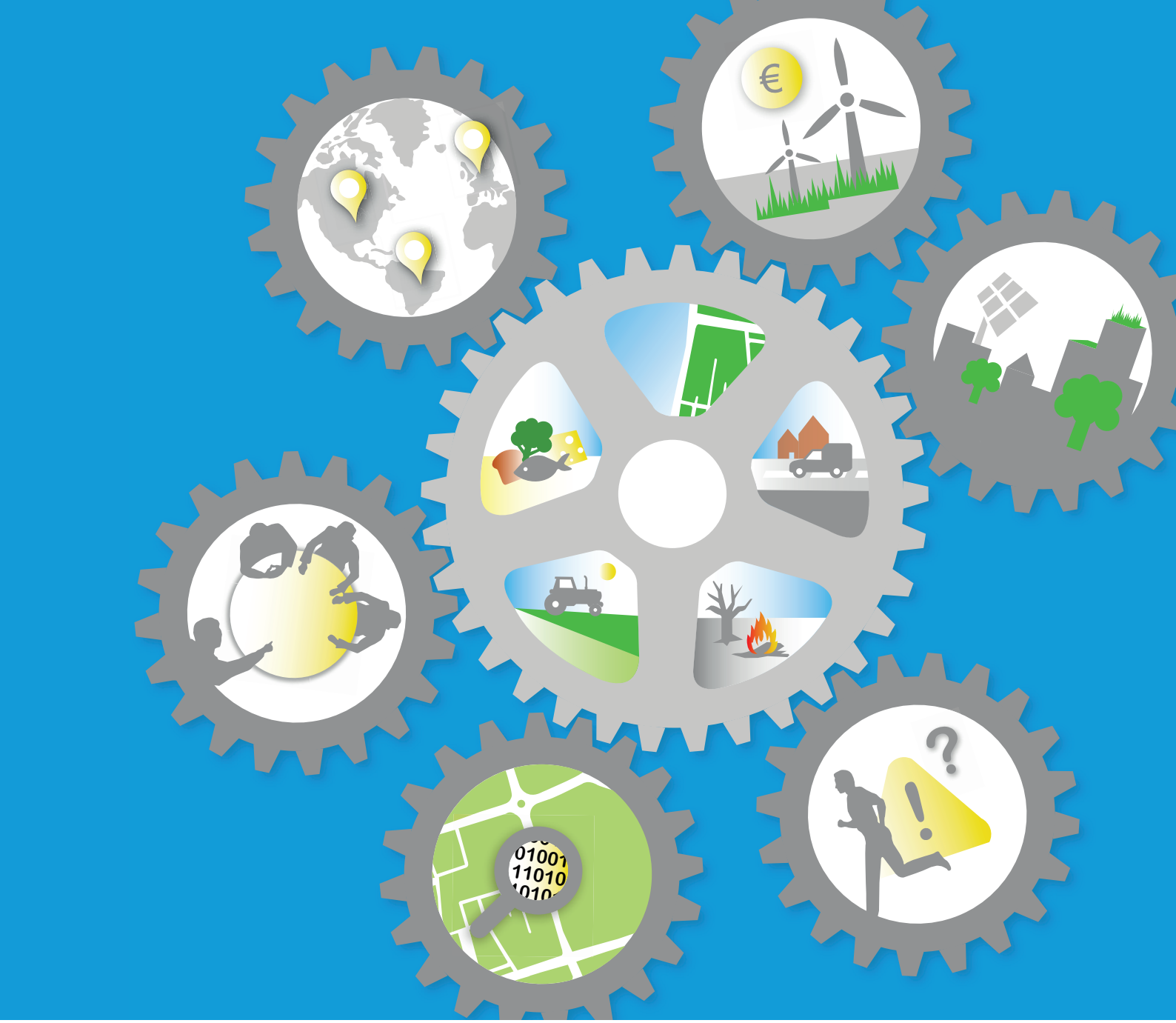

2014 - 2015

WORK PROGRAMME

Council
for the Environment
and Infrastructure

CONTENTS

FOREWORD

This document sets out the work programme 2014-2015 of the Council for the Environment and Infrastructure (Rli). The current members of the Council were formally appointed on 1 August 2012 and have therefore held office for just over one year at the time of writing.

During that first year, the Council's activities focused on a number of themes which had been referred by the first Rutte government (formed in October 2010) to the Rli's predecessors (the Council for Rural Areas, the Council for Transport and Public Works, the Council for Housing, Spatial Planning and the Environment, and the Advisory Council on Hazardous Substances). The Council was also called upon to consider various topical matters referred by the second Rutte government (formed in November 2012).

From 2014, the Council will start to implement its own long term work programme. The Council's ambition is to present advice which will make a tangible contribution towards solving the policy issues that central government is likely to face as a result of certain key societal trends, as well as developments within the physical domain. The trends and developments identified by the Council have been incorporated into the work programme in the form of 'long-term programme lines'. This approach is in keeping with the recommendation made in the first benchmark report which preceded the establishment of the Council in its current form (Berenschot: *Verbinden in onafhankelijkheid,* 2011), whereby the authors advised the adoption of a long term strategic perspective. The strategic forecasts of the relevant government departments (notably the Ministry of the Interior and Kingdom Relations, the Ministry of Economic Affairs, and the Ministry of Infrastructure and the Environment) have also provided important input for the programme, as have the five advice topics formulated by the government (enumerated in a letter from Minister Blok to the chairs of the advisory councils, dated 30 May 2013).

Alongside the desire to provide strategic advice which transcends individual policy domains, the Council wishes to address the requirements of current policy processes and requests for advice on topical matters. In 2013, the Council therefore sought to familiarise itself with those requirements, conducting interviews with the relevant ministers, policy directors, members of parliament and representatives of civil society. This process produced a clear impression of the various parties' advice requirements. The questions presented to the Council are listed in the appendix to this document.

In 2014, the Council will begin to produce its advisory reports on the main themes identified during the consultation rounds. Time and resources have also been reserved to address questions broached by parliament and the government as they arise. We hope, and indeed expect, that this approach will result in a fruitful contribution to government policy. Wherever possible, the Council will seek cooperation with other advisory bodies, the official planning agencies and the Board of Government Advisors (CRA).

Henry Meijdam, Chair

Ron Hillebrand, General Secretary

WORKING ACCORDING TO LONG TERM PROGRAMME LINES

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WORKING ACCORDING TO LONG TERM PROGRAMME LINES

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A focus on long term programme lines based on the main developments affecting the physical domain is seen as an effective manner of tackling the themes and topics requiring the Council's advice. These programme lines will form a framework for new, emerging advice questions and will be geared towards integrated instead of sector-based advice topics. A circular representation of the programme lines (see figure) emphasises their interrelationship and the integrated nature of the approach. The Council considers it important to seek coordination and synergy between the various sectors which fall within its advisory domain. In addition, it is desirable to establish links between the issues and challenges which are medium or long term in nature and those which form part of everyday policy practice.

Source material
The introductory discussions with the ministers and policy directors of three departments – the Ministry of the Interior and Kingdom Relations (BZK), the Ministry of Economic Affairs (EZ) and the Ministry of Infrastructure and the Environment (I&M) – provided a comprehensive view of the scope of potential advice topics (see appendix). The Council also met with members of parliament and representatives of civil society organisations, and studied the following documents:

- The ministries' knowledge and innovation agendas
- The Trends Forecast 2012 produced by the Interdepartmental Strategy Board (SBR)
- The interdepartmental themes and topics within the work programmes of other advisory councils
- The 2013 Work Programme of the Netherlands Environmental Assessment Agency
- The Agenda 2012–2016 of the Board of Government Advisers
- The Rli's own strategy proposal, *Met raad en daad*

The interdepartmental (i.e. government wide) themes which underpin the work programmes of the advisory councils (as listed in the letter of 30 May 2013 from Minister Blok to their respective chairs) are:

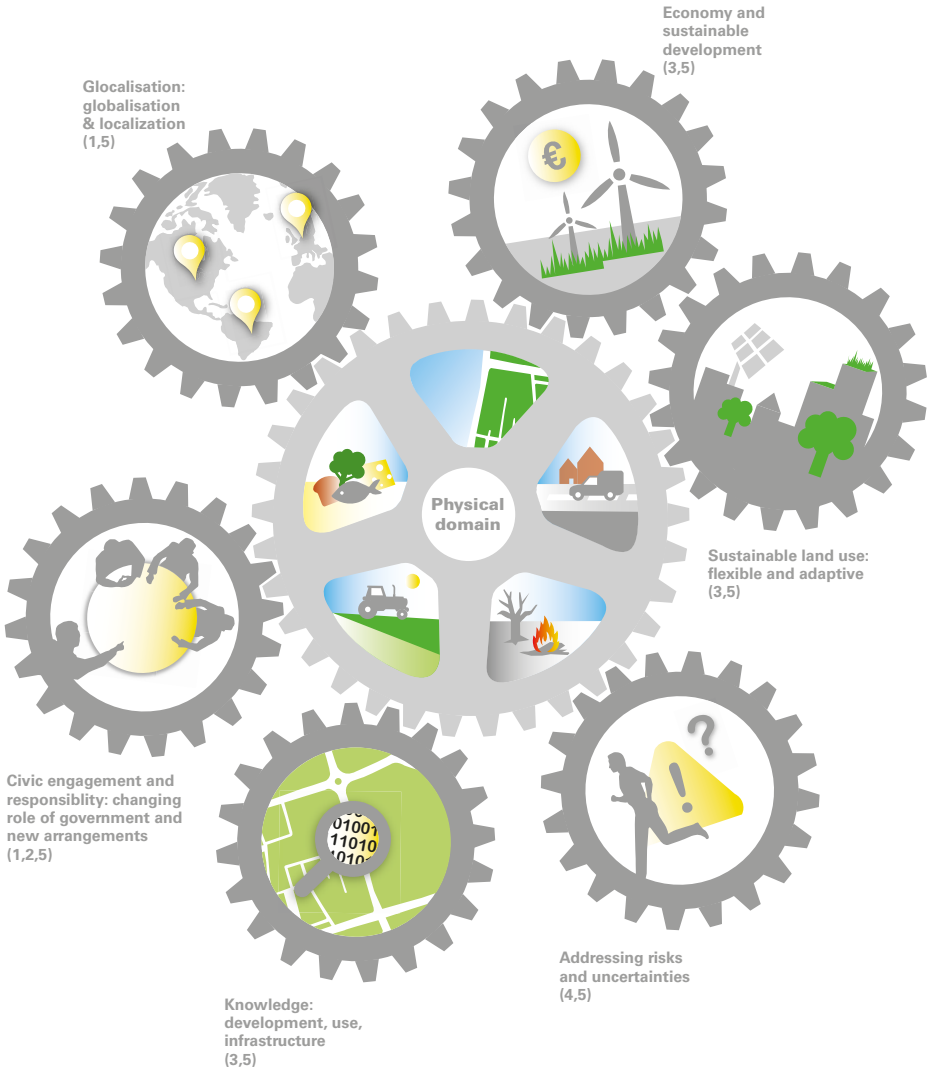
1. Increasing the strength and adaptive ability of society
2. New dividing lines within society
3. Sustainable development
4. Integration of internal and external safety
5. Central government's possibilities for action

The figure overleaf illustrates the close relationship between the Council's long term programme lines and these five interdepartmental themes. Throughout this document, we state how each of the topics on which an advisory report is to be produced relates to the interdepartmental themes and the programme lines. The majority of advice questions are relevant to at least two, sometimes three, of the interdepartmental themes, with a particular emphasis on the first (increasing the strength and adaptive ability of society), third (sustainable development) and fifth (central government's possibilities for action).
The proposed projects are also linked to one or more programme lines, with 'Economy and Sustainable Development', 'Civic engagement and responsibility' and 'Glocalisation' reflected within at least half of those projects, albeit with differing degrees of emphasis. Each programme line is addressed at least once in the projects.

By devoting specific attention to both the interdepartmental themes and the Rli's programme lines in all future work programmes, it will be possible to achieve greater breadth and depth in the process of finding appropriate responses to the developments which affect the physical domain.

Long term programme lines

Figures in brackets refer to the interdepartmental hemes



Economy and sustainable development within the physical domain

The government wishes to ensure that the Netherlands retains its leading position as a competitive (knowledge) economy, doing so through sustainable growth. This demands maintaining not only economic capital but also human, societal and ecological capital while taking account of the links between them. As yet, the Netherlands cannot be said to score well in terms of financial robustness, knowledge level or the sustainable use of natural resources (Statistics Netherlands, *Monitor Duurzaam Nederland* 2011). The financial crisis of 2007 put an end to a period of almost constant economic growth. Six years later, the Netherlands and many other countries remain unable to report any (significant) economic growth. There appears to be a new economic reality which is marked by a degree of stagnation. Concern about the sustainability of the current economic model is growing. The demand for natural resources continues to rise, while many of those resources are becoming ever more scarce. As a result, the environmental debate is also an economic debate. How can 'green growth' be pursued, and how will doing so affect the physical domain? The aspects to be considered are many and various, and include decentralised energy production, sustainable mobility, the circular economy, sustainable housing, local (food) production and water usage.

Sustainable land use: flexible and adaptive

The manner in which the Netherlands uses land has for many centuries been informed by the realisation that land is both limited and fragile. Sustainable economic, ecological and social vitality demands adept land use planning. Sustainable land use entails a good balance between the residential, business and recreational functions, with space reserved for nature and attention for the quality of the built environment. Trends such as population shrinkage, ongoing urbanisation and increased mobility result in an ever growing demand for flexible and adaptive forms of land usage, whereby various societal functions are combined.

Addressing risks and uncertainties within the physical domain

The public has a low acceptance level where risks to physical safety are concerned. Nevertheless, certain risks do exist: accidents involving hazardous substances, flooding, pandemics, traffic accidents and the disruption to everyday life which could be caused by cyber attacks. Individuals wish to decide for themselves which risks they are willing to take. In practice, however, the ability to identify risks, opportunities and consequences is restricted. There are indistinct risks with a high degree of uncertainty in terms of the event actually taking place and the extent of the damage that will ensue if it does. Policy must take account of the uncertainties within long term scenarios. In addition to prevention, the 'manageability' of risks will come to play an even greater part within policy. Which aspects should remain a direct government responsibility, and when should the business sector and general public acknowledge and act upon their responsibility? How can the concept of *shared responsibility* be structured and implemented most effectively?

Knowledge within the physical domain: development, use and infrastructure

New (combinations of) technologies offer opportunities for innovation and are often the drivers of societal change. Is the physical domain taking full advantage of the opportunities presented by nanotechnology, biotechnology, information technology, the neurosciences and other scientific disciplines? Does policy development take sufficient account of developments which may emerge in the (near) future as a result of new technologies? Increasingly, knowledge development involves cooperation with the private sector (as under the government's 'top sectors' policy). But has the essential development of knowledge about the physical domain been excluded from this process? Knowledge should form a sound evidence base for all decision making processes, but the validity of knowledge is increasing disputed. The shift towards a knowledge based economy, with a growing services sector, demands that ongoing attention is devoted to the knowledge infrastructure.

Civic engagement and responsibility in the physical domain: the changing role of government and new arrangements

Policies devote ever greater attention to market forces and acceptance of direct responsibilities. We see an increasing number of (informal) networks of individual citizens, sometimes joined by corporate partners, who take action to improve their immediate human environment. There are projects involving local and sustainable energy generation, the creation of neighbourhood gardens, support networks for people requiring care, and schemes under which people pool their resources to purchase shared tools, appliances or even vehicles. In the light of this shift in the relationship between government and society, public authorities must assume a different, more facilitative, role. The question arises: How should new governance systems be designed and implemented so that public tasks and interests are clearly established while exploiting the strength of the informal networks and other non governmental parties who are willing to assume their share of responsibility?

'Glocalisation': globalisation and localisation within the physical domain

The process of globalisation has brought governments, companies and citizens throughout the world in closer contact. Products, news, food and so forth are derived from all parts of the world. Mutual dependency between countries is becoming ever stronger, which also means that new vulnerabilities are being created. Think of the potential for the rapid spread of diseases, the far reaching effects of a crisis or disaster, and international competition for labour. The Netherlands is increasingly seen as part of a greater whole: Europe. This growing complexity renders society less adaptive, with fewer opportunities for 'social engineering'. Alongside globalisation, we also see processes of regionalisation or localisation. People are more interested in influencing their own immediate environment. They demand food that has been produced locally, and they wish to experience nature 'on their doorstep'. This creates both opportunities and tensions, and demands a thorough review of the role of central government.

ADVISORY REPORTS 2014-2015

02

ADVISORY REPORTS 2014-2015

02

Strengthening the spatial economic structure

Advice question

Six years after the start of the financial crisis in 2007, the Netherlands and many other countries remain unable to report any (significant) economic growth. There appears to be a new economic reality which is marked by a degree of stagnation. How will this affect the Netherlands' spatial economic structure, which should support economic development and innovation? What are good models for strengthening that economic structure in the future? To what extent will policy designed to strengthen the 'mainports' remain important to overall economic strength? The government has designated certain sectors as being of particular importance to the national economy, whereby they receive extra attention and support. However, this 'top sectors' policy is not linked to any comprehensive spatial economic perspective. Is the continuation of the sectoral approach the best way forward, or should there be a more integrated approach targeting agglomerations? What is the most desirable division of responsibilities between central government and the regional authorities? What new instruments will be available to the government?

Background

The creation of a sustainable knowledge economy has many advantages. It will not only secure the direct earning capacity of the Netherlands, but will enhance the quality of life and serve to protect nature and the environment. The strengthening of the economic structure therefore involves many aspects: macro economic, spatial, social and the quality of the built environment. Cities and urban clusters are important components of a strong economic structure, but spatial distribution and cohesion of activities are also significant. Accordingly, attention must be devoted to (regional) spatial economic development (Netherlands Environmental Assessment Agency, 2011).

The European Commission has also adopted a regional policy. In the Commission's view, the regions play an important role in the Europe 2020 strategy because they are the primary institutional partners of those parties most closely involved in innovation: the universities, other research and education organisations, and the small and medium sized enterprise sector (SME). Moreover, the regional policy is seen as crucial to investments in smart and sustainable growth.
The concept of 'smart specialisation' plays a key role in thinking about economic development and green growth. In its advisory report 'Dutch Logistics in 2040: Designed to Last' (Rli, 2013), the Council calls for the creation of clusters of companies in order to promote the circular economy.

Various publications on this theme have been issued by the Netherlands Environmental Assessment Agency (PBL), CRA, the Scientific Council for Government Policy (WRR) and others. The Rli advisory report *Verkenning technologische innovaties voor het fysieke domein* ('Survey of technological innovations for the physical domain'), publication of which is planned for 2014, could also offer useful departure points.
The report will collate existing knowledge on this topic, whereby the Council believes that its own added value will be in terms of the normative consideration of alternative policy options, together with concrete recommendations for action on the part of policy makers. The terms of reference will be further refined in close consultation with the parties requesting the advice, and a thorough analysis of all available prior studies will be carried out.

Theme	Sustainable economy	Sustainable land use	Risks	Knowledge within physical domain	Civic engage-ment and responsibility	Glocalisation
Interdepartmental advice theme		Social strength and ability	Dividing lines	Sustainable development	Safety	Possibilities for action
Possibilities for action			Agenda setting	Conceptual	Strategic	Instrumental
Ministries				BZK	EZ	IenM
Lead Directorate General				Nature and Regional Policy (EZ)		

Housing demand

Advice question

Forecasts of future housing demand play an important part in the preparation and monitoring of national housing policy. They are, however, subject to a particularly high degree of uncertainty. How can the government ensure an adequate supply of housing, both during and after the economic crisis, and further ensure that housing is of appropriate quality and in the right location? How does this process relate to long term economic and demographic developments?

Background

Housing production has fallen significantly since the economic crisis began. It is uncertain how accurate the current estimates of the housing demand still are in this situation. Cultural and economic trends, different motives for relocation and international migration all influence the number of households in the Netherlands and their demand for housing in various categories. How accurately can this demand be forecast, and how should the uncertainties inherent in such forecasts be addressed?

It is also uncertain whether the forecasts will adequately reflect the actual preferences of households, and whether they provide an effective means of managing the residential construction market. If policy is based solely on general housing typologies, it is possible that requirements and preferences will not be met. Established interests such as land ownership may also restrict the scope for meeting housing requirements.

It is necessary to examine how the existing institutions within the housing market address these aspects. Is it possible to create a demand led housing market in which the supply side takes specific account of consumer preferences? How should the housing market institutions be structured? What are the points of departure for policy within such an institutional setting? What public interests must (central) government safeguard, and how can the government adapt policy and legislation in order to do so? What instruments and indicators should local and regional authorities use to fulfil their respective responsibilities?

Theme	Sustainable economy	Sustainable land use	Risks	Knowledge within physical domain	Civic engagement and responsibility	Glocalisation
Interdepartmental advice theme		Social capacity	Dividing lines	Sustainable development	Safety	Opportunities for action
Type of advice			Agenda setting	Conceptual	Strategic	Instrumental
Ministries				BZK	EZ	IenM
Lead Directorate General				Housing and Construction (BZK)		

Fragile vital infrastructure and the role of the citizen

Advice question

The 'vital infrastructure' comprises public, semi public and private organizations which supply products and services that are essential to the daily lives of the majority of people in the Netherlands. Such products and services include drinking water, food, healthcare, energy, telecommunications, and safety and security. Much of the vital infrastructure is to be found within the physical domain. What vulnerabilities in the physical domain are relevant in this context? In what areas are current policy instruments insufficient to safeguard the public interest? What action can the government take to avoid or reduce the social costs of any disruption to the vital infrastructure? To what degree is it possible or appropriate to rely on citizens' ability to fend for themselves if, despite every effort on the part of government and private sector parties, essential amenities become unavailable? Is the public adequately prepared for such a situation?

Background

Safeguarding the vital infrastructure is the shared responsibility of government authorities and private sector organisations. The vital interests at stake include territorial safety and security, physical safety, economic security, ecological security and socio political stability. All are subject to certain threats, such as natural disasters, shortages, deliberate disruption, large scale industrial accidents, power outages and the failure of ICT or water distribution systems.
There is increasing interdependency between the sectors involved. As a result, a chain or 'domino' effect could disable several components of that infrastructure simultaneously. Greater interdependence also gives rise to a different dynamic, whereby it becomes more difficult to monitor the vulnerabilities within the physical domain. Moreover, those vulnerabilities are not static; all demand constant attention.

Just as the interdependency between sectors has increased, so has the need for cooperation between the different sectors. It may be appropriate to review and reformulate the incident scenarios to include possible internal causes within the sectors. The current policy instruments include the 'continuity plans' produced by companies in the vital sectors. If the incident scenarios are updated, it may be necessary to revise these continuity plans. Do current policy instruments and formal agreements (covenants) with the companies concerned take the new dynamic adequately into account? Have developments affected risk management practices (in the broadest sense, from prevention to damage limitation)? Is a consideration of the vital infrastructure adequately embedded within regular policy on the physical domain? What action can and should the government take to maximise the public's ability to deal with the effects of any disaster within the physical domain?

Theme	Sustainable economy	Sustainable land use	Risks	Knowledge within the physical domain	Civic engagement and responsibility	Glocalisation
Interdepartmental advice theme		Social capacity	Dividing lines	Sustainable development	Safety	Opportunities for action
Type of advice			Agenda setting	Conceptual	Strategic	Instrumental
Ministries				BZK	EZ	IenM
Lead Directorates General				Energy, Telecommunications and Competition (EZ) / Public Works and Water Management (I&M)		

Waste prevention

Advice question

At present, approximately 50% of the total quantity of domestic waste produced in the Netherlands – some 8.8 billion kilos – is not recycled. This means that 50% of the large volume of materials which could be recovered and reused are lost forever, often burned in incinerators. In the interests of creating a circular economy, and in the expectation that raw materials and resources will become ever more scarce and expensive, it becomes increasingly important to prevent waste being created in the first place and to recycle materials wherever possible. What can the government do to achieve a permanent reduction in waste production, improve the recycling yield and maximise the economic advantages of doing so?

Background

The 'zero waste' philosophy examines how waste production can be prevented to the greatest extent possible, and how materials which have reached the end of one useful life can be recovered and used again. This demands not only a behavioural shift on the part of households (the producers of domestic waste), but also the input of product designers, manufacturers, distributors, retailers and waste management agencies and companies. What is the government's role in this?

Total waste production in the Netherlands is now levelling out at approximately sixty million tons per annum. An increasing proportion of that waste is being put to a useful purpose. Industrial refuse is usually separated prior to collection and comprises mostly non hazardous waste. Over 55% of industrial waste is produced by the food (processing) sector, with the metal working sector accounting for approximately 17% (*Compendium voor de Leefomgeving, 2011*).
The Netherlands is already a European leader in terms of the proportion of the overall waste output that is recycled (80% compared to the EU average of 38%). However, the proportion of domestic waste which is recycled remains below the international average. This means that (economic) opportunities are being missed in the transition to a circular economy in which waste is primarily regarded as a raw material and production resource ('Dutch Logistics in 2040: Designed to Last', RIi, 2013). Moreover, waste recycling can reduce costs for the local authorities responsible for implementing waste management policy.

This advisory report will include an analysis of the factors (including behavioural factors) which influence the quantity of waste produced by households and the degree to which they separate that waste prior to collection. The analysis will build upon the advisory report *Duurzame gedragspatronen* ('Sustainable behaviour patterns'), which is being prepared by RIi in the course of 2013. Attention will also be devoted to the factors which discourage waste separation and recycling (such as the large quantity of waste which operators of incinerators require to render their business economically viable), legislative restrictions, and the possibilities created by technological innovations. Adopting a longer term perspective, the report will also examine how waste production can be minimised and will consider potential new waste management concepts, examining the entire waste chain and its various links, which include central government, local authorities, public and private waste processing operators and the sector organisations.

Theme	Sustainable economy	Sustainable lande use	Risks	Knowledge within physical domain	Civic engagement and responsibility	Glocalisation
Interdepartmental advice theme		Social capacity	Dividing lines	Sustainable development	Safety	Opportunities for action
Type of advice			Agenda setting	Conceptual	Strategic	Instrumental
Ministries				BZK	EZ	IenM
Lead Directorate General				Environment and International Affairs (I&M)		

Between Brussels and the citizen

Advice question

The Netherlands is increasingly seen as part of Europe, both economically and in terms of policy. Dutch ministers, officials and members of the European Parliament in Brussels help to decide the course of European policy. That policy is important at the national and local level. At the same time, we see a growing number of local societal initiatives relating to public tasks within the physical domain. Policy makers from the local to the national and European level are devoting more attention to such initiatives. National and local attention is that much greater due to the government's ongoing pursuit of decentralisation, whereby responsibilities and tasks are devolved to the regional and local authorities. In view of these developments, what is now the central government's role in policy development with regard to the physical domain, and how should it seek to fulfil that role? What opportunities exist, or can be created, for flexibility and a tailor made approach within the European frameworks? How can societal initiatives be given the greatest possible scope and freedom? How have other countries done so?

Background

When policy is being formulated in Brussels, the likely consequences of its implementation at the local level may affect its adoption, or may prompt some modification to the funding flows. At the local level, various policy areas come together within the physical domain. The desire to arrive at a fair, carefully balanced consideration of all interests can sometimes result in difficult dilemmas for local administrators, those responsible for societal initiatives, and local residents. What is the role of central government, as the 'intermediate' tier of government, in the formulation and implementation of European policy? How can we ensure that it remains possible to consider the interests fairly at the local level?

The advisory report *Brussels lof* (Council for Housing, Spatial Planning and the Environment, 2008) recommended that the likely consequences of proposed European policy and legislation should be taken more explicitly into account during the formulation phase, and that the discretion allowed when incorporating and implementing European directives into national legislation should be explored and applied more actively. In nature policy, for example, there is a clear link between national nature policy and the European nature objectives which clarifies the position of all stakeholders and provides clear legitimacy. As a result, however, nature policy takes on a strong sectoral and legislative focus, while its implementation demands an integrated and flexible approach. This creates the risk that the scope for regional differentiation and the creation of a direct link between a region and its nature areas will be restricted (*Nature's Imperative: towards a robust nature policy*, Rli, 2013).

The planned advisory report will examine how other European member states have interpreted the European obligations with regard to the physical domain, and how they have adopted and implemented the relevant provisions. How do those countries maintain adequate scope for national discretion? What have they done to ensure that specific national and local characteristics are respected within the European directives and continue to offer opportunities for societal initiatives? And what can the Dutch government do to mobilise society's self organisational capability in order to arrive at new arrangements in pursuit of the European objectives? How can European sectoral policy and regional, integrated implementation complement each other? How should the government interact with the institutions which fall between the market and the public authorities (such as utility companies and housing corporations) which have traditionally played a significant role in the physical domain?

The policy domains which are to be subject to an international comparative analysis may include safety and the environment, housing and construction, agriculture, nature and water management policy, rail transport, energy provision and other public utilities, and the strengthening of the economic structure. In consultation with the parties commissioning the advisory report, certain themes will be examined in greater depth so that concrete options for action can be offered.

Theme	Sustainable economy	Sustainable land use	Risks	Knowledge within the physical domain	Civic engagement and responsibility	Glocalisation
Interdepartmental advice theme		Social capacity	Dividing lines	Sustainable development	Safety	Opportunities for action
Type of advice			Agenda setting	Conceptual	Strategic	Instrumental
Ministries				BZK	EZ	I&M
Lead Directorates General				Nature and Regional Policy (EZ) / Environment and International Affairs (I&M)		

Survey of technological innovations for the physical domain

Advice question

Technological innovations can make life easier, also in the physical domain. They can do much to promote social and societal change: think of the mobile phone and the tablet computer. The resultant changes can be so significant that access to knowledge concerning the innovations, and the innovations themselves, must be made available to all. On the other hand, some innovations do not enjoy enough public support to allow their implementation by the government. Electronic road pricing is a notable example. Do public authorities exploit the opportunities afforded by technological innovations to an adequate degree within the physical domain? What are the likely effects of (potential) innovations on our housing, business, mobility and other patterns, and on sectors such as agriculture, industry and services? How can these effects be taken into account today within policy on the physical domain? What provisions must be incorporated into that policy in order to address public concerns and technical uncertainties?

These questions will be examined in greater depth with regard to policy addressing:

- Food production
- More efficient mobility
- Smart cities

Background

Nanotechnology, biotechnology, information and communications technology (ICT) and the cognitive sciences (NBIC) hold out many promises of innovations which will help to resolve all manner of social issues. Personalised traffic information, 'self healing' concrete and asphalt, resistant crops, and the energy neutral household are all potentially in sight. These technologies are increasingly interlinked whereby we use the term 'NBIC convergence'. Their use can also have certain disadvantages. Energy consumption may rise, there could be greater environmental pollution, and personal privacy could be jeopardised. The innovations may emerge rapidly and the resultant social changes could be so far reaching that government policy on the physical domain must take the consequences fully into account sooner rather than later.

Food production

The aforementioned technologies may lead to new 'tailor made' food production practices, with increased productivity, greater nutritional value and a longer shelf life for various products. They may mitigate the negative effects of food production or facilitate production taking place at otherwise unsuitable locations. However, the use of new technologies in the food sector could also give rise to public opposition. For example, how would large scale production of synthetic meat (cultured in the laboratory) affect Dutch agriculture and the general public? What will be the response if inexpensive, high yield solar cells based on nanotechnology are used to desalinate seawater for irrigation and subsequent food production in dry areas?

More efficient mobility

Land in the Netherlands is limited, and large scale infrastructural modifications are expensive. It is therefore essential to use the existing roads, railways and waterways more efficiently and effectively. Technological innovations will increasingly help us to do so. ICT and nanotechnology in new sensors and communications equipment could greatly influence mobility. Think of the 'smart' car which automatically calls the appropriate emergency services in the event of an accident or breakdown, which communicates with other vehicles on the road, and with the infrastructure in order to 'drive itself'. It is possible that young people will prefer to use public transport rather than the car so that they can continue to use Twitter and Facebook while on the move. Perhaps cars will become the new collective transport, while public transport becomes ever more individualised.

Smart cities

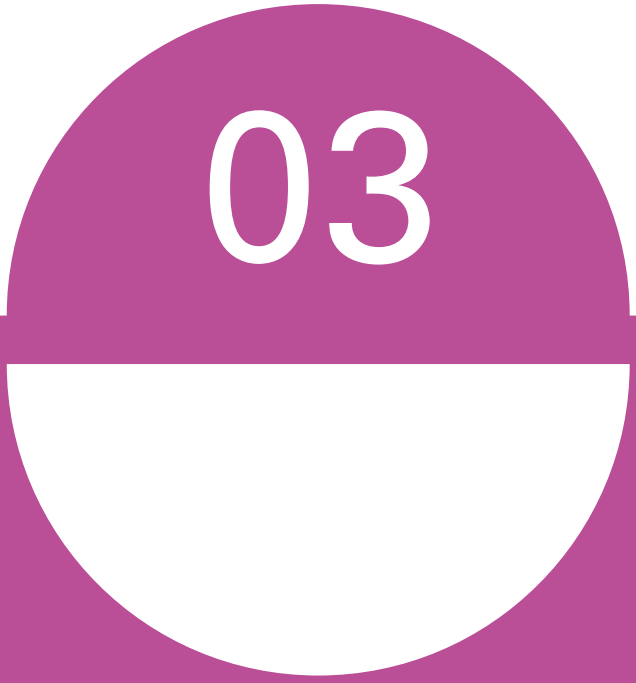
'Smart cities' is a concept in which a combination of technologies is applied to enhance the quality of the built environment. Energy, resources, time and money are saved, while the various sectors and functions (housing, work, mobility, recreation, etc.) are further integrated. There is greater opportunity for societal initiatives and 'co creation'. How do these advantages stack up against essential societal requirements such as privacy and equality? If we take a walk along a sustainable street in a smart city in 2030, what will we see?

This survey can be seen as a partial update of the 2001 report Tussen feit en fictie ('*Between fact and fiction*') published by the Council for Housing, Spatial Planning and the Environment. That report examined developments in ICT and their likely impact on policy in the fields of housing, spatial planning, environment and mobility.

The forthcoming advisory report will examine these policy areas in the context of the four 'NBIC technologies' (nanotechnology, biotechnology, information technology and cognitive science). It will also draw upon the results of the 'Smart cities' component of the joint innovation research programme run by the Ministries of Infrastructure and the Environment and the Ministry of Economic Affairs, to be presented in November 2013. In a future work programme, the survey may prompt the production of a full advisory report on one or more of the relevant themes. In late 2014, the process will culminate in a meeting at which policy makers, researchers and private sector experts will discuss the findings.

Theme	Sustainable economy	Sustainable land use	Risks	Knowledge within the physical domain	Civic engagement and responsibility	Glocalisation
Interdepartmental advice theme		Social capacity	Dividing lines	Sustainable development	Safety	Opportunities for action
Type of advice			Agenda setting	Conceptual	Strategic	Instrumental
Ministries				BZK	EZ	I&M

CONCLUSION



CONCLUSION

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To maximise the added value of the planned products to the various departments, the clients for each product will be consulted prior to the commencement of the advisory process to ascertain their precise requirements.

All advisory reports are produced by means of an open process in which there is ample opportunity for all stakeholders to contribute. In order to gather and collate all relevant information, views and opinions, the Council actively reaches out to those stakeholders through interviews, working visits, workshops, discussions, expert meetings and round table talks. The process also involves a careful study of the existing literature. The Council welcomes any comments or suggestions, including those relating to this work programme, which may assist in the production of its advisory reports.

APPENDICES

List of reserve advice questions 2014

Government and market forces in the real estate sector

What is (central) government's role in addressing the problem of vacant property (both residential and commercial) and unsold land? What interventions and management instruments may be at its disposal?

Adapting to climate change

What will be the effects of climate change in terms of housing, energy, transport, recreation and tourism in the Netherlands? What possibilities exist for timely government action to ensure that those effects do not have (excessively) high societal costs?

Integrated nature policy

Possible advice questions include:

- How can nature policy be further integrated with policy relating to other societal functions, such as healthcare, landscape and conservation, agriculture and recreation? What conditions and instruments will be required?
- How can society's capacity for self organisation be increased in order to arrive at new arrangements? What is the government's role in facilitating, supporting and directing this process? How will the developments affect the role of public sector agencies such as the National Forest Service?
- Various studies, most notably the TEEB reports, have been conducted to support vision development with regard to the 'nature inclusive economy'. How might a system of rights and concessions contribute to the process, and what form could the system take in practice?

Citizenship, governance and public self reliance

Can responsibilities and tasks relating flood safety, water management, water provision and water quality be delegated to, or shared with, private organisations? If so, under what conditions? How will this affect the role of the government? What can and should the government do to ensure that the general public can respond effectively to a crisis such as floods, disruption of water supplies or serious surface water pollution following a chemical incident? Is public engagement always the solution, or does it merely increase the divide between those who are well prepared and those who are not?

Responsibility and acknowledgements

The RIi Work Programme 2014-2015 has been produced following extensive consultation with the relevant ministers and senior government officials, members of parliament, the directors of the policy departments and representatives of a number of societal organisations.

Ministers
In the spring of 2013, the Council held talks with Minister Blok (Housing and the Central Government Sector), Minister Dijksma (Agriculture), Minister Mansveld (Environment), and Minister Schultz van Haegen (Infrastructure and the Environment).

Parliament
On 6 March 2013, the Council met with the Parliamentary Standing Committee on Infrastructure and the Environment. The members of the Standing Committee on Economic Affairs and the Standing Committee on Housing were also invited to attend. The parliamentarians present were R. Bisschop (Reformed Political Party), T. van Dekken (Labour Party), R. Dijkstra (People's Party for Freedom and Democracy), D. Hoogland (Labour Party), J. Houwers (since resigned), N. Klein (50PLUS Party) and A. de Vries (Labour Party).

Directorates
The potential advice questions to be included in the work programme were then discussed with the Administrative Council of the Ministry of Infrastructure and the Environment, and the Directorate General of Housing and Construction (DGWB) at the Ministry of the Interior and Kingdom Relations (BZK).

Introductory talks with the directors of the relevant policy directorates of I&M, EZ and BZK (DGWB) were also held, during which the Council enquired about the possible strategic advice questions which these directorates may have now or in the future. The directors concerned were:

Ministry of Infrastructure and the Environment

Directorate General for Mobility and Transport
E.A. Bien (Civil Aviation Department)
M.C.A. Blom (Directorate for Roads and Traffic Safety)
J.B. Dijkstra (Infrastructure Efficiency Programme)
J.M. Fukken (Directorate for Public Transport and Railways)
R.W. Huyser (Directorate for Maritime Affairs)

Directorate General for the Environment and International Affairs
M.G. van Empel (Directorate for Climate, Air and Noise)
P. Torbijn (Directorate for Safety and Risks)
K. de Snoo (Directorate for Sustainability)

Directorate General for Spatial Development and Water Affairs:
R. Feringa (Directorate for Water Management)
R. Peters (Directorate for Water Business and International Water Affairs)
D.L.M. Slangen (Directorate for Regional and Project Development)
H.A. Snoeken (Directorate for Spatial Development)
E.P. Stigter (Better Regulations Programme)

Ministry of Economic Affairs

Directorate General for Agriculture and Agrifood:
H. Kool (Directorate for Animal Supply Chain and Animal Welfare)
R.P. Lapperre (Directorate for European Agricultural Policy and Food Security)
C. Lever (Directorate for Plant Supply Chain and Food Quality)

Directorate General for Energy, Telecommunications and Competition:
J.C. de Groot (Directorate for the Energy Market)
B.A. Piersma (Directorate for Nuclear Installations and Safety)
E.J. de Vries (Directorate for Energy and Sustainability)

Directorate General for Enterprise and Innovation:
R.P.J. Bol (Directorate for Biobased Economy)
G.M. Landheer (Directorate for Top Sectors and Industrial Policy)
R. Zonneveld (Directorate for Enterprise)

Directorate General for Nature and Regional Policy:
R.P. van Brouwershaven (Directorate for Nature and Biodiversity)
A. Oppers (Directorate for Regional Affairs and Spatial Economic Policy)
G. de Peuter (Directorate for Natura 2000)

Ministry of the Interior and Kingdom Relations

Directorate General for Housing and Construction

A.T. van Delden (Interdepartmental Programme Directorate on Investment Conditions for the Construction Sector)
M. van Giessen (Directorate for the Housing Market)
J.M.C. Smallenbroek (Directorate for Residential Construction)
I.J. Vossenaar (Directorate for Housing and Built Environment)

Societal organisations

On 14 March 2013, the Council met with representatives of a number of societal organisations with an interest in the physical environment:

- Royal Dutch Touring Club (ANWB): G.H.N.L. van Woerkom and F.E. Smith
- Royal Institute of Dutch Architects (BNA): F.F.J. Schoorl
- Bouwend Nederland: P.J.M. Schumacher
- Dutch Federation of Agriculture and Horticulture (LTO): M.P. Cuijpers
- Netherlands Association of Project Development Companies (NEPROM): J. Fokkema
- Association of Energy Network Operators in the Netherlands: J.J. Fennema and L. Knegt
- Netherlands Society for Nature and Environment: T. Wagenaar
- Association of Regional Water Authorities: P.C.G. Glas and A.J. Vermuë
- Association of the Dutch Chemical Industry (VNCI): N.C.M. Alma Zeestraten
- Confederation of Netherlands Industry and Employers (VNO NCW): A.P. Mesker and G.H.J. Rijkhoff
- National Tenants' Association (Woonbond): J.P. Laurier and R. Paping

Advisory agencies

The Council held meetings with representatives of the Netherlands Environmental Assessment Agency (PBL) and the Board of Government Advisors (CRA) to discuss the relationship between the Council's work programme and the programmes of the PBL and CRA. The director of the Netherlands Environmental Assessment Agency, Maarten Hajer, attended the Council's meeting of 16 May 2013. There is regular consultation between the chairs of the various advisory councils, with a view to coordinating the work programmes and entering into cooperation with respect to specific themes.

Strategy directors

In the final stage of preparation, the list of possible advice questions was presented at a meeting of the strategy directors responsible for matters affecting the built environment of the Ministry of Infrastructure and the Environment, the Ministry of Economic Affairs, the Ministry of the Interior and Kingdom Relations, and the Ministry of Education, Culture and Science, at which they were invited to express their preferences and priorities.

Potential advice questions 2014-2015

Housing and Construction

- What is the role of the (central) government in addressing the problem of vacant property (both residential and commercial) and unsold land? What interventions and management instruments may be at its disposal? (This is also relevant to the theme of spatial planning.)
- What can the government do to promote mobility within the housing market, particularly with regard to homeowners who are now in negative equity?
- How can the government, as a major owner of real estate, strike an appropriate balance between its interests as a private owner and the public interest?
- What housing policy should the government pursue in the light of the Primos demand projections? What instruments should be applied?
- What policy should the government apply with regard to the sale of social housing units (including those in poor condition) to private parties?
- What facilities must be introduced within the physical domain in the light of population ageing? (This will build upon the 2013 advisory report on housing and care).
- Does the multicultural society (with its differences in culture) demand any adaptations of policy on the physical domain?
- What will be the long term effects of the government's latest housing market measures (*Woonakkoord*)? Are any modifications necessary?

Governance

- Under what conditions can citizens and private organisations assume responsibility for public tasks within the physical domain? What would be the new division of responsibilities? How will the government interact with the institutions situated between the market and the public sector (product marketing boards, utility companies, housing corporations) which have traditionally played an important role in the physical domain? How can a society in which such institutions no longer exist be effectively managed? How should the government address the inequality between citizens who are well equipped and those who are not? What lessons can be learned from the large scale operations in the physical domain intended to increase the influence of market forces?
- How should the government address its role in European policy making with regard to the physical domain? What opportunity exists, or can be created, for a tailor-made approach and flexibility? What approaches have other member states adopted? What is the (current) role of the government in its intermediate position between Brussels and the regional and local authorities?
- If the central government continues to pursue a 'directorial' role within partnerships rather than applying a top down management approach, what demands will this raise in terms of the structure, organisation and instruments of central government, with particular regard to its dealings with regional and local authorities?

Spatial planning

- The 'integrated vision' on environment and planning is to be published in 2018. What must the government do to ensure the success of this policy instrument? What form should the vision and the subsequent process take? What lessons can be drawn from experiences at regional level? How can the potential be exploited in full?
- What amendments must be made to the Environment and Planning Act (Omgevingswet) in order to facilitate and promote the circular economy?
- Does 'invitation planning' provide a means to preserve quality (of districts and urban neighbourhoods)? In the light of shrinking budgets, what instruments remain available to the central government to influence environmental quality? (This builds upon the advisory report Quality without growth). How should the invitation planning concept be implemented in practice, partly with a view to legal security?
- The focus of spatial policy is now shifting from planning and development to management and maintenance. What implications does this have for the Ministry of Infrastructure and the Environment (in terms of organisation, control and contracting)?
- Does the proposed Environment and Planning Act do enough to safeguard the public interest? How could the Act be used to promote sustainability? Will it foster an approach which centres on the human environment ('think, design, decide')? Are ecosystem assessments (as in the United Kingdom) a useful instrument in the context of the Act? What practical models can be used to refine the concept of 'space for environmental use'?
- How can the resilience and adaptability of villages be maximised in a rapidly changing

world, in which there is an expansion of scale and cities are becoming increasingly dominant? What is the government's task in this area?
- What national interests are at stake further to the process of agglomeration (whereby cities merge to become a metropolitan region)? How can central government safeguard those interests?

Environment
- How can the target of separating at least 65% of domestic waste be achieved?
- What are the societal demands which will be placed on environmental policy in the future? How can the Environment and Planning Act anticipate those demands?
- Traditional environmental legislation focuses on minimising or obviating risks. Is it possible to devise legislation which will maximise opportunities? What new chances will doing so create?

Sustainability and Climate
- What will be the effects of climate change in terms of housing, energy, transport, recreation and tourism in the Netherlands? What possibilities exist for timely government action to ensure that those effects do not have (excessively) high societal costs? In 2012, the General Court of Audit concluded that the effects of climate change in these areas have not been adequately researched, and that no effective adaptation policy is in place.
- Internationalisation leads to higher imports of exotic species and a greater risk of veterinary diseases. Climate change affects the survival ability of animals and plants which have migrated from their established habitats. Should the government adopt a specific policy in this regard, and if so, what form should that policy take? (This is also relevant to the themes 'external safety' and 'nature').
- Is 'green growth' a contradiction in terms? What effect will the envisaged growth scenarios have on (sustainability) policy in the physical domain?
- Sustainability measures and fiscal arrangements: how can we achieve a happy marriage?
- How can the Netherlands implement local energy generation and the re use of materials in the agricultural sector? (This is also relevant to the theme of agriculture.)
- How can we use the biomass available in the Netherlands, including all waste flows, in a prudent and effective manner? (This is also relevant to the theme of agriculture.)

Water
- Where must the joint responsibilities for flood safety, water provision and water quality be placed? What are the key tasks of the government and which tasks can be shared or apportioned elsewhere?
- Wastewater: what risks and opportunities demand new policy?
- The new risk management methodology for flood safety incorporates greater differentiation in terms of the level of risk to individual citizens. How can the government ensure adequate public support for the resulting spatial interventions? How will this affect the responsibilities of the various public authorities, market parties and individual citizens?
- How can the interests of flood safety, spatial policy, disaster management and evacuation policy be integrated in the implementation of the multi layered safety concept?

Traffic and Transport
- The political debate about rail transport is often dominated by incidents and short term effects. How should the rail sector develop in a longer term perspective against the background of a changing society? Are the requirements of freight and passenger rail transport also changing? What governance system will be most appropriate?
- What measures are needed to render inland shipping suitable for the expected increase in goods flows, with any interventions being sustainable in nature?
- How can the government improve the interconnectivity of public transport modalities? What is the government's role in promoting the use of the bicycle to travel to and from transport hubs?
- Does the vision document on sustainable mobility (published mid 2013) present a truly sustainable perspective?
- What contribution can the Netherlands make to increasing the sustainability of maritime transport in an international context?
- How can the sustainable management and maintenance of infrastructure be directed and coordinated more effectively? Is the current division of responsibilities between various levels of government efficient? How can engagement be fostered among those who use the infrastructure?
- How can infrastructure policy (water, rail and roads) be made more adaptive (through changes to the policy instruments) while maintaining the government's status as a reliable partner?

How does long term infrastructural planning relate to a more organic development, with opportunities for societal initiatives?
- How will the demand for passenger transport develop over the longer term? How will this affect the future of personal mobility, and where can and should the government intervene?

Safety
- What are the vulnerabilities within the physical domain with respect to the critical infrastructure? In what areas are current policy instruments inadequate to safeguard the public interests?
- What can and should the government do to increase public self reliance in the face of various incidents or crises in the physical domain (floods, nuclear or industrial incidents, incidents involving the transport of hazardous substances, zoonotic diseases)? How will the public be mobilised in the event of an incident?
- Are the government's efforts (in terms of funding, manpower and legislation) to guarantee public safety in various policy domains proportionate? What level of protection is required? How safe is safe enough? What scope for deviation from norms is permissible? How are the interests of safety balanced against other societal requirements (gas production, economic activity, spatial development, etc.)? How is the risk of a serious large scale incident weighed against other safety risks (traffic accidents, air quality)? Is quantification or even monetisation the answer, given the role played by psychological aspects? What modifications to policy are desirable?
- Greater regulation is seen as a burden, but at the same time the public expect to be protected against danger. What is the task of the government, and what is the task of society? How will this affect policy and government expenditure?

Agriculture
- Commercial fishery can be made more sustainable and revenues increased by adding value elsewhere in the chain. What policy would be appropriate in this regard?
- How should policy on sustainable building-tied animal husbandry be updated?
- What form should the Common Agricultural Policy take after 2020?
- What role do bee populations play in human food production?

Nature
- How can nature policy be further integrated with policy addressing other societal functions (healthcare, landscape and conservation, agriculture, recreation, etc.)? What conditions and instruments are needed? How can the self organising capacity be increased? How will this development affect the role of the National Forest Service?
- How can the second planning period of the Natura 2000 programme (beyond 2019) be used to promote the resilience of nature? How can economy and ecology be combined (the 'nature inclusive' economy)?
- What long term strategy must be applied to arrive at more dynamic nature management? How will the relationship between nature management and other spatial claims (agriculture, infrastructure, urbanisation) be optimised? How should the south western delta region approach long-term issues due to saltwater incursion?
- To what extent is the Netherlands able to formulate its own nature policy, within the context of policy at the European level?

Food and Food quality
- What can the government do to reduce wastage in the chain from producer to consumer? The target is a 20% reduction by 2015, with further reductions thereafter.
- What is the government's role in promoting healthy eating habits? Is current policy (based on a balanced diet which includes five food groups) due for revision, and what is the government's role in this respect? How can public awareness be increased? How can the consumer tell precisely what he is buying? What problems are caused by policy responsibility in this area being shared by the Ministry of Health, Welfare and Sport and the Ministry of Economic Affairs? Which policy amendments and new governance arrangements are desirable?

Energy and Energy infrastructure
- It is expected that gas (LNG, CNG, 'green' gas and possibly shale gas) will play a prominent role in the transition to sustainable energy. What is the best way forward and what obstacles exist within the current system?
- How can spatial planning practice be adaptive enough to accommodate future developments in sustainable energy? (This is also relevant to the theme of spatial development.)

- The Netherlands is situated in a delta area, on the threshold between salt and fresh water. What must the government do to optimally exploit the opportunities this creates in terms of energy provision?
- How can industry be encouraged to successfully reduce energy consumption?
- What 'no regret' investments in the energy infrastructure are possible?
- What can the government do to ensure heat created as a by product of (industrial) processes is used rather than going to waste? What role should the government have in creating the necessary infrastructure?
- What role should the Netherlands seek to fill with regard to European energy policy (directives, coordination of national policy, subsidy competition and networks)?

Regional economic policy

- What effective future models can be envisaged for strengthening of economic structure? How important will policy designed to strengthen the 'mainports' remain in terms of overall economic strength? Is the continuation of the sectoral approach of the 'top sectors' policy the best way forward, or should there be an integrated approach targeting agglomerations, including their SME sectors? Will economic competition between regions become the dominant underlying principle again, or are new models needed in a time in which continued economic growth is no longer assured? What should be the division of responsibilities between central government and the regions? What new instruments will the government be able to use now that the Economic Structure Enhancement Fund (Fonds Economische Structuurversterking, FES) has been withdrawn?

Knowledge and Technology

- Are the opportunities afforded by technological innovation (ICT, nanotechnology, biotechnology and the neurosciences) being adequately exploited within the physical domain? What are the likely effects of innovation on our housing, work, living and mobility patterns? What will be the consequences for agriculture, industry and the services sector? How can such effects be anticipated within policy being devised today? How can the knowledge infrastructure be used effectively and efficiently in a changing spatial setting? (This concerns an update of earlier reports, including the advisory report T*ussen feit en fictie* published by the Council for Housing, Spatial Planning and the Environment in 2001.)

Composition of the Council for the Environment and Infrastructure

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Dr Ron Hillebrand

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 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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