

# **Sustainability Monitor for the Netherlands 2011**



# Foreword

Together with the Netherlands Institute for Social Research, the Netherlands Environmental Assessment Agency and the Netherlands Bureau for Economic Policy Analysis, Statistics Netherlands has developed the Sustainability Monitor for the Netherlands. This monitor shows where the Netherlands is doing well from the point of view of sustainability, and where there is cause for concern. The monitor is a contribution to the current debate among politicians, policymakers and scientists about the long-term development of Dutch society.

This brochure presents a summary of the main results of the Sustainability Monitor for the Netherlands 2011. The statistics and visualisations can also be found on Statistics Netherlands' website ([www.cbs.nl](http://www.cbs.nl)) and are updated annually.

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The Hague/Heerlen/Bilthoven, September 2011

# The Netherlands: sustainable?

## Concerns about sustainable development

From the perspective of sustainable development, there are four areas of concern in the Netherlands:

- **Environment and nature:** climate change is a global threat to the environment and to nature. Biodiversity is declining across the world, and thus also in the Netherlands. Added to this, the Netherlands indirectly uses relatively large amounts of natural resources - such as agricultural land - in other parts of the world.
- **Financial sustainability:** the Dutch government debt is substantial, and costs of health care and social security are increasing. This may put these provisions at risk for future generations.
- **Knowledge level:** knowledge is prerequisite for lasting welfare. In the Netherlands, however, relatively little is invested in research and development (R&D). In addition, the education level of the Dutch population is not very high compared with other countries in Europe. Moreover, relatively many pupils leave school without a basic qualification.
- **Disadvantaged position of non-westerners:** people with a non-western foreign background in the Netherlands are at a disadvantage in a number of respects. Relatively more of them are unemployed and have a low income.

## Policy decisions

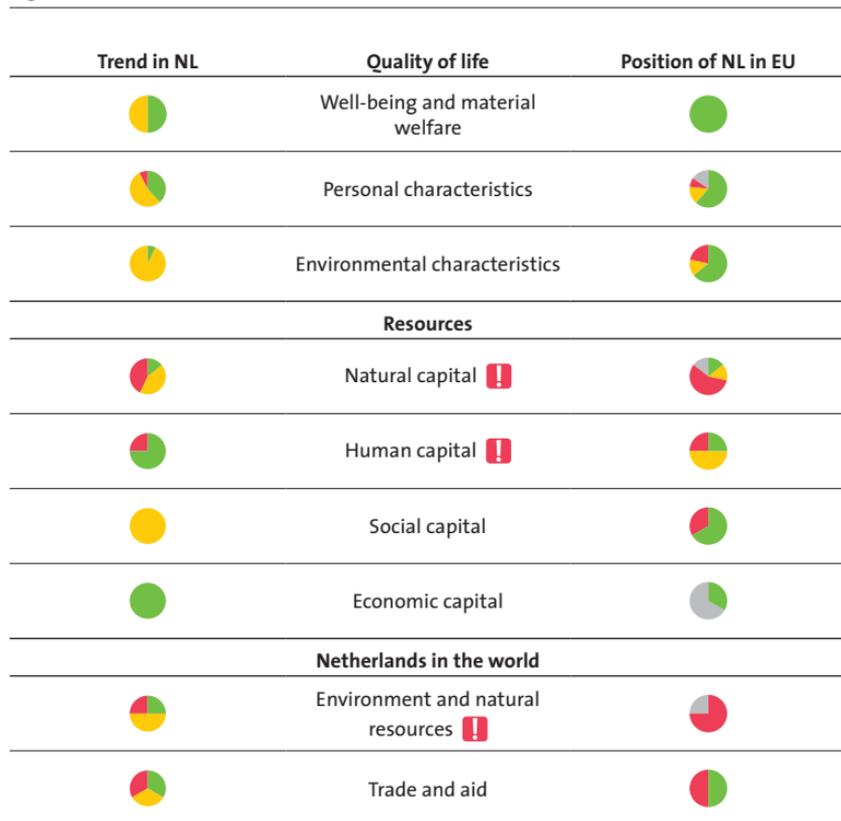
Policymakers will have to address these four problem areas. The five main aspects for which policy decisions must be made are:

- **Greening the economy:** economic growth should be accompanied by a minimum use of fossil energy and depletion of natural resources. This requires a global approach. Strongly growing econo-

mies like those of China and India use a lot of natural resources, leading to more scarcity and higher prices. The threat to the climate and to biodiversity should be tackled globally.

- **Public or private funding:** costs of public and semi-public provisions such as pensions and care continue to increase. Investment is also necessary in other areas such as knowledge and education. Particularly in times of crisis, the questions arise: to what extent is the government completely responsible for financing these areas? And is it possible or desirable to let households and businesses foot the bill directly?
- **Consequences of the shrinking labour force:** the Dutch population will continue to age in the coming decades. Welfare can be maintained by increasing labour participation and increasing productivity. Quality of education plays an important part in this respect. The decrease in the population will also have consequences for spatial planning.
- **Prevention and freedom of choice:** it is easier to manage care spending if people remain healthy to older ages; i.e. if they eat healthily, smoke less and exercise more. People can change their consumption behaviour to reduce the detrimental effects of some forms of consumption on biodiversity and the climate. The government will have to decide on the level of intervention in the lifestyle and consumption pattern of its citizens.
- **Distribution and inequality:** education is an important factor in improving the disadvantaged position of people with a non-western foreign background. People with higher education levels have a higher income, have more healthy years to live, and are more satisfied than those with lower education levels.

**Figure 1** Scores on main dimensions



- trend with negative effect on sustainability, or low international ranking
- trend with neutral or unknown effect on sustainability, or average international ranking
- trend with positive effect on sustainability, or high international ranking
- no data available for comparison with other EU countries

# Sustainability in the Netherlands

**‘Sustainable development is development that meets the needs of the present without compromising the ability of future generations both here and in other parts of the world to meet their own needs.’**

(based on *Our Common Future*, Brundtland Commission, 1987)

Three goals are central in the pursuit of sustainability: guaranteeing a sufficient quality of life (1), that is not at the expense of the ability of future generations to meet their needs (2), and that does not have a detrimental effect on the quality of life in other countries (3).

Figure 1 illustrates these three aspects of sustainability for a number of themes. The circles show how they score on a number of indicators. The column ‘Trend in NL’ indicates whether the development in the Netherlands since 2000 has been positive (green), negative (red) or neutral (yellow). The column ‘Position of NL in EU’ compares the Dutch scores with those of the other 26 countries in the European Union. If an indicator is green, the Netherlands is one of the nine highest scoring countries. Red indicates that the Netherlands is one of the nine lowest scoring countries. Yellow means that the Netherlands is in the middle category. An exclamation mark denotes that the theme is an area of concern, i.e. the score is low compared with the past, or compared with other countries.

## **High quality of life, but depletion of natural resources**

The scores on how sustainable the Netherlands is paint the following picture:

- By European standards, quality of life in the Netherlands is very high. Material welfare has even increased in the last ten years.
- There are indications that the realisation of welfare in Netherlands is depleting stocks of natural resources, leaving future generations to deal with the problems this will cause. Only the economic indicators show a predominantly positive trend, although the credit crisis has slowed down economic growth and government debt has increased substantially.
- Compared with other European countries, the Netherlands indirectly uses a lot of natural resources in other parts of the world,

especially in the poorest developing countries. Substantial imports of raw materials and biomass are examples of this. Pressure on the environment has increased continually in recent years. Loss of biodiversity and emission of greenhouse gases are important negative effects of production. On the other hand, the Netherlands is relatively generous in terms of development aid and income transfers to poor countries.

## Present situation

### **Prosperous and content**

The indicators show that the Dutch are a prosperous and content people. Material welfare, in terms of per capita consumption, is high in the Netherlands compared with other countries in Europe. Moreover, welfare has increased noticeably in recent decades. Well-being is measured by asking people how satisfied they are with their lives; and people in the Netherlands report a high level of satisfaction. The figures on satisfaction have been quite stable for thirty years now.

Other indicators, too, point towards a high quality of life: the Dutch feel healthy and safe, they have a lot of social contacts and are satisfied with how they spend their free time. Surprisingly, the Dutch perceive their quality of life to be better than the scores on the welfare indicators suggest.

There is also some inconsistency, however. Self-reported health has been stable for a long time now, whereas healthy life expectancy has increased. And although income inequality between men and women is decreasing, it is still large compared with other countries.

### **Trust-based society**

The Dutch have a relatively high level of trust in people as well as institutions such as the police and parliament. Together with the Scandinavian countries, the Netherlands is one of the *high-trust societies*. In spite of this, nearly 8 percent of Dutch people say they are discriminated against. Moreover, this percentage has increased slightly in the last ten years.

### **Nature under pressure from shortage of space**

The Netherlands is one of the most densely populated countries in the world, it has a relatively high level of welfare, relatively large numbers of livestock and cars, and a relatively large sector of heavy industry. This is one of the main reasons the country has depleted its natural resources quickly in the course of time. Agriculture, housing, work and infrastructure use up a lot of land. The demand for space to live and work in is still rising and this is putting more and more pressure on nature and biodiversity. No less than 85 percent of the original biodiversity of the Netherlands has already been lost.

### **High energy intensity**

The trends for energy and climate in the Netherlands are negative. At the present rate of use, Dutch natural gas reserves will be exhausted in about twenty years' time. Although the proportion of renewable energy has been growing in recent years, the percentage produced is still low compared with other countries in Europe. The Netherlands also has a relatively energy intensive economy. This means that a lot of CO<sub>2</sub> is emitted per euro produced.

### **Cleaner air, cleaner water**

The quality of soil, water and air in the Netherlands has improved. In spite of this, soil and water quality are not very high by European standards. Because of the high population density and the intensive use of the environment by agriculture, industry and traffic, it will not be easy to turn this around.

### **High labour participation, short working week**

Working hours are relatively short in the Netherlands. The main reasons for this are the low number of hours per full-time job and the large number of part-time workers. In no other EU country do so many people work part-time as in the Netherlands. This is offset by a high labour participation rate, however.

### **Welfare growth result of higher production per hour worked**

Just as in other western countries, the number of hours worked per capita will come under increasing pressure from population ageing. The increase in the labour force has slowed down in recent years. This may lead to wage increases, which in turn may lead to more investment in capital goods such as machines and infrastructure.

An increase in welfare in the coming decades will therefore have to be realised through higher production per hour worked.

### **Knowledge development essential**

Maintaining the level of investment in knowledge will be an important factor in raising productivity. The knowledge economy has expanded enormously in the last fifty years, but since 1995 the growth rate has slowed down.

R&D investment has amounted to no more than 1.8 percent of the gross domestic product (GDP) for years now. This percentage puts the Netherlands only in the middle group in the EU rankings. The structure of the Dutch economy is the main reason for the nation's relatively low R&D intensity. Industry sectors that invest extensively in knowledge are relatively small in the Dutch economy, or they belong to the services sector where this investment is not counted.

Another crucial factor for the increase in labour productivity is education. The education level in the Netherlands has increased steadily. Again, its education level puts the Netherlands in the middle group in the European Union.

### **Government finances deteriorated**

Before the credit crisis Dutch government finances were in good shape. In 2007 the Netherlands had a slight budget surplus and government debt was 45 percent of GDP. These figures meant that the Netherlands scored favourably within Europe. Because of the credit crisis the Dutch government had to come to the aid of a number of banks, while its revenues were decreasing. In 2010 the surplus on the budget turned into a deficit of 5.4 percent, and the debt rose to 62.7 percent of GDP. In many other European countries the consequences of the crisis were much more severe, however.

### **Exhaustion of global stocks of natural resources**

Within the European Union the Netherlands is one of the largest importers of natural resources. This trade provides developing countries with income that is partly reinvested in the economy. But these imports also mean that the Netherlands contributes to the exhaustion of global stocks of non-renewable natural resources and to the decline of biodiversity.

This is especially a problem for many African countries which are highly dependent on these exports of natural resources for their income.

### **Development aid relatively high**

The amount of money the Dutch spend on development aid has been stable in the last ten years, and is high compared with that of other EU countries.

Income transfers in the form of money remitted by migrant workers to family and friends in their home country are also increasing. These amounts, too, are high compared with the rest of the EU.

# Knowledge development essential



# Sources of welfare



natural capital



human capital



social capital

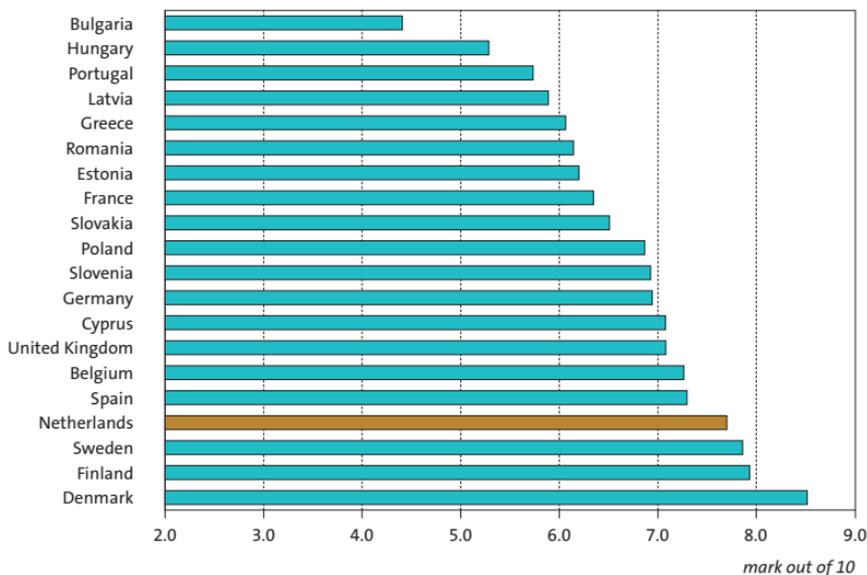


economic capital

# Well-being

- The Dutch are content with their lives. This level of satisfaction is also high by international standards.
- They are also positive about their homes and how they spend their free time.
- The Dutch are more satisfied with their education than ten years ago. However, this puts them no higher than in the middle of the European rankings.
- Healthy life expectancy has increased in the past ten years. The level of perceived health has not changed though.
- In many aspects, the Dutch perceive their well-being to be higher than objective scores would suggest.

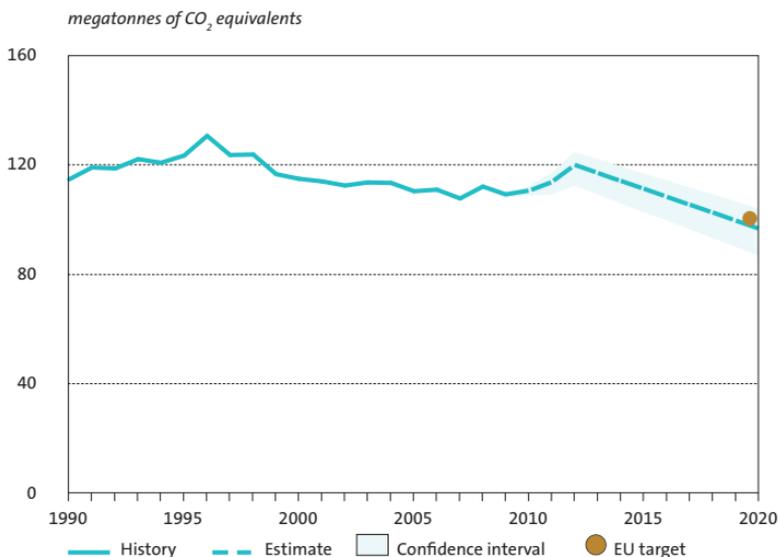
Satisfaction by country, 2008



# Climate and energy

- The emission of greenhouse gases in the Netherlands has decreased since 2005. The EU target of a 20 percent reduction in greenhouse gas emission by 2020 seems feasible.
- To limit the rise in temperature to 2 degrees, emission reductions of 80 to 90 percent will have to be realised for greenhouse gases by 2050. This requires a follow-on policy, aimed at among other things increasing energy efficiency and increasing the share of renewable energy.
- As a result of the consumption of its own energy stocks, the Netherlands will become increasingly dependent on other countries, unless alternative energy sources are deployed.
- Although the share of renewable energy in the Netherlands has tripled since 2000, it is still small compared with other countries. Under current policy, the share of renewable energy will probably not increase by enough to meet the European requirement of 14 percent in 2020.

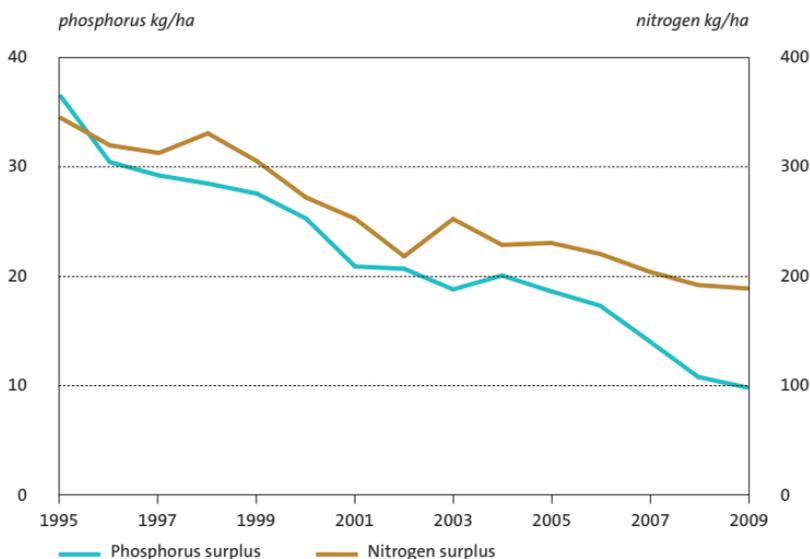
## Emission of greenhouse gases



# Quality of local environment

- Levels of air, water and soil pollution have decreased considerably in the last few decades. This has improved the quality of the environment. Air quality in particular has improved. In spite of this, pressure on the environment is high compared with other European countries and the current exposure to environmental pollution still affects health.
- As less and less manure and artificial fertilisers are used, smaller amounts of nitrogen and phosphorus are deposited in the soil. However, because of its relatively large livestock sector, the Netherlands still has the highest level of nitrogen surplus and the second highest level of phosphorus surplus per hectare of agricultural land in Europe.
- Since 2000 the improvement of water quality has been stagnating in both the Netherlands and Europe. In 2009, less than 5 percent of Dutch waters complied with the 'Good status' norm of the Water Framework Directive.

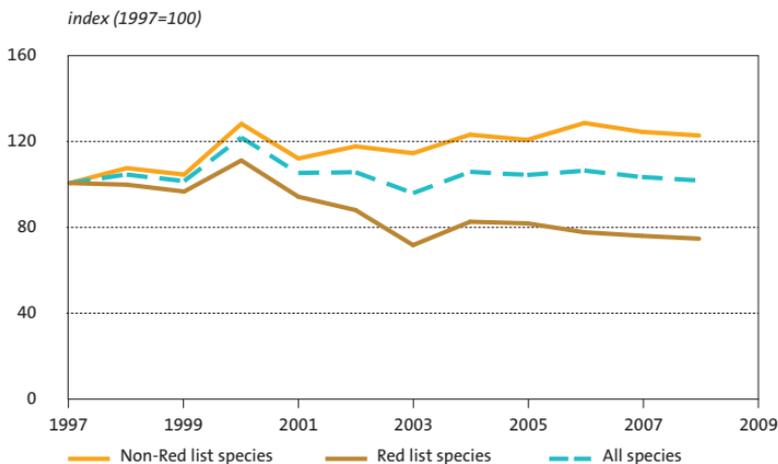
## Phosphorus and nitrogen surpluses on agricultural land



# Biodiversity and landscape

- The Netherlands has only small areas of forest and nature compared with other countries in Europe. The decline of biodiversity has not come to an end, but has slowed down in recent years. The main reasons for this are the creation of new natural areas, targeted nature management and the improved quality of the environment.
- In natural areas, the quality of two in five ecosystems has not declined further in the last ten years. In agricultural areas, on the other hand, the quality does seem to be decreasing.
- Populations of threatened species on the Red List have been decreasing further in the last ten years. Other species are doing well though: their populations are increasing.
- The mark given for Dutch landscape is increasing slightly, but the 8-out-of-10 target for 2020 will probably not be realised.
- Part of the food eaten in the Netherlands is produced abroad. The Dutch therefore indirectly use land in other countries, and thus also contribute to the decline of global biodiversity.

## Populations of Red List and non-Red List species

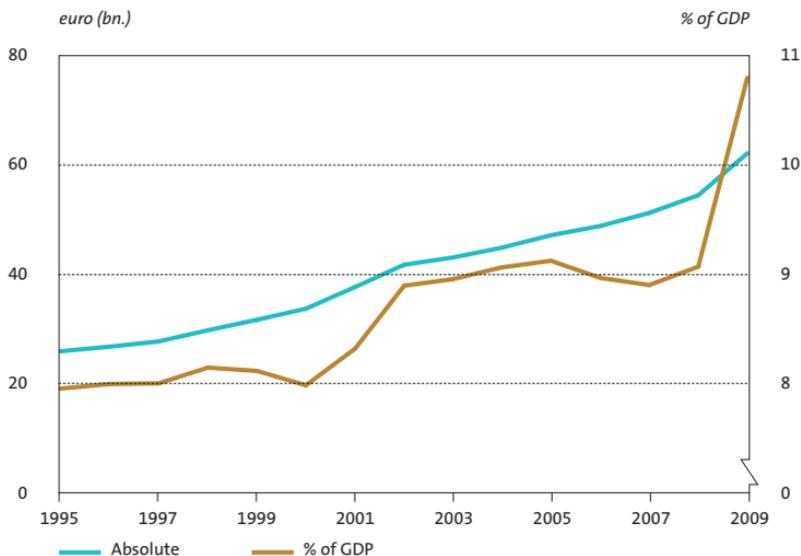


*Classes included: butterflies, mammals, reptiles, amphibians, breeding birds, dragonflies and mushrooms*

# Health

- Life expectancy is high in the Netherlands. For men it is even one of the highest in European Union. For women it is around the EU average.
- In terms of mental health (depression), the Netherlands ranks relatively well within the European Union.
- The cost of health care has risen in recent years. It will probably continue to rise as a result of population ageing and a further increase in life expectancy.
- To keep care expenditure at a manageable level, it is important that people stay healthy as long as possible. A healthy lifestyle is essential for this. One important aspect in this respect is the discouragement of unhealthy habits such as smoking, getting too little exercise, and excessive and unhealthy food intake.

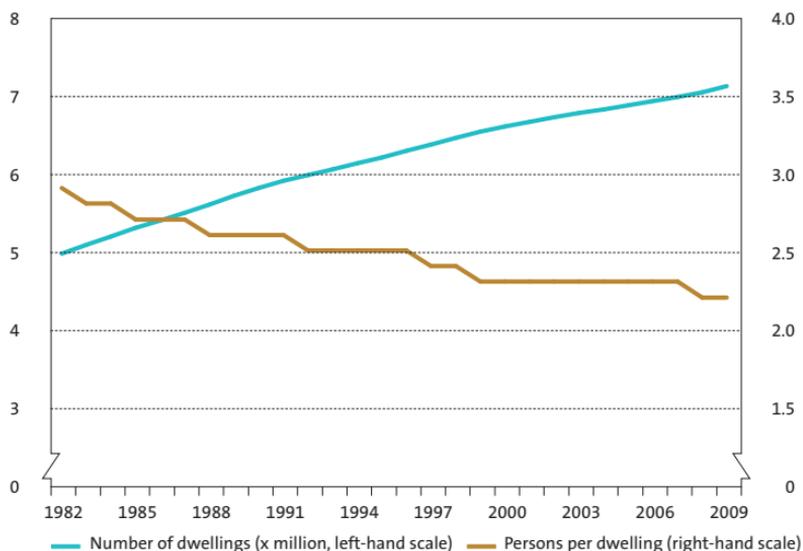
Health care expenditure



# Housing and residential environment

- The Dutch are very positive about the quality of their homes. Indeed the quality of housing is high compared with that in other countries in the European Union. Relatively many people experience neighbourhood nuisance, though.
- The number of people moving from rented accommodation to buy their own home has decreased since 1988. People starting out on the housing market are finding it tough because of high property prices, high-income tenants staying on in cheap rented dwellings, and a slump in new construction.
- It has become more affordable to live in the Netherlands, although the cost of living is high. The Dutch do not perceive their living expenses as high, however.
- In spite of the slight increase in the number of available homes, there is still a shortage on the housing market. In the large cities in particular, waiting lists for accommodation in the social rent sector remain a serious problem.

Dwellings and occupation rate

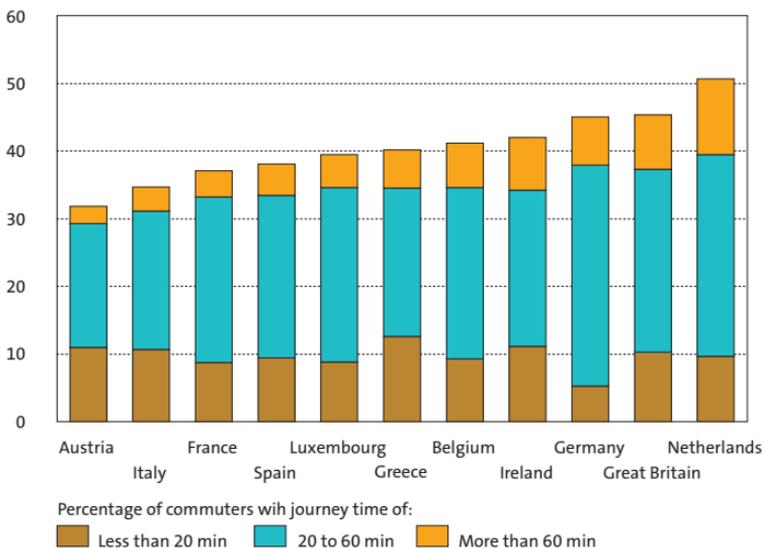


# Mobility

- The mobility of the Dutch population is increasing, although at a slower and slower rate. Commuting from home to work in particular has increased in the last ten years.
- The Dutch spend more time commuting than any other population in Europe.
- Air pollution caused by road traffic has decreased substantially in recent decades. However, three in ten people experience nuisance from road traffic.
- Road traffic deaths have decreased in the last ten years. The Netherlands has one of the lowest road traffic fatality rates in Europe.

## Commuting times

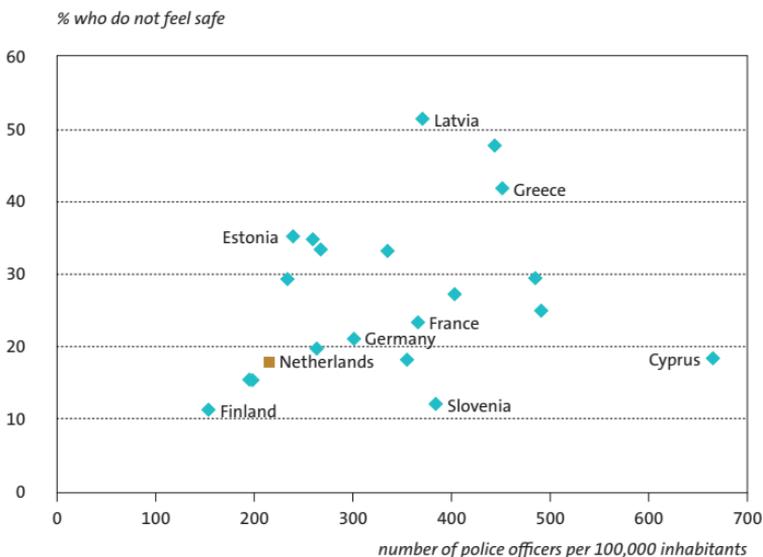
*commuting times in minutes per day*



# Safety

- Crime rates have been decreasing overall in recent years. The number of cases involving assault and threatening behaviour is increasing, however. Compared with other countries in Europe, the Netherlands is about average in terms of crime, although the number of underage suspects is relatively high.
- The number of people who say they do not feel safe has fallen in the Netherlands in recent years.
- The government has been spending more on safety since 2002. Spending on this area in the Netherlands is around the EU average.
- The level of trust in the police and in the justice system has increased.

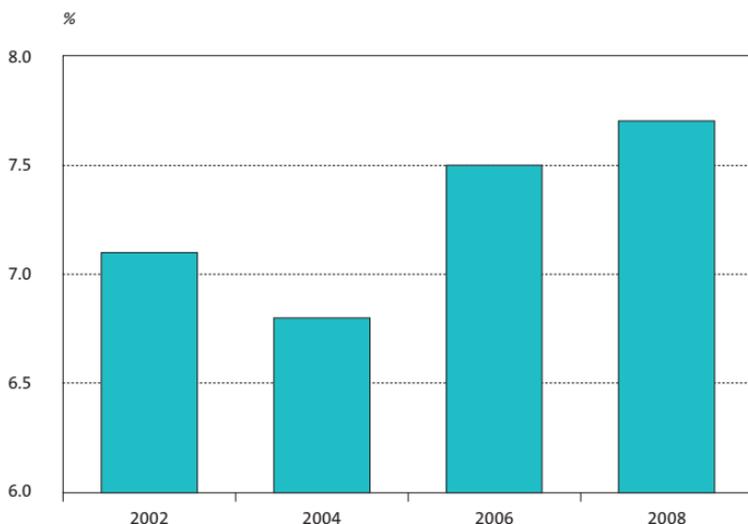
Feelings of unsafety and size of police force in 21 EU countries



# Social participation and trust

- The level of social participation in the Netherlands is very high. Nine out of ten Dutch people contact family and friends more than once a month, and the Dutch have the highest rate of volunteer work in Europe.
- The Dutch also have a high level of trust in each other and in social and political institutions compared with other countries in Europe. This level of trust has not changed in the last few years, although trust in institutions is fluctuating more than in the past.
- A relatively large part of the population feels discriminated against.

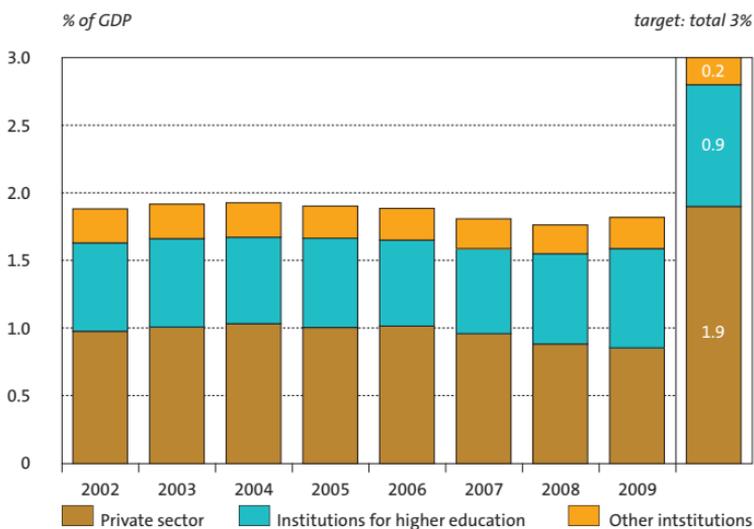
Percentage of people who describe themselves as belonging to a discriminated group



# Education and knowledge

- The Netherlands is not in the top group of knowledge economies. In spite of this Dutch universities are renowned for their high quality of education and research, the quality of regular education is high and lifelong learning is high on the agenda.
- Although the education level in the Netherlands continues to increase, the country is only in the middle group in the European Union. At the bottom of the Dutch education ladder, in particular, problems are caused by the relatively high school drop-out rate.
- Scores of Dutch pupils in internationally comparable tests indicate that the quality of primary and secondary education is declining.
- The European target for R&D spending to account for 3 percent of GDP in 2010 was not achieved in the Netherlands. An important reason for this was the country's economic structure. The relatively low level of private sector investment in knowledge is surprising given the very high level of Dutch achievement in academic research. A mismatch between university research and its application in the private sector may be the cause of this.

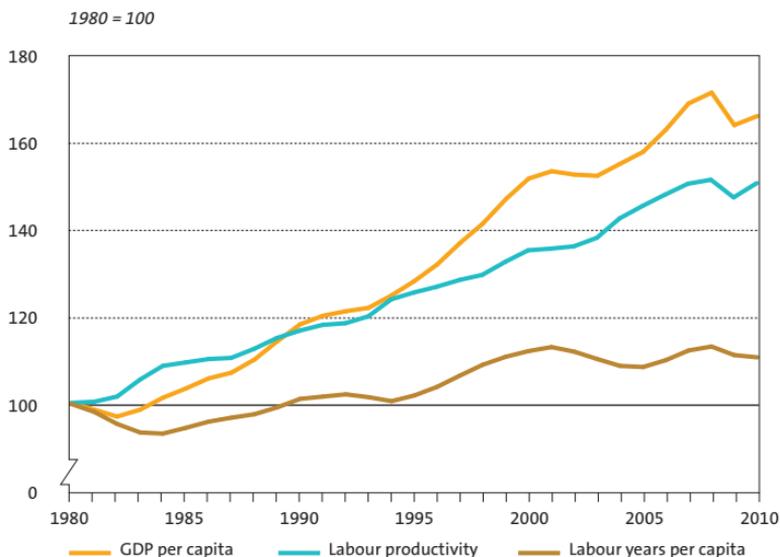
## R&D expenditure



# Material welfare and the economy

- The level of material welfare in the Netherlands is high and still growing. Since 2000, average annual GDP growth has been 1.3 percent (2000–2010, in euro per capita), and consumption expenditure per capita rose by 1.2 percent per year in the same period. The Netherlands is high in the European rankings in terms of both GDP and consumption per capita.
- Welfare will come under pressure in future decades as a consequence of the limited growth of labour volume compared with total population growth. Labour participation is relatively high in the Netherlands, but the number of hours worked per person is relatively low. Population ageing will slow down the increase in labour volume, but this slower growth can be counteracted by a further increase in productivity.
- Unemployment is low in the Netherlands compared with that in other countries.
- The Dutch are optimistic about their future financial situation.

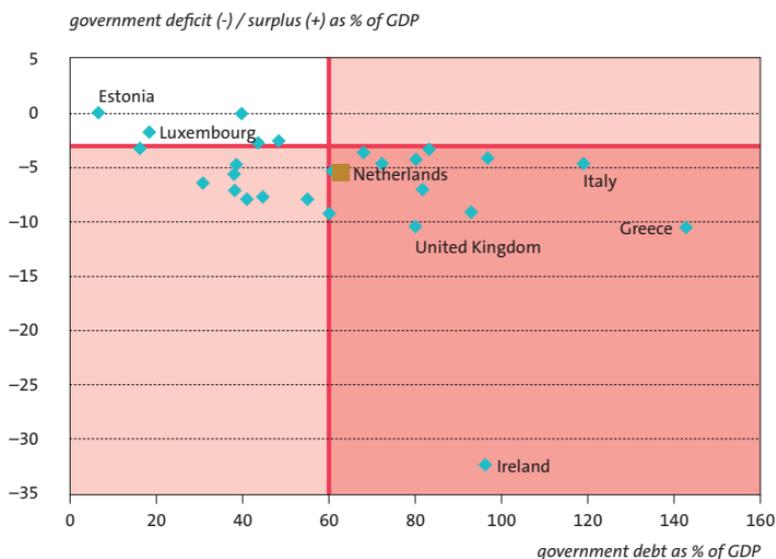
**GDP per capita, labour productivity and labour years**



# Financial sustainability

- With the enormous increase in cross-border capital flows and the conversion from the guilder to the euro, the Netherlands has become increasingly interwoven in the global and European financial system. Financial discipline and trust in institutions are prerequisite for the sustainable functioning of this system.
- By European standards, the Dutch have saved up a large amount of capital for their pensions. In spite of this, present interest rates will render these savings insufficient to pay out entitlements.
- Without tax increases, future generations will probably not be able to enjoy the same level of social security and government provisions as the present generation.

## Government deficit and government debt (2010)



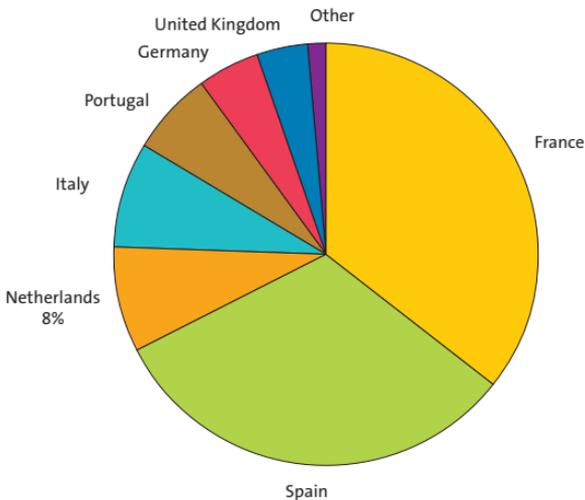
# Trade and aid

- Compared with other countries in Europe, the Netherlands imports a lot of natural resources from developing countries.
- Dutch imports from developing countries have increased strongly since 2000, more strongly than imports by other European countries.
- The Netherlands spends a relatively large sum on development aid. This expenditure is also high by EU standards. The same is true for the amounts of money immigrants remit to family and friends in their countries of origin.

## Imports of crude fossil fuels from least developed countries

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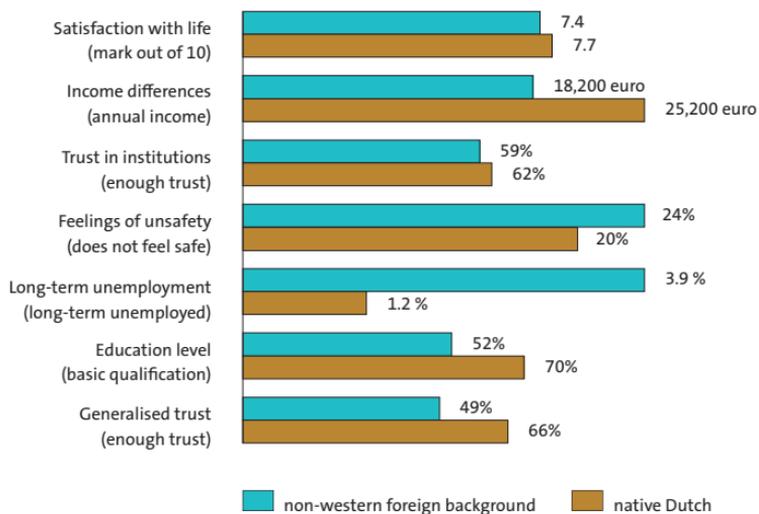
*share in kg, 1999-2009*



# Inequality

- People in the Netherlands with a non-western foreign background are lagging behind the native Dutch in terms of all measured aspects of welfare and in terms of the options for increasing this welfare in the future.
- There is no great social inequality between men and women in the Netherlands. Men and women are equally content with their lives and live equally long in good health. Women do earn less men on average however, and relatively more of them do not feel safe.
- While women previously lagged behind men in education, they have now taken the lead.
- Education is a very important factor in reducing inequality and increasing welfare. People with higher levels of education score better on nearly all welfare aspects than those with lower education levels. They enjoy more healthy years of life and are more satisfied than people with low education levels.

## Inequality between native Dutch people and people with a non-western foreign background (2008/2009)



# Government debt in the countries of the European Union (2009)

Total government debt (EMU debt) as a percentage of gross domestic product (GDP)\*

Greece

142.8%



Italy

119%



Belgium

96.8%



Ireland

96.2%



Portugal

93%



Germany

83.2%



France

81.7%



Hungary

80.2%



United Kingdom

80%



**European Union**

**80%**



Austria

72.3%



Malta

68%



Netherlands

62.7%



Cyprus

60.8%



Spain

60.1%



Poland

55%



Finland

48.4%



Latvia

44.7%



Denmark

43.6%



Slovakia

41%



Sweden

39.8%



Czech Republic

38.5%



Lithuania

38.2%



Slovenia

38%



Romania

30.8%



Luxembourg

18.4%



Bulgaria

16.2%



Estonia

6.6%



\* Provisional figures

# Welfare growth also has positive effects on the environment

The Netherlands is a large importer of goods. The production of these goods often results in damage to the environment and depletion of stocks of natural resources.

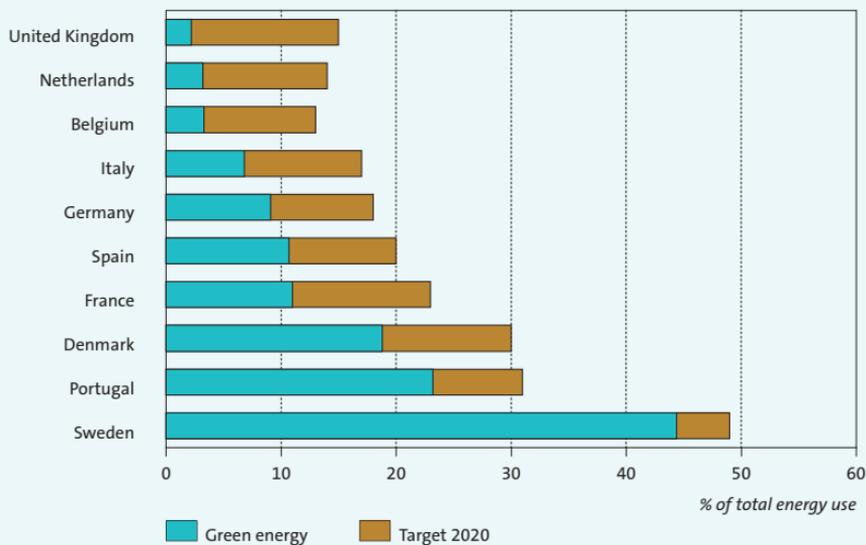
These negative effects occur mainly in developing countries. But by exporting their goods to the Netherlands, developing countries also contribute to the growth of their own welfare in. Growing welfare also has positive effects on the environment. In practice, it turns out that as welfare increases, the need for clean surroundings also increases. More welfare leads to investment in better sanitary provisions, stricter environmental regulations for companies and thus cleaner production methods. Moreover, rising welfare means higher education levels. In nearly all countries this is accompanied by lower fertility levels. While women had five children on average some fifty years ago, this figure has now almost halved. In a large number of countries, fertility is already below - in some countries well below - the replacement rate.

This will probably eventually lead to a decrease in the world population and pressure on the environment will thus ease step by step.

## Number of children and income



## Green energy in ten EU countries



# Towards a low-carbon society

The realisation of a low-carbon society will help to curb climate change and make the Netherlands less dependent on imports of fossil energy – particularly oil – from politically unstable areas. Increasing energy efficiency, switching to an energy system that also comprises nuclear energy, and the application of renewable sources such as solar and wind energy will contribute to both goals. Opting for clean fossil fuels will only limit climate change.

To realise a low-carbon society, polluting production processes will have to be made more expensive, and cleaner technology cheaper. This can be achieved by, for example, passing on the cost of environmental damage to consumers and encouraging investment in green technologies. Subsequently, if people do not change their consumption and behaviour and hardly respond to price signals, legislation is an option. Setting requirements for the energy use of appliances is a possibility in this respect.

A number of strategic choices will have to be made in the coming years about how to realise a low-carbon society. Ultimately, it will mostly be up to politicians to choose a course and the instruments required to take it.



# Competition versus coordination

Many stubborn environment-related problems that have yet to be solved are global – climate change, loss of biodiversity and scarcity of natural resources. Opinions on how best to tackle these problems are strongly divided.

Two extremes in this respect are global coordination and competition. In the case of global coordination, all countries work together in the approach to environmental problems. This is difficult in practice, however, because of conflicting interests. In the second scenario, the solution is sought in global competition for cleaner technology, focusing on the economic opportunities afforded by environment-oriented innovation. The risk here is that this will contribute insufficiently to the solution of the global environmental problem.

Therefore, an ideal mix of competition and coordination will have to be found for Europe and the Netherlands. For the climate, this means that in addition to opting for global cooperation, more attention should be paid to the economic opportunities of, for example, investment in renewable energy. For resources, the Netherlands and Europe could advocate the setting of environmental preconditions for the global competition for resources, for example through international certification of chains.



## Sources of data used in the graphs

Page 15:	European Social Survey (ESS)
Page 16:	Netherlands Environmental assessment Agency
Page 18:	Netherlands Environmental assessment Agency, Netherlands Ecological Monitoring Network, Statistics Netherlands
Page 19:	World Health Organisation (WHO)
Page 21:	OECD Economic Survey: Netherlands 2010 (OECD)
Page 23:	European Social Survey (ESS)
Page 30(I):	World Bank (World Development Indicators), CIA (World Factbook 2010) and Lutz, W. and S. KC, 2010. "Dimensions of Global population projections: What do we know about future population trends and structures?", <i>Philosophical Transactions of the Royal Society</i> , 365 (1554), p. 2779-2791
Page 22, 24, 26, 27, 29, 30(II):	Eurostat
Other pages:	Statistics Netherlands

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### *Design and DTP*

Telldesign, Rotterdam

### *Internet*

[www.cbs.nl](http://www.cbs.nl)

### *Printed by*

Tuijtel, Hardinxveld-Giessendam

Price: € 3,50 (excl. administration and postage)

ISBN: 978-90-357-1758-9

Print run: 3,000

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60222201101-A324