

MONITORING GREEN GROWTH

There is neither one common prescription for implementing strategies for green growth, nor for its monitoring. To trace the development of the Czech economy towards green growth, we have adopted the OECD indicator framework. In order to capture not only the economic and environmental link, but also the social dimension, this report structures the selected indicators into five interrelated groups of indicators:

- Sustainability and equity;
- Environmental and resource productivity;
- Natural asset base;
- Environmental quality of life;
- Policy responses and economic opportunities.

Figure 2: Conceptual scheme of green growth monitoring

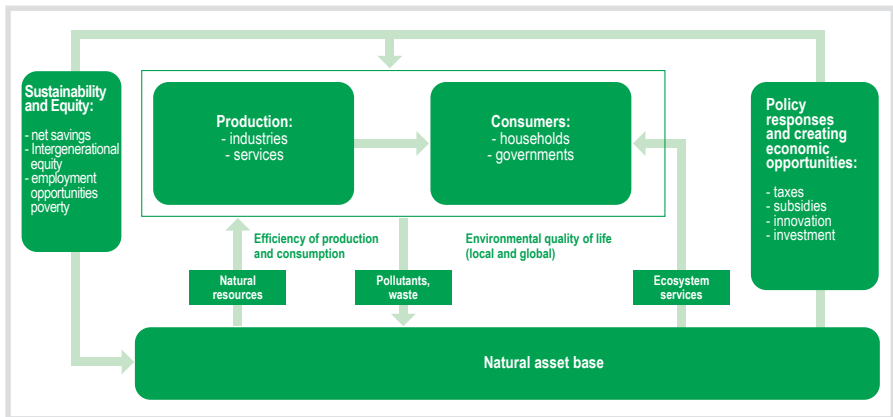


Figure 2 shows how these groups of indicators interrelate. Economic production and growth depend on the environment for inputs of natural resources such as energy, water and basic materials, but also use it as a sink for outputs in the form of waste and emissions. Therefore, environmental efficiency is a central consideration of green growth. In addition to monitoring the relationship between the environmental burden and economic growth, it is equally important to ensure that the burden does not exceed nature's carrying capacity, to prevent irreversible quality losses of natural assets. It is in the interest of an economy's long-term stability to ensure it retains a healthy balance with its natural resource base.

The natural asset base is monitored by way of stocks and flows of both renewable and non-renewable assets. As well as being a provider of resources and an absorber of pollution, the environment also provides ecosystem services such as recreation. Also, a less polluted local environment leads to a healthier population. There is thus a direct link between the environment and the population's quality of life, which is captured in the third set of indicators.

A shift to green growth not only requires policy responses, it also opens up new opportunities. Governments can choose between several policy instruments such as taxes, subsidies and regulation to steer development in a preferred direction. These measures also have potential to create new opportunities for economic activities that may generate new jobs and stimulate economic growth. Finally, green growth strategies need to pay specific attention to many of the social issues and equity concerns that can arise as a direct result of greening the economy – both at the national and international level.

The OECD has identified thirty indicators to monitor green growth. The present report has selected 27 of these based on relevance for the Czech situation and data availability. Most indicators are derived from the data and indicators systems of the Czech Statistical Office while other indicators come from a variety of sources. The following table sums up the main results.

| Indicator name | Evaluation of trend | International comparison |
|---|---------------------|--------------------------|
| 1. Sustainability and equity | | |
| Genuine savings (Adjusted net savings) | +/- | +/- |
| Employment rate of older workers: | | |
| - men | - | +/- |
| - women | + | - |
| At-risk-of-poverty rate by gender | +/- | + |
| Age index and dependency index: | | |
| - old age index | - | +/- |
| - economic dependency index | + | + |
| 2. Environmental and resource productivity | | |
| Production-based greenhouse gas productivity | + | - |
| Consumption-based greenhouse gas emissions | +/- | + |
| Energy productivity | + | - |
| Renewable energy sources | + | +/- |
| Material productivity | + | - |
| Waste treatment | + | + |
| Nutrient balances and agricultural output: | | |
| - nitrogen | +/- | - |
| - phosphorus | + | + |
| Water use productivity | + | + |
| 3. Natural asset base | | |
| Coal extraction and reserves | - | n.a. |
| Forest growing stock volume | + | + |
| Renewable water resources | +/- | + |
| Structure of land cover change: | | |
| - urban areas and infrastructure | - | +/- |
| - agricultural land, pastures and meadows | + | + |
| - semi-natural habitats | - | +/- |
| Common bird index: | | |
| - all common birds | - | +/- |
| - farmland birds | + | + |
| - forest birds | - | +/- |
| 4. Environmental quality of life | | |
| Health risks from air pollution: | | |
| - population exposed to PM ₁₀ | +/- | n.a. |
| - population exposed to NO ₂ | +/- | n.a. |
| Life expectancy at birth: | | |
| - life expectancy (men and women) | + | - |
| - healthy life expectancy (men and women) | +/- | - |
| Population connected to sewage treatment and public water supply: | | |
| - sewerage water connection | + | - |
| - public water supply | + | + |

| Indicator name | Evaluation of trend | International comparison |
|---|---------------------|--------------------------|
| 5. Economic opportunities and policy responses | | |
| Educational attainment: population over 15 years: | | |
| - upper secondary | + | + |
| - tertiary | + | - |
| Green patents: share of clean energy technologies | n.a. | - |
| Green jobs | +/- | +/- |
| Environmental protection expenditure: | | |
| - environmental protection investment | +/- | n.a. |
| - environmental non-investment expenditure | + | n.a. |
| Share of environmental taxes | +/- | +/- |
| Expenditures on technological R&D | + | - |
| Energy prices: electricity and heat | - | n.a. |

Note:

- + refers to positive trend (approximation to goals); values at the level of leading states
 +/- refers to variable or stable values, but without development in the direction of goals; values at the average level of comparable states
 - refers to negative trend (distant from goals); values close to the last states
 n.a. no data available or non-applicable