontwerp (NNAO) (Van der Cammen, 1987), in the dialogue between politics and plan development (Hajer et al., 2006) and (inter)nationally in the IABR Project Ateliers (Sijmons, 2016).

Research by design can be part of the design approach. Research by design uses the creation of a design to examine its effects on the surroundings. Multiple design options can thus be tested for the degree to which the design addresses the challenge and for the impact the different designs have on the quality of the landscape.

The Challenge Landscape 2070 (Appendix 1) has provided the Council with an understanding of the added value the design approach can have. The Challenge mainly shows the creative, exploratory, innovative qualities of the design approach. In addition, various examples show how the design approach can function as an integrating mechanism between residents, stakeholders and the commissioner (see Text Box 9).

Delta landscape, ZUS, Challenge Landscape 2070

*'To properly flourish, a knowledge region has to focus on a stable, regional basis structure, a good connection with the network of knowledge cities, a high quality of life, an open and accessible knowledge structure, some urban mass and diversity as well as a balanced social development.' (Source: LOLA)*

*'Our region will have to commit to finding a sustainable equilibrium and to making smart use of continued knowledge development combined with quality cultural interaction.' (Source: OKRA)*

*'The gold of the future is fresh water.' (Source: ZUS)*

**Text Box 9: Design Workshops**

Design workshops or design charrettes come in many different shapes. Crucial elements are residents that are committed in any way at all and a work method that is oriented towards a clear deadline by which results have to be presented.

Some charrettes have little room for residents, for example the charrettes organised in the context of the three northern provinces' project Grounds for Change in which mainly experts addressed the spatial consequences of the sustainable energy supply (Roggema, 2013). The Dienst Landelijk Gebied (Rural Area Department, DLG) also organised multi-day design workshops (so-called sketching barges) in the context of, among other things, land consolidation projects of which the participants were mostly experts, administrators and stakeholders (DLG, 2004, 2006).

Other charrettes make more room for residents willing to co-design the tasks at hand and fully participate in the charrette. For example, the design charrettes held as part of the project 'Design-led Decision Support for Regional Climate Change' in Victoria, Australia (Roggema, 2013; Arcari et al., 2013). In this charrette, residents and other stakeholders examined the question of what a climate-proof future could look like. This happened in, among others, design charrettes in Sea Lake and Bendigo (Australia) that involved participants from the sciences, from administration and from the business community in a number of design sessions. What made this special were the mixed ages of the participants, ranging from 10 to 70 years old. In advance, everyone received a design brief comprising landscape analyses, existing policy, current challenges and practical information about the charrette.

During the first session, experts and/or policymakers explained the challenge. Presentations inspired the participants to create ideas and designs for the sustainable future of their own local environment. The first active sessions consisted of a retrospective of events that took place in the past and caused the current status of the location, and a discussion of participant's expectations of the (distant) future, looking back 30 years and looking ahead 30 years. During a second design session, participants were asked to outline their futures on large maps, on different scale levels. During a third and final session, participants were asked to visualise their future three-dimensionally using coloured clay. The charrette was concluded by a presentation of the results to a select group of decision makers. The end result of these charrettes comprised a number of design proposals for the involved municipality/location, putting forward solutions for (in this case) a climate-proof future of their own environment that had the support of the population.

Another project in which design workshops play an important part is Rebuild by Design in New York (see Text Box 6).

The Ruimte voor de Rivier (Room for the River) project illustrates how work on the (river) landscape and on spatial quality, from initiative to completion, can go hand in hand (see Text Box 10). The local and integrated approach to this major sectoral project couples ambitious commissionership at the local level with major challenges at the national level. It is an example of how a transition challenge (water safety in a changing climate) can result in a new, valuable landscape.

**Text Box 10: The process of Ruimte voor de Rivier: Interlacing Objectives, Governments and Stakeholders from the Beginning**

The Ruimte voor de Rivier (Room for the River) programme (operational since 2007) had a double objective: the improvement of both water safety and spatial quality. This double objective required an integrated approach from the beginning (Wessels, s.a.). This is why even during the process of developing the Planologische Kernbeslissing (PKB Key Planning Decision) in late 2001-2006, the collaboration between the then Ministries of Transport and Public Works and Housing, Spatial Planning and the Environment, the Atelier Chief Government Architect and central project organisations and local governments received due attention.

At the beginning of Ruimte voor de Rivier, Rijkswaterstaat went through the entire river area with a fine-toothed comb to identify potential measures from different perspectives. They found a total of 600 of them. At the national level, the government had to make fundamental choices about 'Ruimte voor de Rivier' that would have a major impact on the spatial development of the Netherlands. It therefore developed a long-term strategy in the context of the MER study Ruimte voor de Rivier; the designed strategies of the future made a major contribution to this process (Projectorganisatie Ruimte voor de Rivier, 2003). A thematic intermediate design step was taken to assess whether the proposed measures could have the desired effect. Once affirmative answers were in, Rijkswaterstaat conferred with the municipalities, provinces, polder districts and water boards to gauge which measures could count on support from these governments and which measures potentially dovetailed with local initiatives. With the help of administrative consultation and design sessions with focus groups, this process resulted in a selection of 37 (ultimaltely 32) projects for the Ruimte voor de Rivier programme. After the decision-making, they became part of the PKB. The focus groups mainly consisted of interest groups. Residents could join in the discussion, but they were usually only consulted once the selected projects were developed further. It is especially the public-public collaboration that is considered innovative, for example the intertwining of central and local governments and of central knowledge and local needs (Ten Heuvelhof et al., 2007).

The projects were subsequently finalised in administrative contracts. These stipulated that minor governments were responsible for the realisation of most of the projects. They received a generous budget for a certain period of time. The central government decided on the

conditions (safety objectives, time and money) and gave the region a clear field for the implementation. Regional and local governments (provinces, water boards and municipalities) were appointed the initiators; they conceived the plans in collaboration with residents and businesses and implemented the plans themselves whenever possible. The central government monitored the progress and established a multidisciplinary Q-team (Klijn et al., 2013). The Q-team, the quality team Ruimte voor de Rivier, was a team of independent experts. The Q-team regularly visited the projects and consulted with the project organisations, designers, governments, developers and other stakeholders about the spatial quality of proposed solutions. The objective was to incrementally improve the quality of the spatial design and to ensure that the design would make a contribution to the water safety; to encourage an integrated approach and to use time and money efficiently. The central government's final budget allocation partly depended on a positive advice of the Q-team about spatial quality. The work area of the Q-team was later extended to include the completion of the projects.

The above-described work method led to better plans, more support and hence less risk of delay (Hulsker et al., 2011). In the projects, work on spatial quality was and is being done by using a wide range of tools. It is important, for instance, that the commissioner and commissionnee's project leaders have feeling for integrated design and it is essential that the spatial designer is carefully selected and that an integrated team co-designs the challenges. In addition, spatial quality frameworks of projects, aspiration documents and aesthetic master plans function as the recurring themes that guide the designs. Project organisations and the designers of individual projects explored each river branch to ensure they would be familiar with the context. Strong directing from the higher scale level countered a too detailed and too-conservative approach at the local level (Hulsker et al., 2011).

The participatory involvement of interest groups and residents was set up on time and used strategically, participants had the opportunity to actually influence the process and the process was transparent about expectations of eventual decision-making and the realisation of specific components (Ruimte voor de Rivier, 2015). The contacts with residents and visitors went through the environment managers.

Explicitly stating spatial quality as a second objective has led to an efficient work method that has substantiated the quality of the designs in a dialogue among governments, stakeholders and experts. The local approach in which the initiator of spatial measures is a municipality, province or water board, worked and led to good results (Van Twist et al., 2011). Working in an integrated manner and focusing on quality not only meant more attention for the spatial quality of the projects, it turned out that many projects could be realised faster and cheaper as well (Sijmons, 2012).

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# APPENDICES

# 1 LOCAL AREA SESSIONS AND CHALLENGE LANDSCAPE 2070

For this advisory report on the changing of the landscape in the distant future, the Council for the Environment and Infrastructure sought the input of various parties. In two areas, the Council engaged in discussions with residents about their appreciation of the changing landscape. In addition, the Council organised a Challenge for design offices and educational institutions about the landscape of the future, asking them to look ahead some 50 years.

**Local Area Sessions**

During the local area sessions, residents of De Ronde Venen and the Westland looked back at developments in the landscape from 1950 until today and looked ahead to 2070 in two separate meetings. Looking back gives insight into how the landscape changed in a few generations and supports the exploration of future changes in the landscape. Looking back, the discussion focused on what the residents appreciate in the landscape in their area (a site, certain characteristics), on how the landscape changed and on aspects of the landscape that are important to them. Looking

ahead, the discussion focused on the question what aspects of the changing landscape have to be conserved to ensure people will continue to feel connected with the landscape.

The areas were picked because they are expected to change a lot in the coming years and because they face major sustainability challenges. The two areas are also very different. The participants received background information in advance, including a landscape analysis of the area and an analysis of future trends and challenges. Participants in the meeting had different backgrounds and were from different generations: the youngest participant was 17, the oldest about 80 years old. All lived in the area: some were born and raised there, others had lived there for decades.


Report of the area session De Ronde Venen
Report of the area session Westland

**Challenge Landscape 2070**

For the Challenge Landscape 2070, the Council invited educational institutions and design offices for landscape and urban development to give their views on developments and uncertainties that will determine the landscape in 2070 and about the role governments can and should play. Ten teams (three educational institutions with interdisciplinary student teams and seven design offices) have presented their results to the committee.

The Council thus received a rich contribution from the designing disciplines for its advice. Both young talent (students, young offices) and teams with broad experience in the design of city and countryside participated. At the request of the Council, the student teams also combined various disciplines including landscape architecture, architecture, planning and social psychology. Unexpected alliances were created, such as that between Eindhoven University of Technology, the Design Academy Eindhoven and Fontys University that worked on the Rijk van Dommel en Aa area.

Questions the participants were asked in advance:

1. Choose an area that is expected to change a lot in the coming years on account of developments that will change the landscape (‘driving forces’).

2. Analyse these ‘driving forces’ and outline how this area will develop under the influence of the abovementioned ‘driving forces’.
3. Design a maximum of two strategic interventions with the intention to enhance the quality of the landscape in the area.
4. Project the impact of the two interventions on the landscape.
   And describe the impact of these interventions on the continuous development of the landscape and the uncertainties this involves. Who plays what role?

The contributions of the teams (compilation videos, presentations and background documents) can be found on the Rli website.

**Academy of Architecture Groningen with the Master’s Programme Planning, Landscape History and Social (Environmental) Psychology:**
**Nederland 2070 – Neem het met een korreltje zout (Netherlands 2070 – Take it with a Grain of Salt)**
Area: The northern Netherlands
Message: The northern Netherlands are undergoing many changes: sea level rise, salinisation and aging of the population. The Dutch government has to shift with those changes, rather than resist them. This centres on the people. The people need the landscape, they take, but they also have to give something in return, live in symbiosis with, rather than deplete the landscape. Collaboration and networking are key concepts: the people in an area experience problems, they deliberate together, make a plan and think about the way that plan relates to the landscape. They know what is happening in the area best, they know where the opportunities for the future lie. Designers can support this process.

Compilation Video ‘Nederland 2070 – Neem het met een korreltje zout’
Presentation ‘Nederland 2070 – Neem het met een korreltje zout’
Background Document ‘Nederland 2070 – Neem het met een korreltje zout’

**Bosch Slabbers Garden and Landscape Architects with VenhoevenCS architecture+urbanism:**
**Landschap 2070 – ontwikkelen van kwaliteit (Landscape 2070 - Developing Quality)**
Area: All of the Netherlands
Message: The Netherlands is facing major challenges – climate change, demographic developments, tension globalisation-localisation, mobility issues – and needs resilience to meet them. We have to use the changes to add quality and partly reinvent our landscape, with more room for experiments. The main principles are: enhancing spatial diversity; getting along with the system; no healthy economy without a healthy ecosystem; reduction of $CO_2$ emissions and enhancing international competitiveness (sufficient critical mass, agglomeration effect and room for innovation). The landscape has to be richer in contrasts: between highly dynamic and less dynamic regions, between tranquillity and liveliness. Necessary are: perseverant invitational planning, and a directing central government that generates the conditions for co-creation.

Compilation Video ‘Landschap 2070 – ontwikkelen van kwaliteit’
Presentation ‘Landschap 2070 – ontwikkelen van kwaliteit’
Background Document ‘Landschap 2070 – ontwikkelen van kwaliteit’

**Design Academy Eindhoven, Fontys University and Urban/Lab TU Eindhoven: The landscape in between**

Area: Area between Eindhoven-Helmond: Rijk van Dommel en Aa
Message: Technological developments greatly impact the landscape: they are game changers (energy storage, smart mobility, open data). Do not look at these developments separately, but in connection; bring different parties that can provide an interesting and unusual solution for the landscape of 2070 together. This needs designing and directing. For the Rijk van Dommel en Aa area, a layered strategy was developed that includes four systems: a brook system (a climate park with renewable energy production, water treatment and storage and energy storage), a highway system (less space needed for transport, free space becomes available), a park system (integrated residential and recreational areas, urban agriculture) and a dry nature system (co-owners in adjacent living-working areas).

Compilation Video ‘The Landscape in Between’
Presentation ‘The landscape in between’
Background Document 1 ‘The Landscape in Between’
Background Document 2 ‘The Landscape in Between’
Column ‘Game changers in het landschap’ (‘Game Changers in the Landscape’)

**Fabric:**

**Designing with flows**

Area: Randstad
Message: In the coming decades, the landscape will change beyond recognition. The metabolism of an urban region is the most important angle for learning how cities operate in conjunction with their environment, with flows, raw materials, nutrients. Designers have to play a part in the transformation of the landscape. Look for creative ways to meet the challenges, such as energy production, on the basis of this metabolism.

Compilation Video ‘Designing with Flows’
Presentation ‘Designing with Flows’

**karres+brands Landscape Architecture and Urban Planning:**

**De 7 Nieuwe Nederlanden (The Seven New Netherlands)**

Area: Dijkring 14 and the High Netherlands
Message: The Netherlands has a heroic tradition of polder-making, dredging and working against nature. However, this cannot go on or we will soon live in a degraded landscape behind metres-high dikes. We need to get along better with the landscape and to make use of the forces of nature. The result: seven new and differentiated Netherlands. We gradually move to the safe grounds above sea level and capitalise on the strengths of the different landscapes. For example, by producing wind power where there is wind, so along the coast; by getting along with the

water in the river landscape by making more Room for the River (2.0) and by compacting the Brabant mosaic.

Compilation Video ‘De 7 Nieuwe Nederlanden’
Presentation ‘De 7 Nieuwe Nederlanden’
Background Document ‘De 7 Nieuwe Nederlanden’

**LINT Landscape Architecture:**

**Waterring Zuid-Holland**

Area: Southern part of the Randstad

Message: The Dutch landscape is a large-scaled and robust landscape that should not suffer fragmentation. The central government should paint a perspective for the landscape of the future, doing such things is in our DNA. ‘Waterring Zuid-Holland’ for the southern part of the Randstad presents such a perspective. In the lower central part of South Holland, urgent challenges coincide such as subsidence, seepage, water storage, salinisation, a dead-end water network and a shortage of nature and recreational possibilities, especially in the reclaimed areas. The Waterring can be a water machine with which to address these problems.

Compilation Video ‘Waterring Zuid-Holland’
Presentation ‘Waterring Zuid-Holland’
Background Document ‘Waterring Zuid-Holland’

**LOLA Landscape Architects en De Zwarte Hond:**

**Hoe Nederland er uit had kunnen zien (How the Netherlands Could Have Looked)**

Area: Region Groningen, because of its ‘perfect city – countryside balance’

Message: Towards a self-steering region. See the urban region as a landscape challenge and strengthen the relationship between city and countryside using ‘leylines’ and country estates. Use the medieval landscape as a breeding ground for innovation and transition and make the region energy and water neutral.

Compilation Video ‘Hoe Nederland er uit had kunnen zien’
Presentation ‘Hoe Nederland er uit had kunnen zien’

**OKRA Landschapsarchitecten:**

**Landschap 2070 – de haven als deltalab (Landscape 2070 – the Port as a Deltalab)**

Area: Sea, coast, port, Rotterdam

Message: The landscape of the future is a landscape of different paces: a rapidly changing landscape near big cities, a more gradually changing landscape at the edges of the Netherlands. This has to do with the programmes that are implemented there: energy transition, water management and the metabolism of the urban regions. The government has to generate catalysts for change for the things we really want, so other developments can follow. The port area is an anthropogenic landscape that has to transform into an innovation landscape, with the combined action of the sea, the landscape, the port and the city. Promising is a

transition to three specialities: seaport, distribution port, knowledge port. The port as not only a distributor, but also as a producer.

Compilation Video ‘Landschap 2070 – de haven als deltalab’
Presentation ‘Landschap 2070 – de haven als deltalab’
Background Document ‘Landschap 2070 – de haven als deltalab’

**Wageningen UR:**

**Hout werkt! Hoe krimp aan zet komt (Wood Works! Shrinkage Makes Its Move)**

Area: Northwest Drenthe

Message: Drenthe is experiencing shrinkage and aging, stream valleys are drying out. Focus on an innovative regional economy by creating an economic carrier for the region, for example by the redevelopment of the esdorpen (villages around a commons) and moorland of the Drenthe landscape on the basis of flexible timber construction. Biomass production in the area has a lot of potential, through the planting of a mixed production forest. The wood can be used as a building material, for $CO_2$ storage and to replace fossil fuels.

Compilation Video ‘Hout werkt! Hoe krimp aan zet komt’
Presentation ‘Hout werkt! Hoe krimp aan zet komt’

**ZUS (Zones Urbaines Sensibles):**

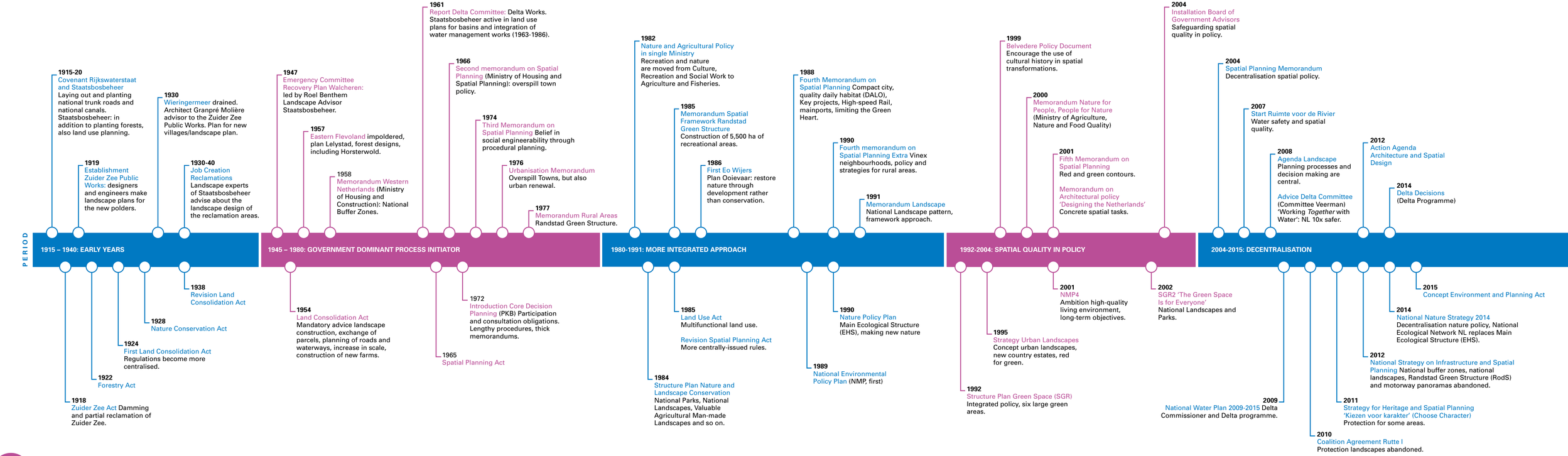
**Delta 3000**

Area: Delta landscape

Message: the Netherlands is turning into a large dune metropolis. Major interventions are necessary to create an inhabitable and productive landscape and to cope with sea level rise, extreme peak discharge, tectonic collapse, salinisation and subsidence. Here, dredging up 3 billion m3 of sand will create one of the largest freshwater reservoirs for the new gold of the future. We need a central government with a central plan: Delta 3000. Together with water boards and major cities. The central government will have to provide a real long-term strategy to solve the big problems. Covering not merely decades, but centuries.

Compilation Video ‘Delta 3000’
Presentation ‘Delta 3000’
Background Document ‘Delta 3000’

# 2 TIME LINE GOVERNMENT INTERVENTION IN THE LANDSCAPE 1915-2015



# RESPONSIBILITY AND ACKNOWLEDGEMENTS

**Composition of the Council Committee**

Jan Jaap de Graeff, Chair RIi

Derk Loorbach, Director DRIFT, Research Institute For Sustainable Transitions, Professor Socioeconomic Transitions Erasmus University Rotterdam

Annemieke Nijhof, RIi, Committee Chair

Wouter Vanstiphout, RIi (until 1 August 2016)

Dirk Sijmons, Emeritus Professor Delft University of Technology, Advisor at H+N+S Landschapsarchitecten

**Composition of the Project Team**

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Rob Roggema, External Team Member

**Consulted Experts and Institutions**

***Local Area Session De Ronde Venen, Thursday 11 February 2016***

*Residents*

Otto van Asselen

Carmen Baanders

Kelly Bocxe

Nico de Boer

Dick Boogaard

Saskia van den Bor

Joost van den Brandt

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Ives van Leth, Waternet

***Local Area Session Westland, Tuesday 1 March 2016***

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***Challenge Landscape 2070 for Educational Institutions and Design Offices***
Groningen Academy of Architecture in collaboration with Master's Programme Planning, Landscape History and Social (Environmental) Psychology
Bosch Slabbers landschapsarchitecten in collaboration with VenhoevenCS architecture+urbanism
Design Academy Eindhoven, Fontys University and Urban/Lab Eindhoven University of Technology
Fabric
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LINT Landscape Architecture

LOLA Landscape Architects and De Zwarte Hond
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ZUS (Zones Urbaines Sensibles)

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# OVERVIEW OF PUBLICATIONS

**2016**

Challenges for Sustainable Development: Main Focus Areas Identified in Advisory Reports Published in the Past Four Years by the Council for the Environment and Infrastructure. [‘Opgaven voor duurzame ontwikkeling – Hoofdlijnen uit vier jaar advisering door de Raad voor de leefomgeving en infrastructuur’]. July 2016 (Rli 2016/03).

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**2014**

Managing Surplus Government Real Estate: Balancing Public Interest and Financial Gain. [‘Vrijkomend rijksvastgoed, over maatschappelijke doelen en geld’]. December 2014 (Rli 2014/07).

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**2013**

Sustainable Choices in the Implementation of the Common Agricultural Policy in the Netherlands [‘Duurzame keuzes bij de toepassing van het Europees landbouwbeleid in Nederland’]. October 2013 (Rli 2013/06).

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**2012**

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