City Land-*Plus*

advice on 'Netherlands 2030 - an Exploration of Spatial Scenarios' and 'Housing Scenarios 2030'

English translation from Dutch summary
July 1998

Contents

Introduction

Why this brochure?

This 'City Land-*Plus*' advice is compiled by the Council for Housing, Spatial Planning and the Environment on two different scenarios of the future, one concerning spatial developments and one concerning the development of housing in the Netherlands, both with 2030 as the time horizon. The 'City Land-*Plus*' advice was published at the request of the Minister of Housing, Spatial Planning and the Environment and gives an opinion on these two scenarios, which it is hoped will make a contribution to the development of new policy.

The Council for Housing, Spatial Planning and the Environment advises the Dutch government and parliament on policy with respect to the sustainable quality of the environment and about other aspects of housing, spatial planning and the environment.

The Netherlands is a densely populated country that plays an important role in the distribution sector and as a 'main port' in North West Europe. International dynamics demand constant readjustments in the planning of the scarce space for tomorrow's society, a society that is becoming integrated at a rapid rate into a European one.

For this reason the Council for Housing, Spatial Planning and the Environment has translated a summary of the 'City Land-*Plus*' advice into English to inform interested citizens, organisations and authorities within the European Union about ideas on the spatial development in the Netherlands for the coming 30 years.

Spatial planning in the Netherlands a 'must'

The Netherlands is, with an area of approximately 40,000 square kilometres, one of the smaller countries of the European Union. The democratic traditions of Dutch society are closely interwoven with the management of scarce space and the defence of it against the waters of the North Sea and the large rivers. The favourable situation at the mouth of these Rhine and Meuse rivers led to the development of Rotterdam into the most important port in Europe and transport, transit and trade became extremely important activities in the open Dutch economy.

With 15.6 million inhabitants the Netherlands is the most densely populated country in Europe. Approximately half of the population lives in the Randstad, in which the four largest cities are located: Amsterdam, Rotterdam, The Hague and Utrecht. The uneven distribution of the population over the country is expressed in the percentage of land actually built on: 14% in the Randstad, 9% in the adjoining provinces of Gelderland and North-Brabant in the south-east of the country, and 5% in the north of the country.

Despite the increasing urbanisation, the Netherlands is still a country in which

agriculture has an important place. 60% of the total land area is in agricultural use. But the agricultural community is diminishing in size and in many areas it is closely interwoven with urban communities. The total area taken up by woodland (8%) and nature (4%) is small but is increasing slowly. The Netherlands is still a country with large areas of water; in the west and north more than 15% of the total area. These characteristics taken together make it clear that space is an extremely scarce commodity in the Netherlands, and that the use of it must be carefully planned. In addition, European developments are playing a more and more important role.

The Dutch authorities are active in spatial planning at all administrative levels. The Minister of Housing, Spatial Planning and the Environment is responsible for national spatial policy and the integration of this policy in the European context. The provinces set down their policies in regional spatial plans whilst the municipalities draw up detailed local land use plans which are binding for the citizen.

Current national policy is set down in the Fourth Policy Document on Spatial Planning. Because doubts have set in about the efficacy of this policy, the National Spatial Planning Agency, part of the Ministry of Housing, Spatial Planning and the Environment, started in March 1996 a wide-ranging national debate about spatial planning of the Netherlands in 2030.

At the same time the Director-General of Housing placed the question of the role of subsidised housing in the coming decades on the agenda. Both initiatives resulted in government documents, namely 'Netherlands 2030 - an Exploration of Spatial Scenarios' and 'Housing Scenarios - Living in 2030'[1]. These documents are commented upon in the 'City Land-*Plus*' advice by the Council for Housing, Spatial Planning and the Environment.

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[1] For both documents English summaries can be obtained from the Ministry of Housing, Spatial Planning and the Environment (telephone: + 31 79 3449449, fax: + 31 79 3449448).

Netherlands 2030, brief outline of the contents

The spatial challenges

'Netherlands 2030' explores the opportunities and threats for spatial development on the basis of six spatial challenges.

The demand for space

How does the Dutch government respond to the continuing urbanisation? Accept or resist it? The Netherlands will contain in 2030 around 18.5 million inhabitants (there are now 15.6 million), who will demand more space per capita and a better quality of housing than they now have. The demand for rural housing and high quality housing locations in general will grow strongly.

Travel

How will the growth in the transport of people and goods be dealt with? Should new forms of public transport be encouraged?

Traffic jams are a daily reality on many Dutch motorways, whereby cities become more and more inaccessible. Should there be more roads or can the existing ones better be used? What role can technological innovations or new forms of private and public transport play in all this?

Relationship between the environment and the economy

How can a sustainable balance be achieved between the economy and ecology? With the aid of technological innovations or through a new economic order? The service and information sectors will increase in importance, Rotterdam and Amsterdam Schiphol Airport will further expand their 'main port' functions. Are both developments possible without damaging the quality of the environment and nature?

Life styles and housing needs

How can a division between the privileged and underprivileged be prevented? Should there be investments in human development or in the physical environment? The Netherlands is developing into a multi-cultural society, with a colourful palette of life styles and housing needs. Can all these needs be met?

Nature and landscape

What is the relationship between man and nature? An ecocentric or an anthropocentric one? Nature conservation and biodiversity are important to Dutch society. Nature conservation organisations have large memberships. But the urban population also seeks opportunities for recreation in the nature and rural areas. Can the objectives of preservation of the species and the recreational needs of the population be adequately met?
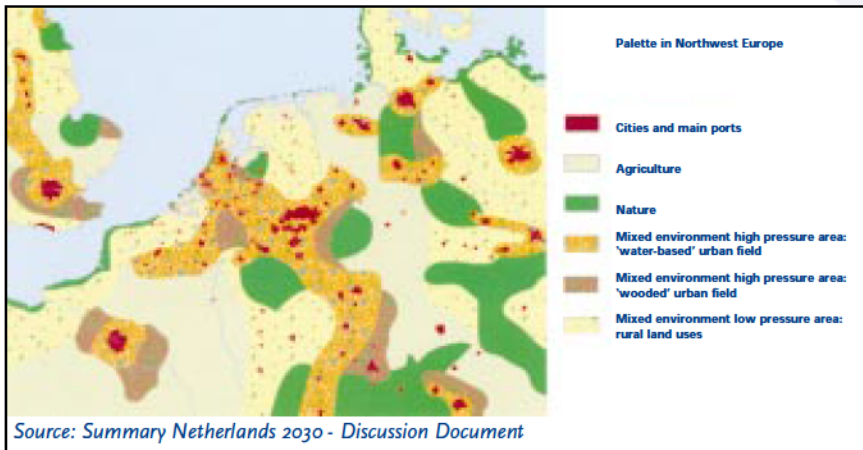
Relationship between government and the individual

How do the authorities and individuals relate to each other as far as spatial planning and land use are concerned? Should the emphasis be on centralisation or decentralisation?
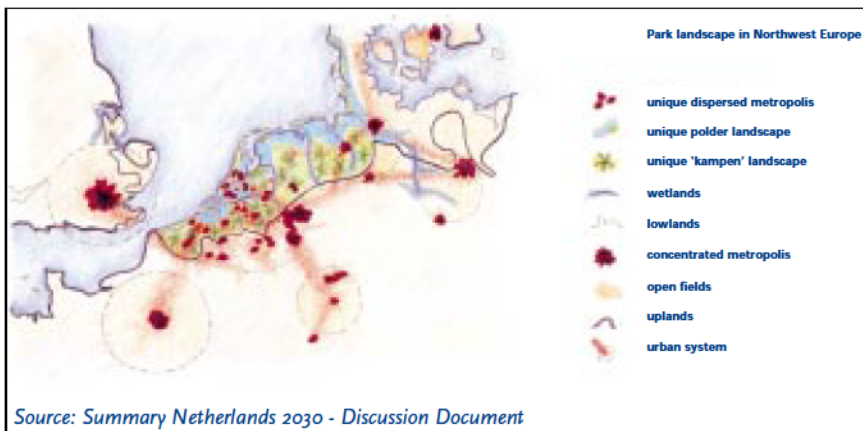
The spatial scenarios

The wide-ranging debate about these questions resulted in four spatial scenarios for the Netherlands in the year 2030: 'Palette', 'Park Landscape', 'Flow Country' and 'City Land'.
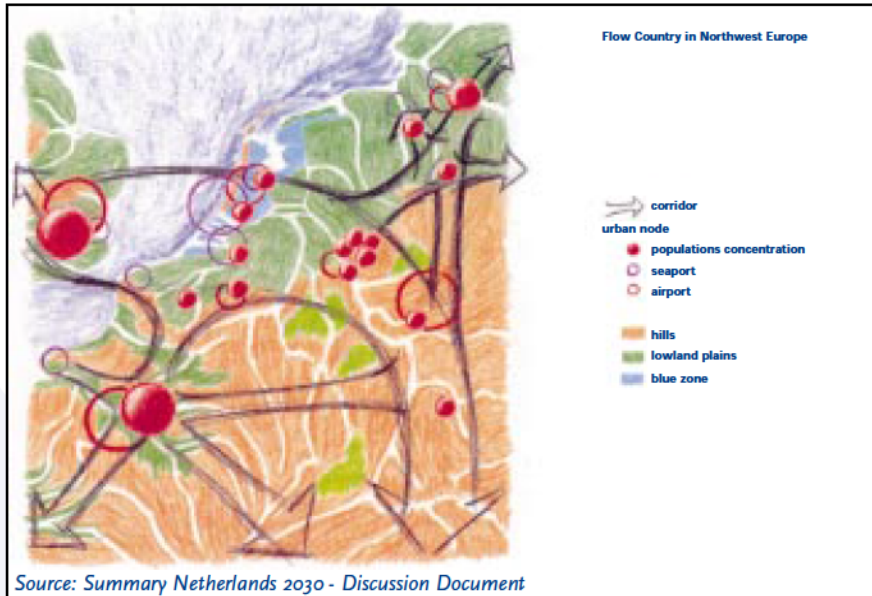
In *Palette* entrepreneurs and citizens are free to locate and settle where they wish. The distances between dwellings and workplaces increase and the distinctions between the urban and rural areas become blurred. The national authorities do not steer the urbanisation in any way; the market determines the spatial developments.

Palette in Northwest Europe

- Cities and main ports
- Agriculture
- Nature
- Mixed environment high pressure area: 'water-based' urban field
- Mixed environment high pressure area: 'wooded' urban field
- Mixed environment low pressure area: rural land uses

Source: Summary Netherlands 2030 - Discussion Document

Park Landscape reflects the symbiosis between town and country. The cities become greener and small industrial enterprises are located in the countryside. An urban dynamic alternates with the tranquility of the countryside. In Park Landscape also the distances between dwellings, workplaces and recreation areas increase. Agriculture supplements its production with management activities; farmers play an important role in the maintenance of the landscape.

Park landscape in Northwest Europe

- unique dispersed metropolis
- unique polder landscape
- unique 'kampen' landscape
- wetlands
- lowlands
- concentrated metropolis
- open fields
- uplands
- urban system

Source: Summary Netherlands 2030 - Discussion Document

In *Flow Country* the existing water, rail and road networks are the basis for land use planning. The use of public transport becomes more attractive. Capital intensive agricultural activities, dependent on good supply links, are concentrated in corridors.

Flow Country in Northwest Europe

→ corridor
urban node
● populations concentration
◎ seaport
○ airport

▨ hills
▨ lowland plains
▨ blue zone

Source: Summary Netherlands 2030 - Discussion Document

City Land is characterised by a clear distinction between town and country. The existing urban areas are, viewed in spatial terms, optimally utilised by for instance compact building. Cities become increasingly attractive through their economic activities, beautiful architecture and the expansion of cultural facilities. The urban inhabitant uses mainly public transport to travel within or between the urban networks.

Through the compact cities sufficient countryside remains for nature, landscape and recreation. The intensive agricultural activities are clustered as far as possible. Central government plays an active role in spatial planning.

City Land in Northwest Europe

▨ North Sea
▨ European cities
▨ city networks
▨ open areas in the delta area
▨ European delta
▬ cultural landscapes
✦ rivers
●●● High Speed Train connections

Source: Summary Netherlands 2030 - Discussion Document

Do the scenarios meet the spatial challenges?

The four scenarios meet according to the ministry the challenges set out in different ways:

Demand for space

The amount of land required for urban functions is smallest in *City Land*. The environmental quality in the cities can however, for this reason, come under pressure.

Travel

The differences in travel patterns are, as a consequence of the differences in spatial organisation in the four scenarios, in combination with the population increase and economic growth, considerable. The compact, clustered urbanisation in *City Land* and *Flow Country* offers possibilities for limiting air pollution and energy consumption by reducing car travel. In *Park Landscape* and *Palette* there is, however, a considerable growth in travel because of the greater average home-work distances.

As far as goods transport is concerned the differences are less pronounced. In *City Land* distribution problems can emerge in the cities. For this reason the construction of underground pipeline systems is an essential aspect of this scenario. The use of space in the vicinity of Amsterdam Schiphol airport is intensified. In *Park Landscape* the emphasis is on innovative management; Schiphol is partly relocated. *Palette* is based on technological innovations and an improvement of the transport systems.

Environment and economy

In *City Land* the cities are the focus of economic growth. The growth of the information and service sectors in the cities must lead to the development of 'brain ports'. In *Flow Country* there are possibilities for the location of firms in corridors along the infrastructure networks. In *Park Landscape* the scattered development of firms is possible provided a great deal of attention is devoted to incorporation into the landscape. All the scenarios refer to an expansion of the following functions in the rural areas: recreation, landscape management, nature development, energy production and drinking water acquisition. In *City Land* and *Flow Country* there is a heavy concentration of intensive agricultural sectors. In *City Land* a concentration of agricultural activities takes place at the most suitable locations via functional exchanges. In *Flow Country* capital intensive agricultural enterprises are situated along the transport axes. In *Palette* and *Park Landscape* agriculture makes room for new economic functions.

Life styles and housing needs

The prevention of the spatial segregation of underprivileged and privileged social groups is in the four scenarios linked particularly to the problems of the large cities and less to the viability of the rural areas. Spatial planning can make only a modest contribution to the improvement of the economic and socio-cultural conditions in the cities. It is primarily an issue for socio-economic policy. In *Palette* and *Park Landscape* especially there is a risk that a clear spatial distinction emerges between the under-privileged in the old urban areas and the privileged in the attractive, green suburban areas. *City Land* strives for a better urban quality, especially through a high standard of services, attractive open spaces and good quality public transport. In *Park Landscape* living in the rural areas is attractive to lower income groups. In *Palette* the contrasts in the city become greater as a result of the market; these contrasts are, however, made less extreme by attractive locational conditions for new firms.

Nature and landscape

Nature, landscape and water play an important role in all the scenarios. In *Flow Country* and *City Land* especially 'wetland nature' (nature in areas with water in abundance) is developed in a large scale way. In *City Land* nature development is, moreover, combined with agricultural land use, recreation and drinking water acquisition. *Flow Country* uses water as a planning principle and contains numerous possibilities for nature management by farmers. In *Park Landscape* and *Palette* the emphasis is on 'nature use' (nature areas accessible to the public for recreation and education) combined with various patterns of housing and employment.

Steering and investments

In *City Land* the emphasis is on steering by central government by means of legal instruments and binding agreements with respect to resources to be made available. In *Flow Country* central government concentrates on large projects and sets constraints within which policy agreements can be realised between regional authorities and the private sector. In *Park Landscape* the regional authorities play the most important role; they develop regional visions on the basis of objectives set at the national level. In *Palette* local authorities and social organisations play the most important role. Private actors are the most important investors.

Housing in 2030, brief outline of the contents

Parallel to the question of what the Netherlands will look like in 2030, the question was also posed how the inhabitants of the Netherlands will be living in 2030 and what role the authorities could play in the housing sector. To stimulate the discussion about this question the ministry published the document 'Housing Scenarios - Living in 2030'.

From quantity to quality

Housing policy has changed drastically in character in recent years. Centralised steering and planning has been replaced by the more dominant influence of the market. Moreover the issue is no longer that of building many new dwellings rapidly and simply but that of guaranteeing housing quality. Due to increasing prosperity in the Netherlands the range of choice for people has grown considerably and the housing market has changed fundamentally. This is expressed in the demand for a diversity of housing environments. A growth in social differences in the Netherlands must be prevented from leading to the development of ghettos.

The expansion of the housing stock to 2030 will be limited: 80% of the dwellings have already been built. Maintenance and improvement in the quality of the existing stock require, therefore, a great deal of attention.

The Housing Scenarios deal with the question of how sustainable quality in the housing environment can be combined with equal opportunties for everyone.

Agenda for the future

The Housing Scenarios summarise four points with respect to the agenda for the future:

1   The quality of the existing housing stock must be greatly improved;
2   The development of ghettos must be resisted;
3   There must be a better relationship between the prices of rented or purchased dwellings, the quality of these dwellings and the purchasing power of the inhabitants;
4   Housing corporations can play an important role in urban management;
5   Reconstruction projects must be custom-made.

Housing policy is oriented on the realisation of this agenda, whereby the authorities are striving for a balance between individual and collective interests under the motto: freedom where possible but action where necessary.

The Housing Scenarios provide the basis of a discussion about future housing policy. Due to the increasing inter-relationship between housing, on the one hand, and environmental and spatial policy, employment and social policy, on the other, it is important that persons and organisations outside the housing sector take part in the debate.

The advice of the Council for Housing, Spatial Planning and the Environment

The Minister of Housing, Spatial Planning and the Environment requested the Council for Housing, Spatial Planning and the Environment to advise on the policy implications of the 'Housing Scenarios 2030' and 'Netherlands 2030 - an Exploration of Spatial Scenarios'.

The advice of the Council regarding Housing Scenarios 2030

The Council will give a more detailed advice on the 'Housing Scenarios 2030' after the national debate about the housing problems has taken place. For the moment brief comments by the Council suffice. The Council requests more attention to be devoted to the social aspects at the lower end of the housing market and the role housing policy can play. It deems further research to be necessary into the sustainability of housing, whereby in addition the travel and recreational needs of the consumers are also considered.

The Council is satisfied with the modification of the compact city policy as advocated in 'Housing Scenarios 2030' because a rigid application of this concept can conflict with future housing quality demands. Here there is common ground with 'Netherlands 2030 - an Exploration of Spatial Scenarios'.
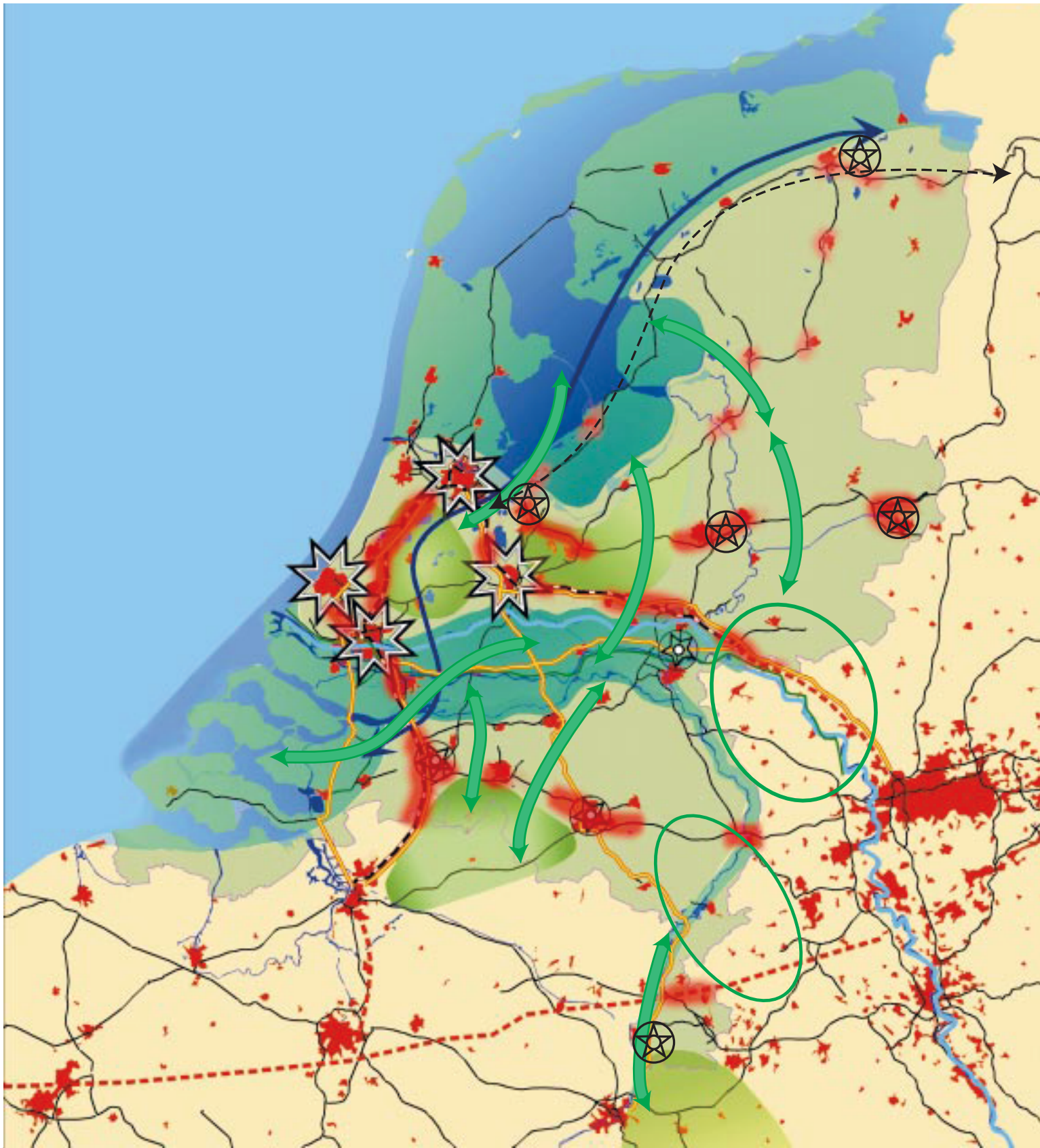
The advice of the Council on 'Netherlands 2030 - an Exploration of Spatial Scenarios'

Spatial policy must be the central framework in which investments in the infrastructure in the Netherlands must be evaluated. A long term vision on the spatial planning in the Netherlands is in the opinion of the Council indispensible. Spatial changes are taking place in the Netherlands so rapidly that existing policy, set down in the Fourth Policy Document on Spatial Policy, is no longer adequate.
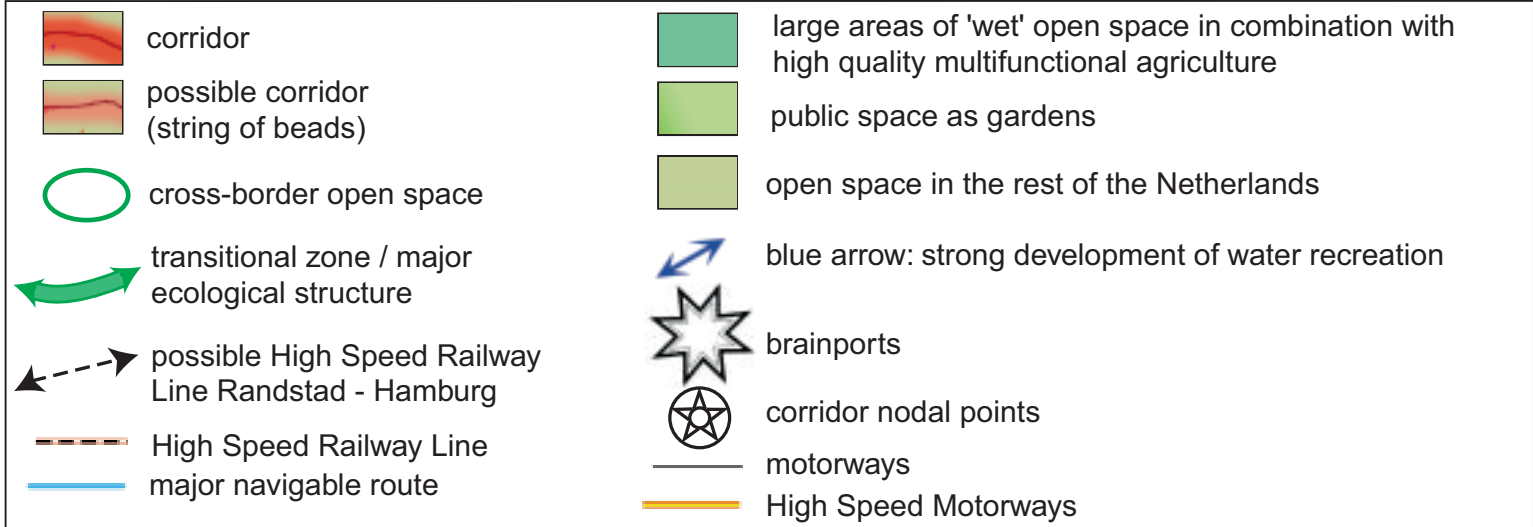
Social and spatial trends

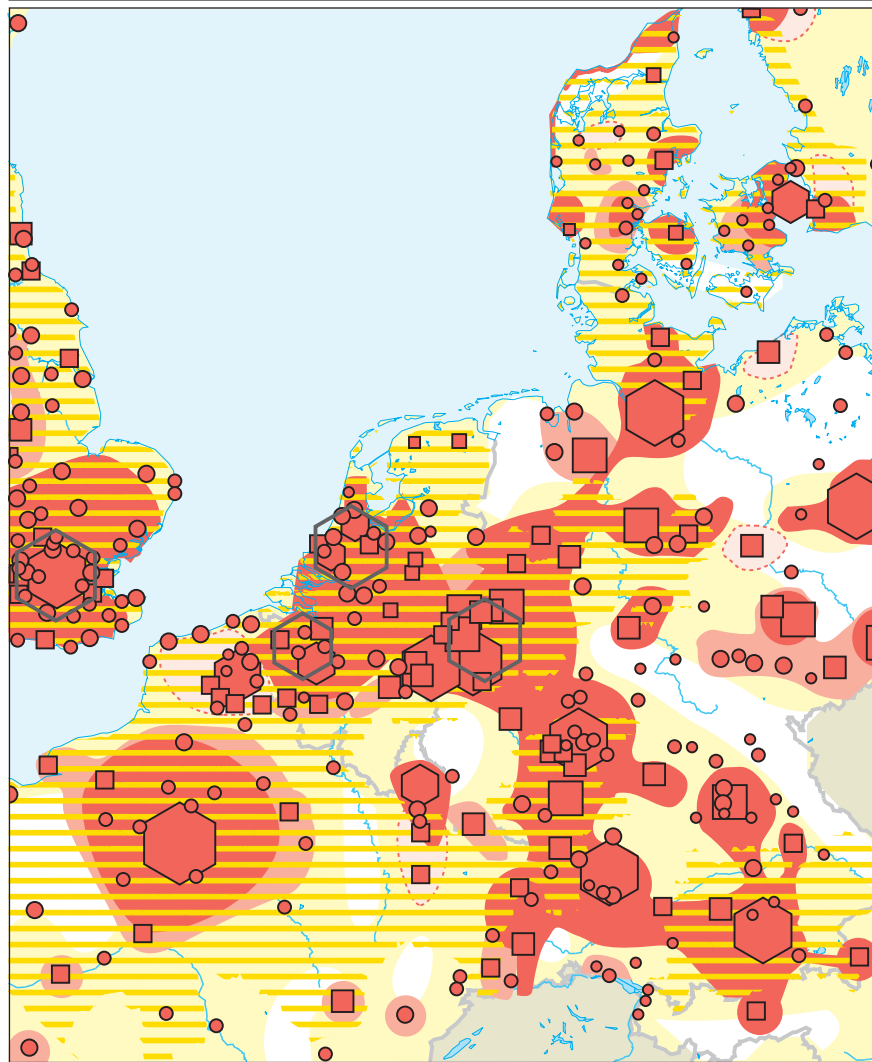### Increase of use of space per individual

More space will be required in the future for housing. Up to 2020 an increase of 1 to 1.5 million dwellings is expected. Because of the ageing of the population in the coming decades, the number of one person households will increase considerably. People are also placing different demands on housing. Technological developments make it possible, with Internet and the computer, to work at home or gain access to a wide range of services and facilities. For this, space is needed in the home. The amount of built-up space per individual is, therefore, increasing, both with respect to actual space in the home and also services, open space and infrastructure.

source: VROM-raad

|			
corridor		large areas of 'wet' open space in combination with high quality multifunctional agriculture	
possible corridor (string of beads)		public space as gardens	
cross-border open space		open space in the rest of the Netherlands	
transitional zone / major ecological structure		blue arrow: strong development of water recreation	
possible High Speed Railway Line Randstad - Hamburg		brainports	
High Speed Railway Line		corridor nodal points	
major navigable route		motorways	
		High Speed Motorways	

RURAL-URBAN RELATIONSHIPS

existing and expected land-use pressure

- strong
- of lesser intensity
- uncertain

types of rural area

rural area facing decline or abandonment

medium productive agricultural area

A shift of functions from the cities to the rural areas is also occurring. The locational behaviour of wealthy enterprises and households is resulting in a strong spatial dynamic in the Netherlands. The Dutch government finds it difficult to steer this development because it is taking place in an international spatial-economic context.

International urban networks

Urban networks are characterised by heavy flows of information, capital and goods. In the Netherlands the Randstad and the regions of southern and eastern Netherlands are part of the central urban network of North West Europe - see the map 'Town-Country Relationships'[2]. This network extends from South East England via the Rhine corridor to Northern Italy and is expanding to the cities of Northern and Eastern France.

Characteristic of this dynamic European core zone is a large number of headquarters of banks and multinationals, the considerable presence of hi-tech enterprises, the large number of universities and research institutions and the wide availability of international airports.

## Contrasts in the Netherlands

In the Netherlands an important contrast has emerged between the urban regions that are part of the central urban network of North West Europe and the relatively peripheral and less densely populated regions of Northern Netherlands and Zeeland. These latter regions have a great deal of space, and many nature areas and attractive cultural landscapes but they also have relatively high unemployment and low prosperity.

In the Randstad the links between the high value activities of urban centres (business services, radio and television organisations, publishers, cultural institutions etc.) are much stronger than in the regions in Eastern and Southern Netherlands and the Randstad has earned its place in the list of metropolises such as London, Paris and the Rhine-Ruhr region. The position of the Randstad is strengthened by the development of the 'main ports' of Rotterdam and Amsterdam (Schiphol airport).

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[2] The map *'Rural-Urban relationships'* shows the urban system of North West Europe. It can be clearly seen how Southern and Eastern Netherlands, situated in the urban sphere of influence of the Randstad, the Rhine-Ruhr area and the 'Flemish Diamond', are themselves part of the central urban network of North West Europe. Nevertheless the population density of the Randstad provinces (average ca. 1000 inhabitants/sq. km) is around twice as high as in South-East Netherlands (ca. 420 inhabitants/sq. km) and five times as high as in Northern Netherlands (ca. 200 inhabitants/sq. km) (source: Central Office of Statistics). It is also apparent from the map that the Netherlands, seen from a European perspective, contains highly productive agricultural land. The pressure on the land is great, as can be seen by the high prices per hectare of cultivated land. Agricultural land which is freed from its function immediately finds a new function.

ACCESSIBILITY, INFRASTRUCTURE AND TRANSPORT
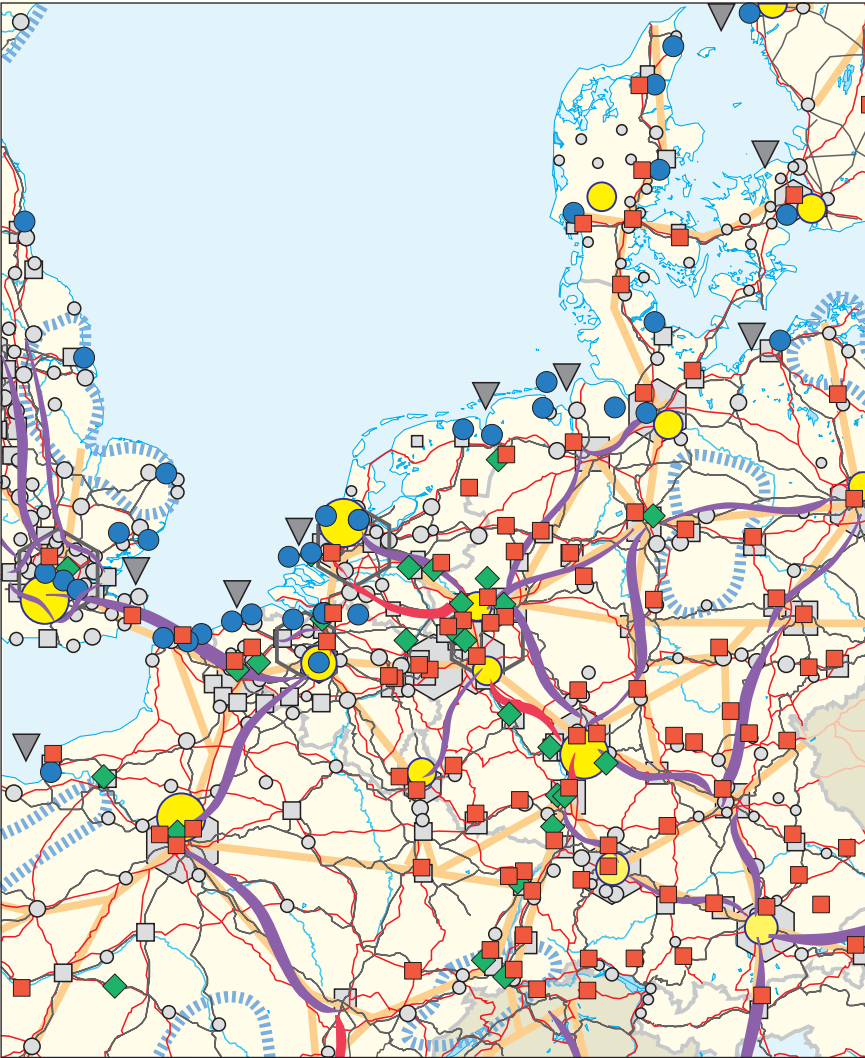
main european networks

— road network

— conventional rail network

— high speed rail network
(existing and planned)

multimodal
transshipment terminals

■ road rail terminal

◆ inland waterway terminal

main traffic axes

— mainly road congested corridor

— congestion corridor for al transport modes

● major airports (community connecting points)

▼ major seaport (area)

accessibility

peripheral and remote area

nologsche Dienst

Because of the high population density both the economic development and the quality of the envrionment in the Randstad are under threat. Congestion is reducing the accessibility of the Randstad - see the map 'Accessibility, Infrastructure and Transport'[3]. Good and affordable locations for firms are scarce.

Exodus from the city

For many years there has been exodus of people from the cities to the surrounding areas. This applies not only to households but to firms and public amenities, and has far-reaching effects.

- ¬ In the cities the proportion of less well off households is growing. It is mainly the wealthier households that are moving to the suburban areas.
- ¬ Through the dispersal of firms 'urban fields' are emerging. The total urbanised area is thereby growing rapidly.

In the Green Heart of the Randstad a restrictive building policy is still applied to prevent the emergence of an urban field. In Southern and Eastern Netherlands there is no equivalent protection of open space.

Urban quality will in the future be more and more a function of varied, intensive and high quality interaction networks. Compactness is no longer a pre-condition for this.

This observation was essential to the decision of the Council to draw up its own scenario for the Netherlands in 2030, called City Land-*Plus*.

[3] The map *'Accessibility, Infrastructure and Transport'*: the density of the transport network reflects the population density within Europe. Within the central urban network of North West Europe the High Speed Train network is being constructed, so that the travel time over land will be halved. For areas not connected to this network, such as Northern Netherlands, relative peripherality will increase.
The pressure on the major transport axes remains high due to the growing demand for travel: the number of private cars in the Netherlands increased between 1985 and 1995 from almost 5 to 6 million. 78.3 billion kilometres or 81% of the number of kilometres travelled by road in 1994 were by private cars. In 2000 this number will be 83.5 billion. Freight traffic accounted for 16% of the number of kilometres travelled in 1994 but increased by 60% between 1985 and 1994! This trend appears to be continuing. An increase in the capacity on existing routes will barely be able to accommodate the traffic demand.

The Council's spatial scenario: City Land-Plus

The Council has assessed the four scenarios against criteria for sound spatial planning. The Council is of the opinion that City Land is the best starting point because it is the most economical with the use of space and does most justice to the different qualities of town and country. City Land also responds to the projected social and spatial trends, but this aspect needs to be further developed.

The Council proposes, therefore, to amend to the City Land scenario with respect to a number of points. This results in a new scenario: City Land-*Plus*.

The additions in City Land-Plus

¬ Continue the current compact city policy, but on the basis of considerations of expediency add to this controlled and regionally differentiated corridors.
The Council defines a corridor as an urbanisation axis, built along transport links via roads and railways and where possible water, comprising existing urban nuclei in combination with intermediate zones at suburban densities, intended for firms and offices as well as services and dwellings. The intention of the corridors is to meet the urgent location demands of households and firms in a controlled way and thereby form a more realistic framework for the clustering of decentralised urban land use.

¬ Relate more emphatically to spatial differentiation in the Netherlands at the international and national levels, upon which the designation of potential corridors is based. Moreover in consultation with the German and Belgian authorities high quality cross-border open spaces need to be designated, green buffer zones between the international urban networks. At the national level the clear contrast between the Randstad, the South and East of the Netherlands and the relatively peripheral Northern Netherlands and Zeeland needs to be taken into consideration.

¬ Given the differences in economic dynamics, population pressure and natural and cultural potentials between the Randstad, on the one hand, and Northern Netherlands and Zeeland, on the other, the fundamental question of what strategy is to be chosen for these peripheral areas must be answered. Should they connect to the central urban network of North West Europe with the associated development of the infrastructure, economy and urbanisation or should they choose to strengthen and protect their ecological and recreational potentials? In the case of the latter a wetland-open-space-strategy should be pursued. Wetland nature development and the development of sustainable agriculture, recreation and tourism can be encouraged.

¬ Irrespective of the fundamental choices that must be made for the rural areas of Northern Netherlands and Zeeland, a renewal strategy is required to strengthen the socio-economic structure and the spatial quality of the most peripheral villages in these areas.

¬ In conjunction with the corridors, as defined and applied above, it is self-evident that the following must be added to 'the corridor nodal points' indicated in the City Land scenario: the cities of Twente, the Apeldoorn/Deventer/Zutphen urban triangle, the city of Groningen, the urban field of Het Gooi/Almere and Maastricht-Heerlen (see the map 'National Spatial Infrastructure City Land-*Plus*').

Strong government role

The scenario outlined above offers more space for decentralisation than the City Land scenario, but shows a considerably greater concentration than the actual spatial developments at present. For this scenario to be realised a strong steering government role is required.

A strong government must also guarantee the necessary investments to realise the scenario outlined. That implies that the following national policies for the period 2010-2030 should be considered:

a To ensure the integration of the Randstad and the cities in South-East Netherlands in the central urban network of North West Europe, an improvement of the rail infrastructure for passenger transport is necessary. Investments are also necessary for the development of the infrastructure and logistics of the various forms of goods transport. Congestion of national and international road traffic must be counteracted;

b Invest in the 'main port' facilities in the vicinity of Amsterdam and Rotterdam (consider the desirability of a second national airport);

c Create a high quality and differentiated urban regional public transport; increase the capacity of the rail network and, if unavoidable, the road network;

d Restructure the urban centres into attractive locational environments for enterprises and higher education institutions: the cities as 'brain ports';

e Restructure the urban centres into attractive residential and cultural environments (facilitation of public cultural and recreational amenities, restructuring of public spaces);

f Increase the diversity of type of dwellings and recreational environments and, thereby, the spatial and social diversity in the cities;

g Invest in new functions in the rural areas in order to:
   · realise the ecological infrastructure in the Netherlands;
   · retain the production space for a sustainable agriculture;

- concentrate certain agricultural sectors, such as intensive cattle rearing or horticulture under glass, in corridors;
- create recreational areas of regional or even national or international significance.

In this way, in the opinion of the Council, a scenario is outlined with which the spatial problems identified can be met in a balanced way. The Council is of the opinion that this scenario responds to the location demands of enterprises and households and is more operational for taking investment decisions, without leading to a real loss of collective values in Dutch society.

Annex: Composition of the Council for Housing, Spatial Planning and the Environment

The Council for Housing, Spatial Planning and the Environment is made up as follows:

Dr Th. Quené, Chairman
Ms M.M. van den Brink
Mr L.C. Brinkman
Ms M. Daalmeijer
Professor W.G.J. Duyvendak
Professor R. van Engelsdorp Gastelaars
Mr J.J. de Graeff
Professor W.A. Hafkamp
Ms F.M.J. Houben
Professor J. de Jong
Ms M.C. Meindertsma
Mr P.G.A. Noordanus
Professor I.S. Sariyildiz
Professor J. van der Schaar
Professor W.C. Turkenburg
Mr T.J. Wams
Ms L.M. Wolfs-Kokkeler

Observers
Mr P.J.C.M. van den Berg, on behalf of the Central Planning Bureau
Professor N.D. van Egmond, on behalf of the RIVM
(National Institute for Public Health and Environmental Protection)
Mr Th.H. Roes, on behalf of the Social and Cultural Planning Bureau

General Secretary
Mr W.A. Haeser