

Course: Livable Future Cities

Answer sheet - week 7

Optional Exercise 3

Energy consumption

Country: The Netherlands

1. Can you give a short overview of the national circumstances of your country? (e.g. population, land use, climate, economics, energy consumption, industry, transport etc.)

Population

The population of the Netherlands In 2012 is approximately 16.7 million people.

Source [1]

Land use

"The land surface covers 33,718 km², of which 60% is used as agricultural land.

While the use of land for agricultural is decreasing, land use for settlements and infrastructure is increasing, on the other hand. Forests make up roughly 10% of the land use."

Source [1]

Climate

"The Netherlands is located in the so-called 'temperate zone'. The 30-year annual average temperature in the centre of the country is 10°C, while the mean annual average at 52 °N is close to 4°C."

Source [1]

Economics

"The Gross Domestic Product (GDP) of the Netherlands was € 417 billion in 2000 and € 599 billion in 2011."

The Netherlands exports agricultural products, machinery and transport equipment, chemicals, food and other livestock products.

The availability of large domestic reserves of natural gas supports significantly to the development of chemical industry.

Source [1]

Energy consumption

"During the period 1990-2012 energy consumption in the Netherlands increased by 20 percent, reaching a maximum in 2010 of 3,493 PJ, while in 2012 the energy use was 3,281 PJ."

Source [1]

Industry

"In 1990, industry accounted for 19% and commercial and public services for around 60% of GDP. The other sectors each accounted for less than 10% of GDP."

Source [1]

Transport

"Transport volumes are influenced by demographic, economic, spatial and infrastructural factors. Air and international shipping are highly concentrated: in 2012 Schiphol Airport handled 95%, of all air passengers and 97% of all air freight, with the port of Rotterdam handling 75% of the total freight in tonnage."

Source [1]

2. What are the main climate protection targets of your country in the report?

The Netherlands has emission-reduction targets in the context of Kyoto Protocol.

The greenhouse gas emission reduction target is 6% below the emission level in the base year.

Furthermore the Netherlands has greenhouse gas emission reduction targets under EU-legislation.

"The goal is to reduce emissions of greenhouse gases by 21% in 2020 compared to 2005 levels."

Source [1]

3. How does your country want to reach these target goals?

The total goals for 2020 are divided to sectoral goals.

The total goal is divided to CO2 reduction and Non-CO2 Greenhouse gasses reduction.

The following sectors has been presented: Industry & energy, transport, built environment, agriculture.

"The above-mentioned Kyoto target over 2008-2012 was translated into an assigned amount of 1001 Mt over these 5 years. This meant that during this period, emissions should not exceed approximately 200 Mt of CO2 equivalent per year."

The following Energy targets has been applied for the Netherlands: by 2020 14% primary energy consumption have to come from renewable sources.

Some measurements to achieve the goals are:

- * Energy taxes
- * Smart metering - gas and electricity for households and small businesses.
- * *"Boosting Renewable Energy Production"* - regulations which support using renewable energy sources.
- * The improving industrial energy-efficiency.
- * Financial support for industrial companies which use energy-saving equipment.
- * Green Deal - program
- * Using biofuels for transport
- * Eco Driving for transport
- * Sustainable transport and increase of maximum speed
- * Improving energy efficiency of new buildings and completely energy neutral buildings by 2020.

Source [1]

4. What is your opinion about you country's approach of the environmental issues? (e.g. are the targets feasible? Is the approach feasible? Would you approach the problem in a different way?)

The source report [1] is from 2013, nowadays new insights could be applied.

In the period of 2008-2010 the average green house gasses emission has been reduced with 4% yearly, the target is 6% Source: [2]

In the period of 2008-2012 the average green house gasses emission has been reduced with 6% yearly. Source: [3]

Source: [1] Sixth Netherlands National Communication under the United Nations Framework Convention on Climate Change
Ministry of Infrastructure and the Environment
Submission date 30/12/2013

Source: [2] <https://www.cbs.nl/nl-nl/achtergrond/2013/04/nederland-en-de-kyoto-doelstelling>

Source: [3] <http://www.pbl.nl/publicaties/nederland-voldoet-aan-de-kyoto-verplichting-uitstoot-broeikasgassen>