Some background information on green growth in the Netherlands

History

Around 2010, two new initiatives were developed at the interface of economic and environmental aspects of sustainability: the OECD's green growth strategy and the UNEP's green economy initiative. Although both initiatives largely include the same subjects and have the same purpose, some conceptual differences will be explained below.

According to the OECD definition (OECD, 2011a), green growth encompasses promoting economic growth and development while ensuring that the quality and quantity of natural resources remain at a sufficiently high level. As a result environment services necessary for our well-being can continue to be provided. Green growth also concerns economic opportunities offered by the transition to a green economy: stimulating investment, competition and innovation that support sustainable growth and result in new economic opportunities.

UNEP defines a green economy as one that results in 'improved human well-being and social equity while significantly reducing environmental risks and ecological scarcity' (UNEP, 2011).

Statistics Netherlands uses OECD framework to monitor green growth

Statistics Netherlands has chosen to monitor green growth according to the OECD framework, as this currently offers the most comprehensive measurement system. OECD green growth indicators focus on the relationship between economy and environment; for example, the extent to which economic activities are being 'greened'. The conceptual framework developed by the OECD is based on the structure of a macroeconomic production model, which transforms inputs into outputs (OECD, 2011b). Accordingly, the indicators describe:

1. natural resources (natural capital) that provide crucial inputs into production;
2. the 'greening' of production processes in terms of improving environmental efficiency;
3. aspects that refer to the broader "well-being" concept or which are not covered by macroeconomic measures, such as environmental and environment-related health problems and facilities. A number of government policy and economic opportunity indicators have also been added to the OECD framework..

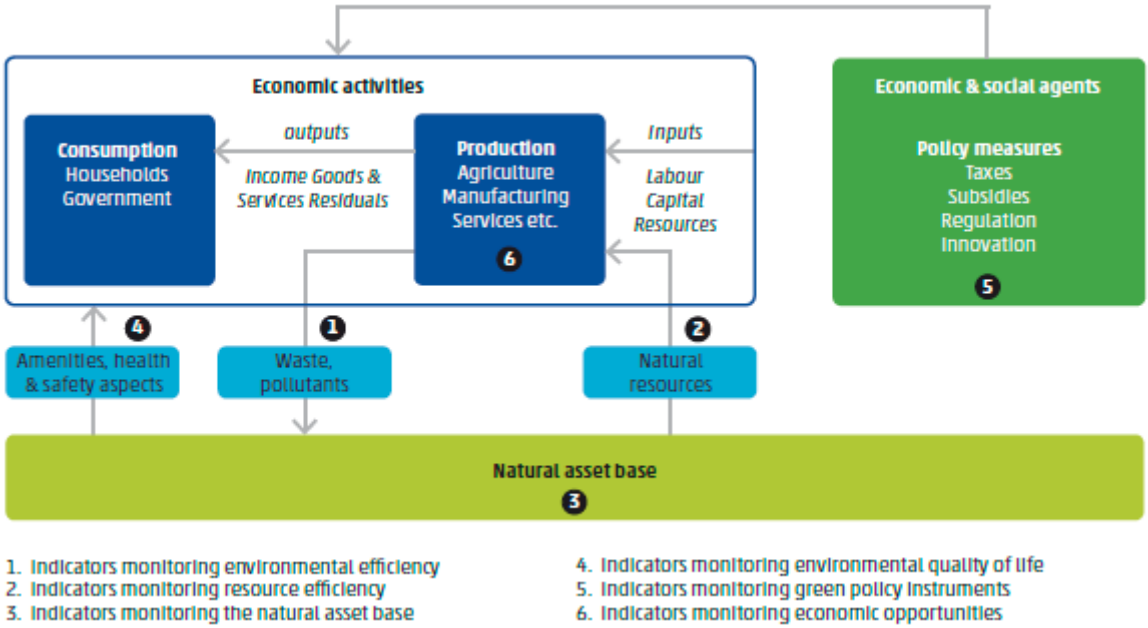

Figure 1. OECD measurement framework for green growth

Green growth and sustainable development

Sustainable development and green growth (a green economy) are sometimes thought to be the same. Although both concepts have the same purpose of maintaining sufficient natural resources and protecting the environment for future generations, there are some conceptual differences.

One clear difference is that green growth can be seen as a way to create economic growth, while this is not the case for sustainable development. Despite this incongruity, sustainable development and green growth partially overlap on the green aspects such as environment, quality of life, natural capital and the impacts on global natural capital.

Some specific subjects, however, are covered by one concept but not the other. General human well-being, and human and social capital constitute the core of sustainable development, while green growth focuses on environmental and resource productivity, green policy responses and economic opportunities. Green growth can be seen as the path towards sustainable development. In this respect, green growth and sustainable development should not be regarded as conceptual contradictions, but as parts of a broader domain of sustainability, as illustrated in figure 2.

Green growth studies are relevant to broader policy initiatives related to sustainable development. In 2016 United Nations replaced the Millennium Development Goals by the Sustainable Development Goals (SDGs). These goals focus on areas such as energy consumption and emissions (especially emissions related to climate change). As a result, green growth can be seen as an integral part of the SDGs.

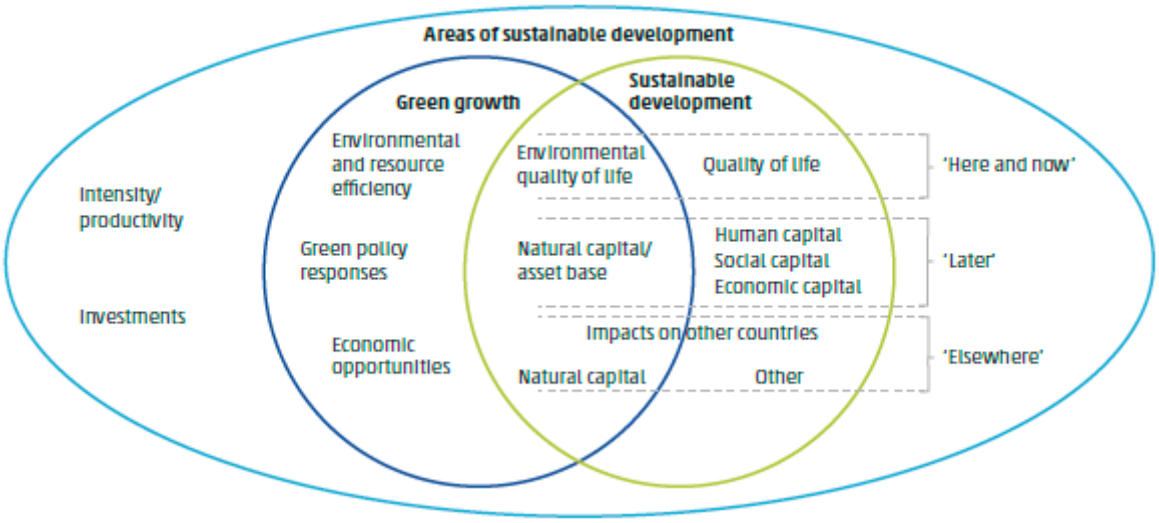

Figure 2 Simplified scheme showing the relationship between green growth and sustainable development

Selecting the indicators

The starting point for the Dutch green growth framework is an indicator list compiled by the OECD (OECD, 2011b). The first report on Dutch green growth described twenty indicators (Statistics Netherlands, 2011). This set of indicators was revised in 2012 and supplemented with indicators based on the following five criteria:

1. Coverage. The indicators must cover all green growth themes adequately. As a result several new indicators were added in the 'Environmental quality of life' theme.
2. Interpretability. The indicators should be clearly interpretable in relation to green growth.
3. Data quality. The indicators should meet general quality standards: they must be analytically sound and measurable.
4. Consistency with other indicator sets. Where possible, the indicators should be consistent with the macroeconomic indicators from the national accounts, the Dutch Monitor of Well-being and the Dutch Circular Economy project.
5. Relevance to the Dutch situation. Not all indicators in the OECD list are relevant to the situation in the Netherlands. For instance, the OECD indicator "Access to sewage treatment and sanitation" is not relevant for the Netherlands as (almost) all Dutch households have access to these facilities. So this indicator was removed in favour of more relevant indicators not included in the OECD list, such as those on water quality.

All indicators are grouped into a green growth dashboard based on the OECD framework themes.

Sources

Data for Dutch green growth indicators originate from several different sources. Many indicators are derived from the Dutch Environmental Accounts (environmental figures tailored to macroeconomic indicators from the national accounts, see text box 'Environmental accounting and monitoring green growth'). Data for other indicators come from a various other statistics, including environmental, energy, and innovation and technology statistics. Some indicators are based on sources outside Statistics Netherlands.

Environmental accounting and monitoring green growth

The System of Environmental-Economic Accounting (SEEA), which is the basis for environmental accounting at Statistics Netherlands, provides a consistent, coherent and comprehensive measurement framework for green growth, as it integrates economic and environmental statistics

(UN, EC, FAO et al., 2014). Both UNEP and OECD advocate using environmental accounts as an underlying framework for deriving green growth indicators. The OECD further explicitly emphasises that, where possible, measurement efforts should be obtained directly from the SEEA framework (OECD, 2011b).

A large number of indicators in the OECD framework for green growth monitoring can be obtained directly from the Dutch environmental accounts. Indicators on environmental and raw material efficiency can be derived from physical flows statistics. By combining physical information with monetary indicators from the System of National Accounts, SNA, information on the interaction between environmental pressure and economic growth is generated. Natural resource accounts are used as the basis for natural capital indicators. Environmental accounts also provide useful information about the implementation and efficiency of various policy instruments, such as environmental taxes and subsidies. Lastly, data from the environmental goods and services sector (EGSS) provide indicators for the evaluation of the potential economic opportunities resulting from green growth.

Assessing the indicators

A key aspect of measuring green growth is assessing the indicators. Scores are based on the evaluation of trends. For example, if the share of renewable energy or waste recycling increases this is scored as 'positive' in terms of greening the economy. If the trend is stable, such as stable exposure to air pollution, the indicator is judged to be ‘neutral’. If the trend deteriorates, e.g. a decline in biodiversity or decrease in energy reserves, the indicator is judged to be ‘negative’ in terms of greening the economy.

The scores for environmental and raw material efficiency indicators are based on the relationship between environmental pressure and economic growth. When economic growth exceeds the increase of the environment indicator over a certain period, this is called 'decoupling' (see figure 3). Decoupling can be either absolute or relative: absolute decoupling occurs when the environment variable is stable or decreasing. This gives the indicator a positive score; relative decoupling is when the growth rate of the environment variable is positive but lower than the growth rate of the economic variable. Relative decoupling is assigned a neutral score. If no decoupling occurs, this is scored as negative.

Scores do not provide information about the 'speed' at which the Dutch economy greens. For example, the share of renewable energy in energy production is growing but this 'positive' score does not express how fast the transition to renewable energy production is occurring. In addition, indicator scores do not convey whether the developments they reflect are sufficient to prevent irreversible damage to the environment. For example: the steady fall in nutrient and heavy metal emissions into the environment may not be able to prevent damage to ecosystems and biodiversity loss. Lastly, the scores do not convey whether policy targets are being realised. Available information on scores and policy targets is given in the indicator descriptions.

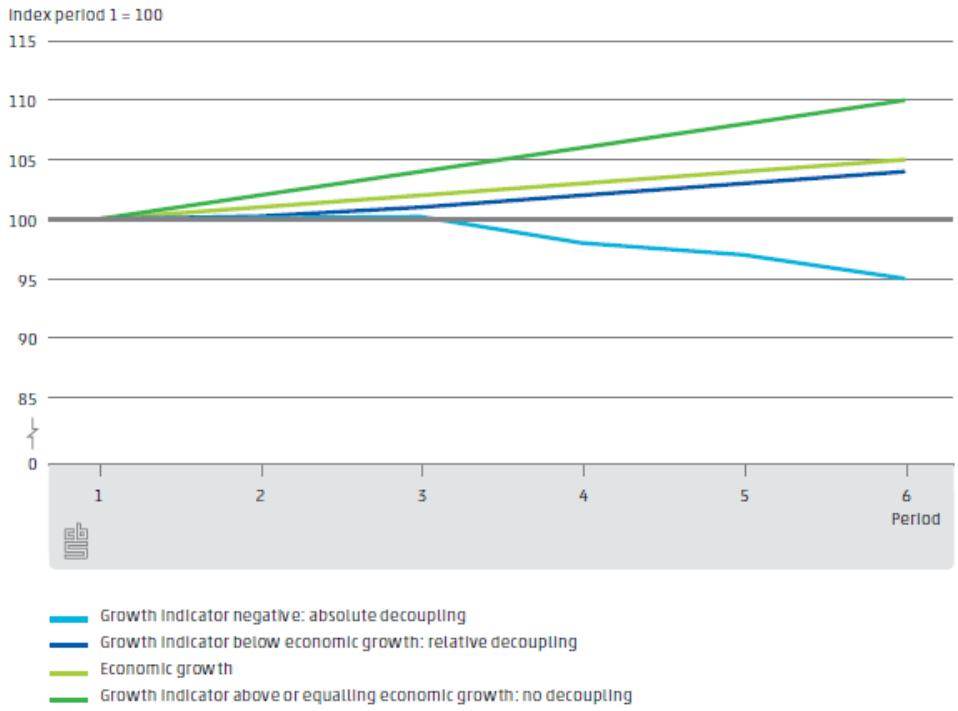

Figure 3 Concept of decoupling

More information

More background information on green growth indicators can be found in the publications Environmental accounts of the Netherlands 2013; first results (Statistics Netherlands, 2014), previous Green growth publications (Statistics Netherlands, 2011 and 2015) and Compendium voor de leefomgeving (Statistics Netherlands, PBL Netherlands Environmental Assessment Agency, Wageningen University & Research, 2017). Data for most indicators can also be retrieved from StatLine, Statistics Netherlands' online database (Statistics Netherlands, 2017). In addition, Statistics Netherlands has also developed an interactive infographic to inform policy makers and the general public on the status of green growth in the Netherlands.

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