



# Green Growth Indicators in the Slovak Republic



Tatiana Gušťaříková  
Slovak Environment Agency



# Slovakia in figures, year 2013

<b>Area</b>	49 034 km <sup>2</sup>
<b>Population to 31.12.</b>	5 415 949 inhabitants
<b>Highest and lowest altitude</b>	95 m above sea level (river Bodrog) – 2 655 m above sea level (Gerlachovský štít)
<b>Average temperature</b>	11.7 °C
<b>Population density</b>	110 inhab./km <sup>2</sup>
<b>Index human development *</b>	0.840 (35. place) – high
<b>GDP</b> • total • per capita	72 134.1 mil. Eur 13.33 ths. Eur
<b>Inflation rate</b>	1.4 %
<b>Unemployment rate</b>	14.2 %
<b>2014 Environmental Performance Index**</b>	74.45 %, 21. place from 178 countries



# Content of the presentation

- Assessment of the environment in Slovakia
- Green Growth and Slovakia
- National set of the GG Indicators
- Challenges and future work

# Building of the indicators assessment

Analyse of the indicators and reports of EEA, OECD, EUROSTAT, UN CSD

Assessment of the possibility to use them in the slovak conditon

Set of the individual and agregated indicators

**< 2013**  
SD  
Indikators

Sectorial  
indicators

Indicators

MF Indicators  
SCP Indicators  
GG Indicators

Key  
indicators

**2014 <**  
New set of  
SD Indicators

New set of  
sectorial indicators

Environmental  
indicators

RE Indicators  
GG Indicators

# SEA – database of env. data

<b>National Report on the State of Environment in SR (legal framework)</b>		In 2013 one chapter about green growth and green economy English version
<b>Environmental Indicators/Core set (in english)</b>		11 areas – air, water, soil, waste, material flows, biota, climate change, economical instrument, environmental management system, roks
<b>Sectoral indicators report and sectoral indicators</b>		Energy, industry, transport, agriculture, tourism, forestry
<b>SD indicators</b>	Environmental pillar	
<b>SCP and RE indicators</b>	According to EEA and Eurostat set of indicators	
<b>GG indicators</b>	OECD	



# Slovak Republic and Green Growth

- Slovak Republic is one of the 34 signatories of the OECD Declaration on Green Growth, of 25th June 2009.
- By signing this declaration Slovakia acknowledged that the major challenges that all the countries face today include economic, environmental, and social issues.
- Slovakia thus manifested the ambition to implement the green growth strategy into its political system.
- In this perspective, Slovakia is also bound by a number of outcomes from the RIO+ Summit and other conceptual and strategic documents of the EU, OECD and UN.



# The need to develop green growth indicators

- the outcomes of the National Green Growth Workshop (2011)
- OECD recommendations within the environmental performance review of the Slovak Republic (2011)
- OECD's recommendations published in the Economic Review of the Slovak Republic (2012).



# The set of the GG Indicators

- is based on the set of the indicators proposed by the OECD and addressed by the report: "Green Growth: Monitoring progress towards green growth".





# OECD proposed 4 main areas of monitoring, which means 4 major indicator groups

- **Indicators of environmental and resource productivity** that represent interconnection between the effectiveness of natural resources exploitation, production, and consumption,
- **Indicators of natural asset base** that monitor the status and quality of natural resources in terms of their depletion and diminishing, which poses a risk of slowing down the growth,
- **Indicators of environmental quality of life** that express either direct or indirect impact of the environment on human health and life,
- **Indicators of economic opportunities and policy response** that serve the politicians to make the implemented political measures more effective.



# The set of the indicators

- comprises 33 individual indicators that are relevant in Slovakia's conditions
- 4 of them describe voluntary instruments of the environmental strategy (one of the priorities areas of Governmental Programme 2012-2016)

<b>Voluntary instruments of environmental policy</b>	Environmental management system (EMS)
	European Eco-Management and Audit Scheme (EMAS)
	Green public procurement
	Environmental Product Labelling

# The set of the indicators

- represents a first attempt at transferring the OECD indicators for green growth to the national level, and providing feedback to the international community.
- becomes one of the tools that may shape the view of government and the public to green growth and can help to shift towards a more positive view of the adopted measures, which are essential to the transition to a green economy in Slovakia.

# The set of the indicators

- were developed by the Slovak Environment Agency (SEA) in cooperation with professionals across different ministries and business of the Slovak Republic.
- are published on the Slovak Ministry of Environment's information website called Enviroportal ([www.enviroportal.sk](http://www.enviroportal.sk)) and are accessible also from the OECD's website through the following link: ([www.oecd.org/greengrowth/countries.htm#slo](http://www.oecd.org/greengrowth/countries.htm#slo))



# GG indicators - the result of the work of a broad spectrum of institutions

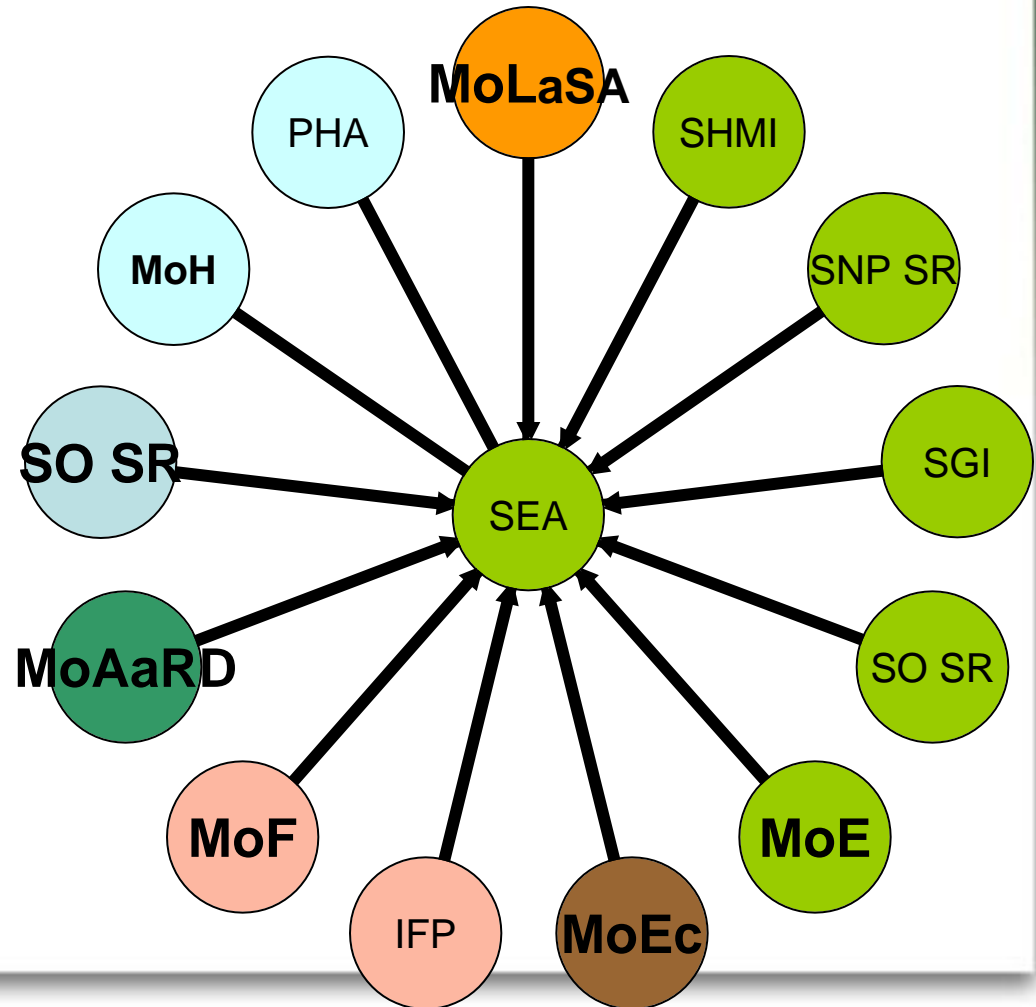


## Working Group on the GG Indicators



# Data flows – SEA compiled indicators

- **Ministry of Environment (MoE)**
  - and its professional organisations (Slovak Hydrometeorological Institute - SHMI, Slovak Geological Institute - SGI, Slovak Environmental Agency - SEA, State Nature Protection - SNP SR)
- **Ministry of Economy,**
  - Slovak Innovation and Energy Agency
- **Ministry of Labour and Social Affairs and Family**
- **Ministry Finance**
  - IFP – Institute of Financial Politic
- **Ministry Agriculture and Rural Development**
- **Ministry of the Health**
  - The Public Health Authority
- **Statistical Office of the Slovak Republic** whose databases furnish most of the information.



# The set of the indicators

- Data used come from the official national or international sources and databases.
- Each of the indicators is presented on a graph in **time period 2000 – 2012**. Basic time sequence is changed in those cases when the data are not accessible or when their comparison is not possible due to differing approaches in their collection, assessment, changes in methodology, classification, etc.



# Summary assessment of indicator's trend from the green growth perspective is based on

- a subjective evaluation of the responsible assessor due to the fact that the strategy is not officially implemented in the Slovak Republic and therefore specific objectives have not been defined yet. Naturally, this assessment builds on the analysis of the past trends, as well as their anticipated direction in view of the measures adopted as to date.
- Assessed trend was reviewed and discussed with the WG members.

## Notes:

- + positive trend
- +/ stable trend
- negative trend
- n.a. no available





# Sum up of main results

Indicator		Trend evaluation
<b>Indicators of environmental and resource productivity</b>		
Carbon and energy productivity	CO <sub>2</sub> productivity	+
	Energy productivity	+
	Energy intensity in sectors of the economy	+/-
	Share of energy from renewable sources in gross final energy consumption	+
	Contribution of electricity produced from renewable energy sources	+
Resource productivity	Material productivity	+
	Volume of generated waste (excluding municipal waste) and the recovery rate	+/-
	Volume of generated municipal waste and the recovery rate	+/-
	Nitrogen and phosphorus balance	+/-
	Water productivity	+/-



# Sum up of main results

Natural asset base		
Renewable stocks	Trend in the size of forest land	+
	Forest growing stock	+
	Intensity of surface water resources exploitation	+/-
	Intensity of ground water resources exploitation	+/-
Non-renewable stocks	Geological mineral reserves	+/-
Biodiversity and ecosystem	Endangerment of flora species	n.a.
	Endangerment of fauna species	n.a.
	Changes in the use of lands	-
	Soil erosion	+/-

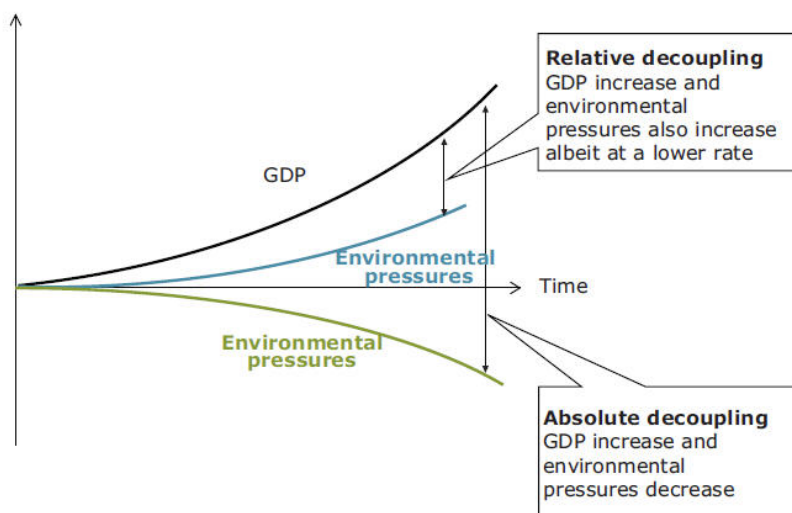


# Sum up of main results

Environmental quality of life		
Environmental health and risks	Exposition of the public to air pollution by particulate matter (PM <sub>10</sub> )	-
	Air quality in urban areas	+
	Average life expectancy	+
Environmental services and amenities	Connecting the public to the public sewerage system	+/-
	Connecting the public to public water supplies	+
Economic opportunities and policy responses		
Prices and taxes	Share of environmental taxes on total revenues from taxes and on GDP	+/-
	Electricity and gas prices for households	+
	Average price for production, distribution and supply of drinking water	+
Innovation	Expenditure on research and development in selected areas	+
Voluntary instruments of environmental policy	Environmental management system (EMS)	+
	European Eco-Management and Audit Scheme (EMAS)	-
	Green public procurement	n.a.
	Environmental Product Labelling	-



# Decoupling (absolute or relative) is evident in the following areas



- water use,
- greenhouse gas emissions,
- material consumption,
- phosphorus surpluses.

Zoznam indikátorov

- Kľúčové indikátory
- Sektorové indikátory
- Indikátory TUR
- Indikátory zeleného rastu
- Indikátory efektivity zdrojov

Produktivita CO<sub>2</sub>

📅 **Dátum poslednej aktualizácie:** 23.10.2014

Téma

Indikátory zeleného rastu

Značky

Definícia indikátora

**Produktivita CO<sub>2</sub>** vyjadruje pomer HDP v stálych cenách k celkovému množstvu emisií CO<sub>2</sub>.

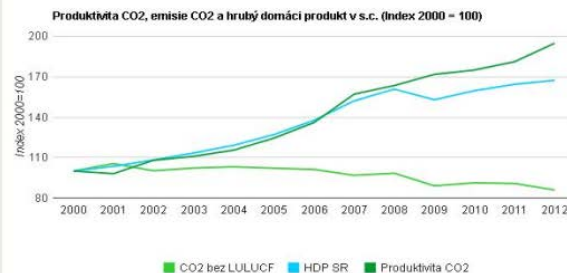
Jednotka indikátora

Index 2000 = 100

[Metadátá](#)

Väzba indikátora k rozvojovým dokumentom a cieľom

Sumárne zhodnotenie



Zdroj: SHMÚ, ŠÚ SR  
[Zdrojová tabuľka](#)

Podrobné zhodnotenie

Produktivita uhlíka charakterizuje vzájomnú závislosť uhlíkového a klimatického cyklu prepojenú na environmentálnu a ekonomickú efektívitu ako výsledok politik podporujúcich nízkouhlíkové a čistejšie technológie pri využívaní energetických zdrojov. Hlavnou úlohou je obmedziť emisie CO<sub>2</sub> a iných skleníkových plynov a stabilizovať koncentrácie skleníkových plynov v atmosfére na úrovni, ktorá by obmedzila ich nepriaznivý vplyv na klimatický systém.

Pristúpením SR ku Kjótskemu protokolu, následnou legislatívnu úpravou v zmysle jeho redukčných cieľov a zavedením širokého súboru opatrení dochádza k plynulému znižovaniu emisií skleníkových plynov.

Emisie CO<sub>2</sub> majú od roku 2000 miernu klesajúcu trend. V roku 2012 oproti roku 2000 emisie CO<sub>2</sub> poklesli o 14,1 %, zatiaľ čo HDP sa zvýšilo o 67,4 %. Keďže emisie CO<sub>2</sub> klesajú, zatiaľ čo hrubý domáci produkt rastie, môžeme hovoriť o absolútnom decouplingu, čo predstavuje pozitívny trend. Medziročne poklesla produktivita v roku 2012 oproti predchádzajúcej roku o 7 %.

Kontakt na spracovateľa

Ing. Dorota Hericová, SAŽP, [dorota.hericova@sazp.sk](mailto:dorota.hericova@sazp.sk)

**Environmentálne témy**  
Vybrané env. problémy  
Rizikové faktory  
Vplyvy na ŽP  
Zložky ŽP  
Sťasťosťnosť o ŽP  
Medzinárodná spolupráca  
Terminológia v ŽP

**Agendy**  
Občan  
Podnikateľ  
Verejná správa

**Informačné a monitorovacie systémy ŽP**  
Informačné systémy  
Indikátory  
Atlas krajiny SR  
EnviroGeoPortál  
EnviroInfo  
ISM ŽP  
Katalóg objektov ŽP

**Dokumenty**  
Právne predpisy  
Medzinárodné dohovory  
Dokumenty  
Správy o stave ŽP

**Rezortné organizácie MŽP SR**  
Rozpočtové organizácie  
Príspevkové organizácie  
Státny účelový fond  
Státne podniky



# CO<sub>2</sub> Productivity

# The set of the GG indicators

- characterize Slovakia's initial position as seen from the perspective of the green growth,
- a measuring tool before further steps are taken in the process of implementation of this strategy,
- complex assessment of the future trend of the Slovak economy.



# Limited data

- Green jobs
- Green innovation
- Green patents

# Challenges

- Strengthening of inter-governmental co-operation
- Education and public awareness
- Innovation performance





# Future work

- English version
- New indicator - innovation
- to create the stable information base for different target groups (decision makers, professional public, general public) - regular updating
- to respond to the new challenges in environmental policy



<http://www.enviroportal.sk/uploads/files/Dokumenty/ZelenyRast.pdf>



**Thank you for your attention**  
**Спасибо за внимание**

**tatiana.gustafikova@sazp.sk**

