Addressing climate change and the environment in the context of cohesion policies and progress evaluation: *Methodologies, outcomes and lessons learned*

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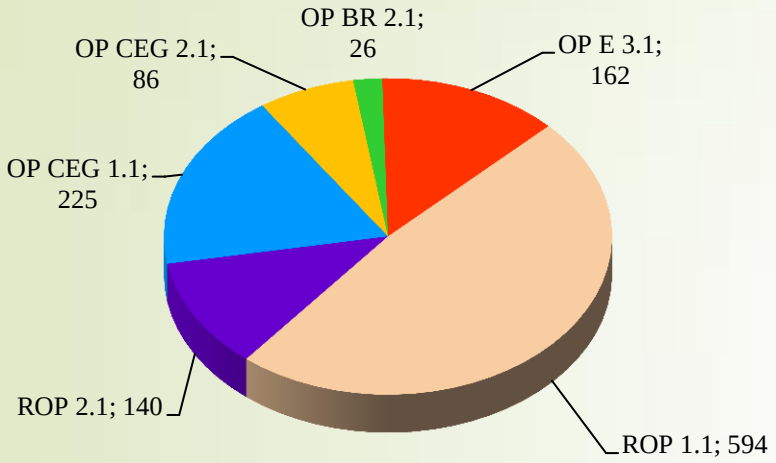
Prognostický ústav Slovenskej akadémie vied

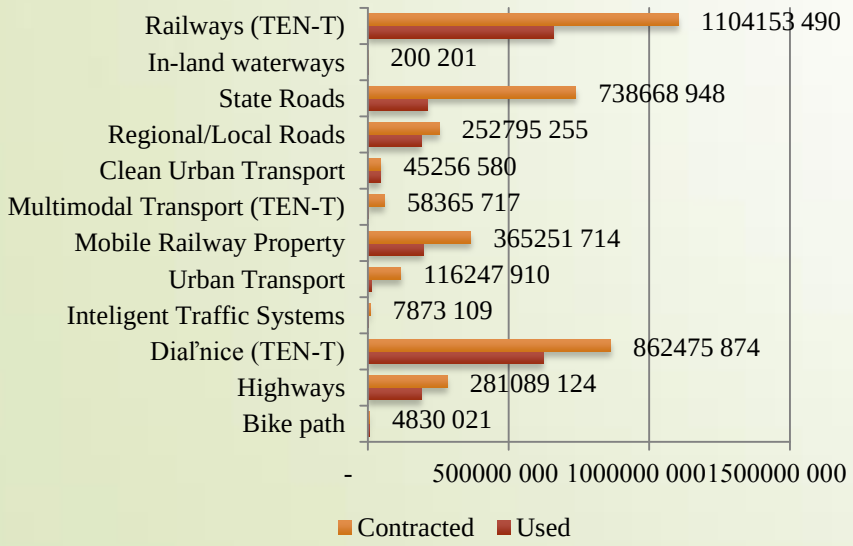
European Funds Technical Assistance

MINISTRY OF ECONOMIC DEVELOPMENT

European Union Cohesion Fund

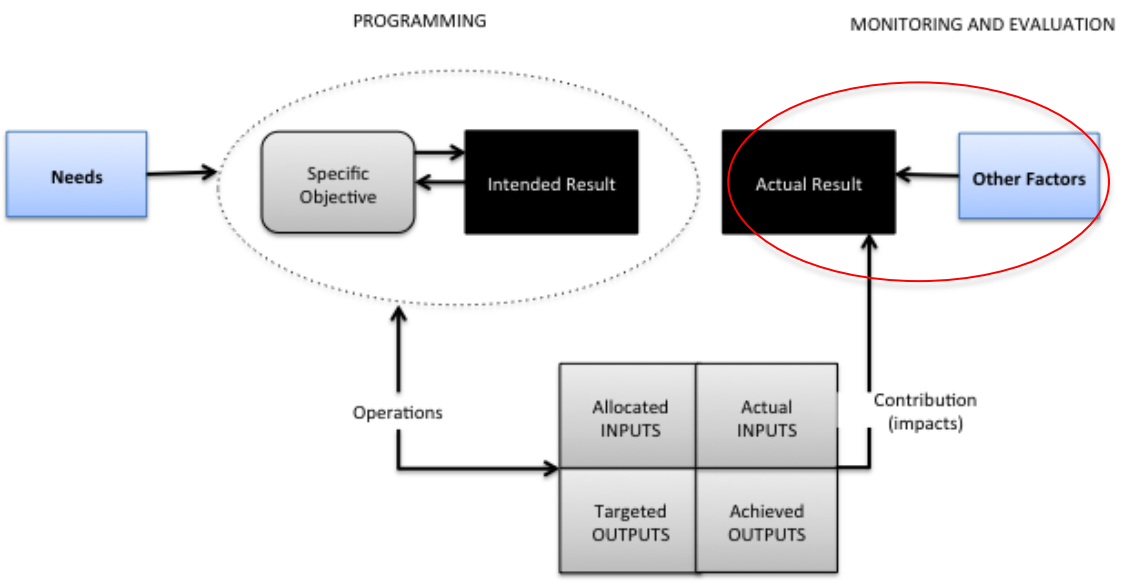
Points of departure





- Smart, inclusive but sustainable growth?
- Climate/Environment as the declared goal in Partnership Agreement Slovakia – EU, and in the OPs (i.e., Horizontal Priority)
- Several evaluation projects conducted in 2014/2017 (Education, Research and Development, Sustainable Growth, Mid-Term evaluation of PA)
- Main focus: Evaluate investments vis-à-vis progress to reach EU/SK 2020 Targets
- Few questions to start with…
  - *Where were the investments aimed to?*
  - *How much cohesion policy measures and projects moved the country towards the EU/SK 2020 targets?*
  - *What are the structural and other barriers having influence on results achieved?*
  - *How to define benchmarks for future evaluations?*
  - *Lessons learned and what/why works? Or not really…*

Approach and Methodology



- ***The relevance of existing interventions***
  - Are we on the track to meet the for EU 2020 targets?
  - Does interventions supported by the EU represent key tool for improving the quality of growth towards the targets of the EU 2020?
- ***2. Performance and the results achieved***
  - Is there a change, and to what extend we can analyse such change as a result of interventions by SF and CF?
  - What factors (internal and external) have affected the results of interventions by SF and CF? Have there been unintended (positive or negative) effects
- ***3. The impact of interventions***
  - Is there a synergistic effect of SF and CF funds and state budget?
  - To what extend were the funds distributed to those regions which show the most problematic performance?
  - To what extend were the funds directed to the identified target groups and what are the results?
  - Is the current approach in targeting interventions economically efficient for achieving the intended objectives?

Source: Programming period 2014-2020: Guidance document on monitoring and evaluation

Sustainable growth and Slovakia

(1) ***To what extent the SF/CF investments have contributed to meeting the main objectives of the EU 2020 Strategy in the area of mitigation measures for climate change and transformation of energy production?*** Three main objectives are defined as follows:

- *Greenhouse gas emissions, baseline years 2005: maximum increase by 13% in 2020 compared to 2005 level [in sectors other than emission trading schemes (ETS)].*
- *Objective related to energy from renewables by 2020: 14 %. Share of energy from renewables in all transport modes: 10 %*

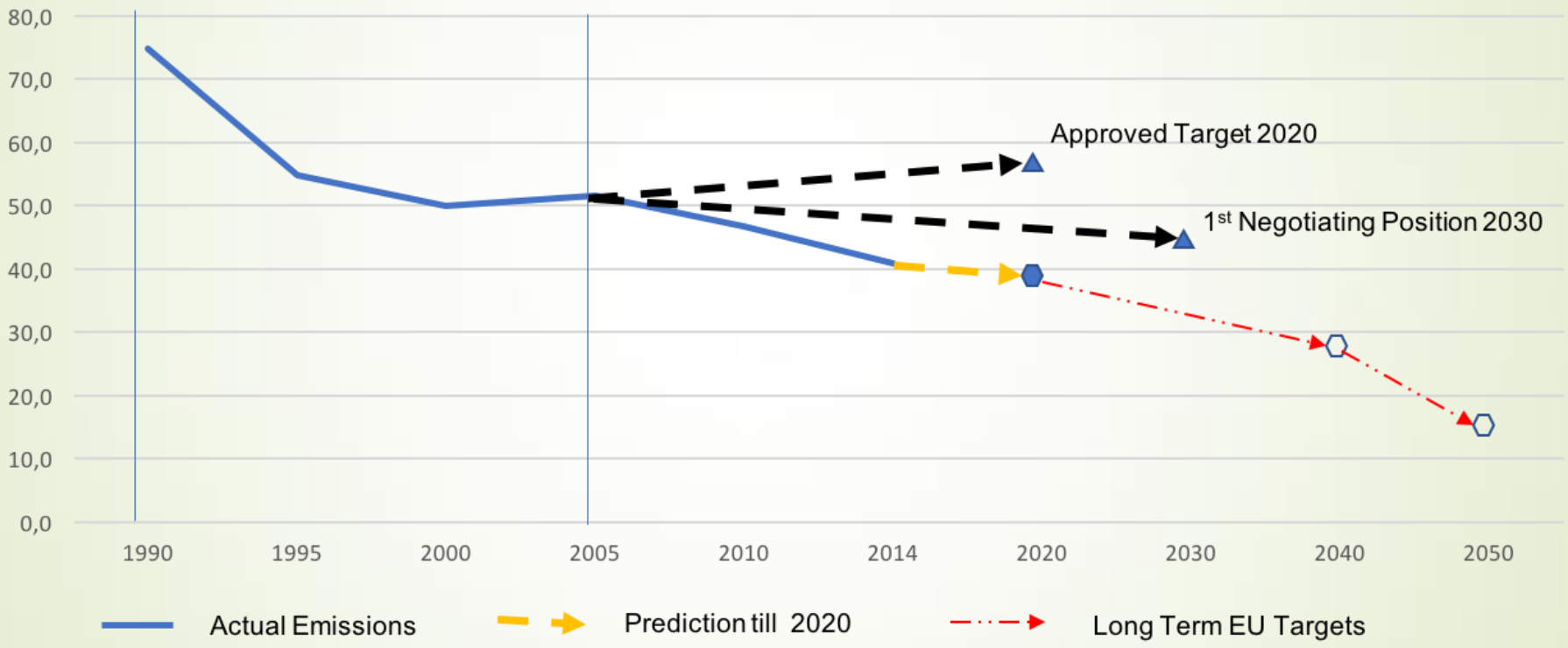
(2) ***Do interventions from the SF/CF lead to reduction of energy and material intensity of the Slovak economy and to more effective use of natural resources?***

- *Energy efficiency: Objective of energy effectiveness of Slovakia is to reduce by 2020 the final energy consumption by 11 % compared to 2001 - 2005 average, which for the single EU comparison basis means to achieve 16.2 Mtoe as a primary energy consumption (10.0 Mtoe as a final energy consumption).*
- *In the area of resource productivity the assessment is focused on the main indicator of resource productivity measured by the relation of GDP to domestic material use in EUR/tonne.*

(3) ***What relevant effects of the SF/CF interventions on local level can be identified for support of sustainable growth concept?***

- *Investments for support of science and research in the area of green technologies.*
- *Secondary effects in social area and employment.*

CO_2 Emissions in Slovak Rep. – trends and outlook

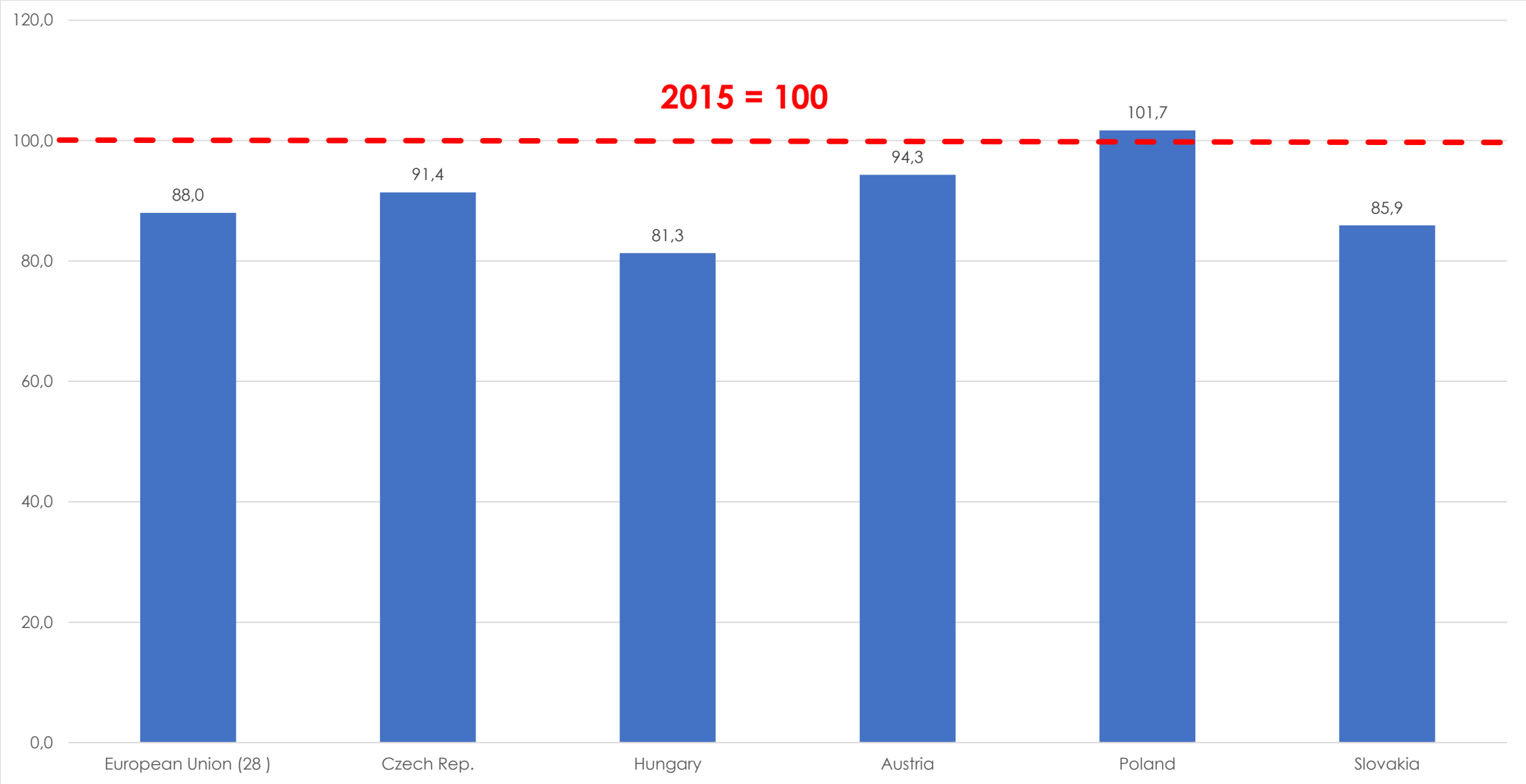


Linear Regressions (CO_2 Emissions) and OP Environment (2007 – 2015)

Dependent variable:	With OP E 3.1		Without OP E 3.1	
	B	Sig.	B	Sig.
Constant	x	0.861	x	0.226
Change of electricity consumption	--	--	--	--
Change in diesel consumption	--	--	--	--
Change in natural gas consumption	--	--	--	--
Change in added value	-0.259	0.018	-0.274	0.015
Investments from OP CEG 1.1 and OP BR 2.1	--	--	--	--
Investments from OP CEG 2.1	--	--	--	--
Investments from ROP 1.1	--	--	--	--
Investments from ROP 2.1	--	--	--	--
Investments from OP E 3.1	-0.259	0.025	X	x
Coefficient R^2	0.135		0.075	

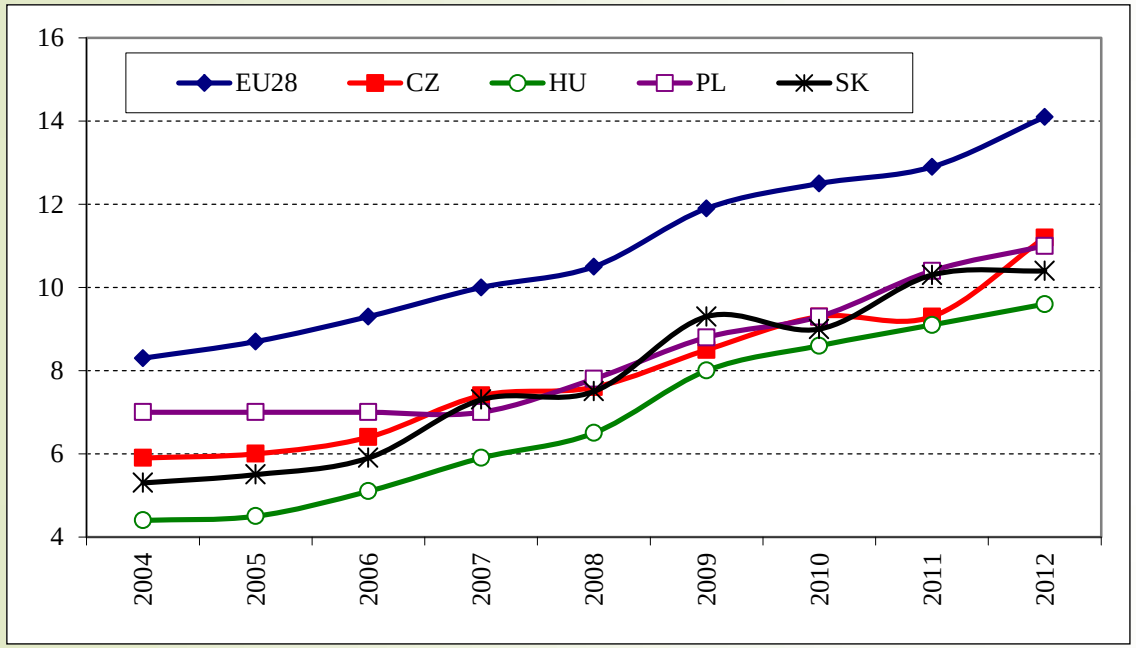
- The total explanatory power of the model is 13.5 %.
- The model without the predictor OPE 3.1 explained only 7.5 % of total variation in emissions of CO2.
- We assume that just investments from the OPE 3.1 explained at least 6 % of total variation in CO2 emissions.
- Good result - Taking into account relatively small amount of intervention (EUR 161.7 million certified, or EUR 170.8 million uncertified expenditures in 2008 - 2015)
- Additional savings came especially from the ROP, OP R&D and as a side effect of other interventions
- A substantial part of investments came from private sources

Energy saving - annual data

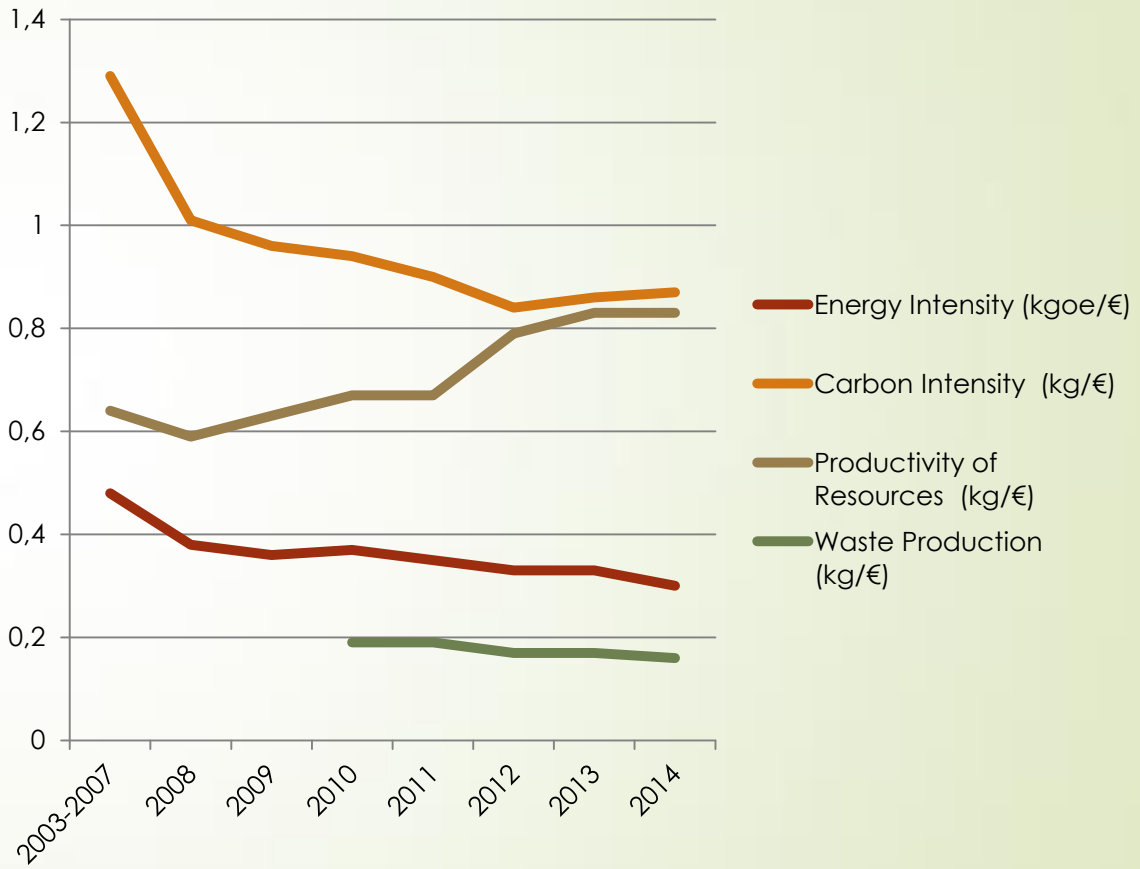


Source: EUROSTAT

Share of renewables in gross final energy consumption (%)



Slovak Industry and resource efficiency/Key indicators



Source: Adapted from EUROSTAT, Slovak Statistical Bureau and Slovak Env Agency

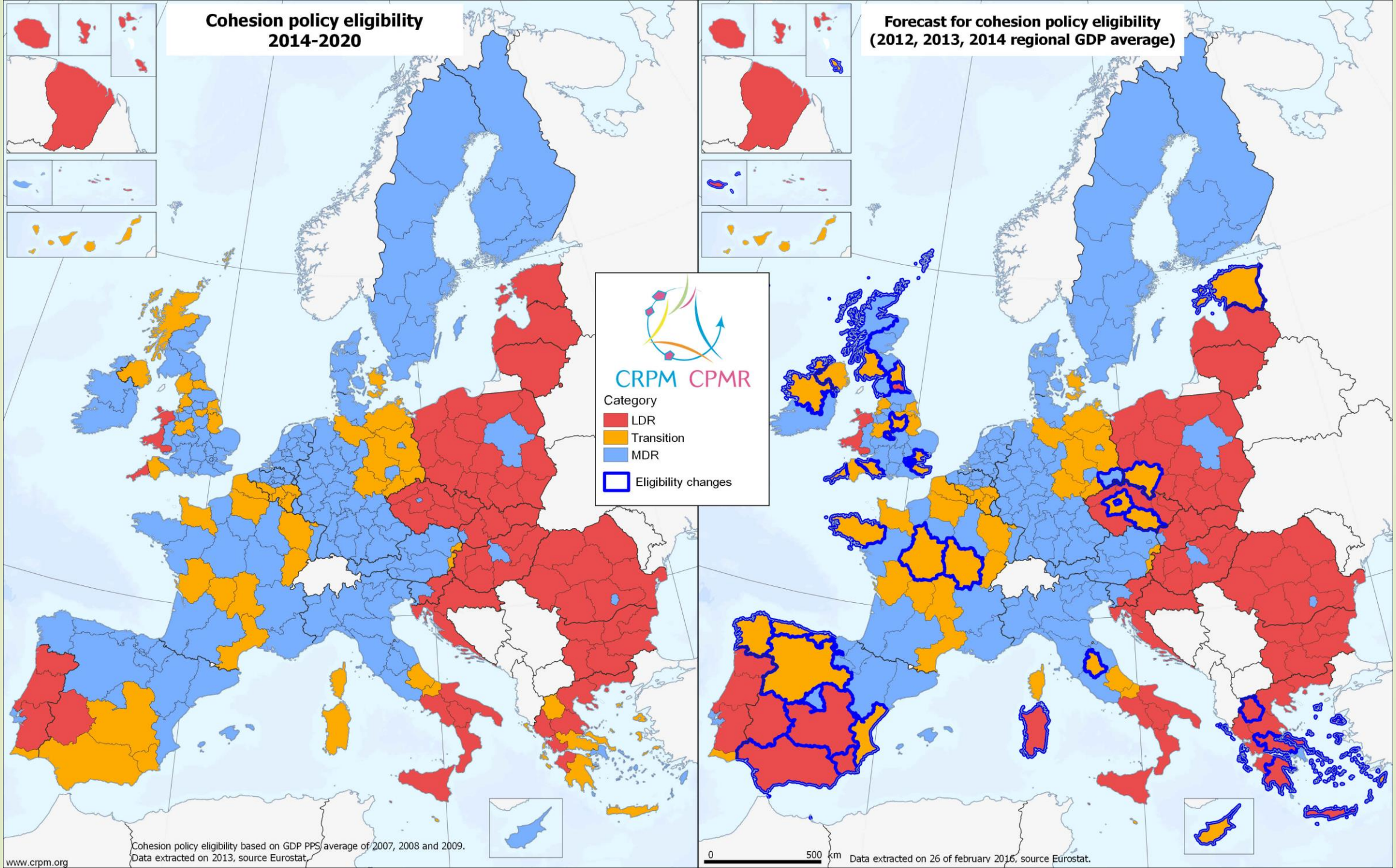
EU 2020 objectives according to the SR NRP 2014	Relevance	Evaluation of the situation
To reach employment rate of 72 %	Medium	Employment reached 65.1 % in 2012 and 65 % in 2013. Green jobs are divided to highly specific (development and implementation of technologies) and low specific (production, heat insulation). Investments in green technologies, energy saving and use of wastes brought new jobs, their number is however low and Slovakia is under the EU average.
Research and development: 1.2 % of GDP (if the business sector should ensure 2/3 of total costs).	Medium	Although we see a slight growth from 0.46 % to 0.83 % of GDP (2013), it is still very low value and involvement of business sector is uncertain. Research and development in green technologies and renewables is on the low level and industry depends on import of these technologies.
Partial objective related greenhouse gas emissions: maximum increase by 13 % in 2020 compared to 2005 (in sectors other than emission trading scheme (ETS)).	High	It is expected that emissions will decrease by roughly 24 % compared to baseline in 2005. For 2003 a maximum possible growth by 2.3 % was planned but emissions decreased by 8 %. In 2014, emissions from energy production decreased by 14.1 %. If no unexpected changes occur this objective will be easily reached.
Partial objective related to energy from renewables: 14 % **Share of energy from renewables in all transport modes: 10 %**	High	Production of renewables reached 10.4 % in 2012 but in 2013 it slightly decreased to 9.8 %. Analysis of situation and trends indicates that the objective 14 % of renewables should be met, but it will not be automatic and there are risks connected to changes in the business environment. Share of final consumption of energy from renewables in all transport modes on the level of 10 % will depend on prices and availability of fuels. There is a problem that 3 % of final consumption should be made of second generation biofuels which are not bound to biomass cultivated on agricultural soil.
Partial objective: by 2020 to reduce energy consumption by 11% compared to average 2001-2005 which for comparison within the EU means to reach 16.2 Mtoe, expressed in primary energy consumption (10.0 Mtoe expressed in final energy consumption).	Hight	Large part of investments from the EU funds was oriented into the area and planned values of insulations are reached easily. Effectiveness in industry is growing rapidly. The objective of energy effectiveness for primary and final consumption of energy should be met.
Partial objective related to premature completion of school attendance: 6 %	Indirect	Sufficient educated and skilled labour force as a basis of sustainable growth.
Partial objective of tertiary education: 40 %	Medium	The area of green technologies and environmental protection is in curricula of universities and increasing number of students should positively affect environmental management and availability of experts.
Objective related to reduction of number of inhabitants threatened by poverty or	Small	In the second category of jobs demanding low education there is a positive trend of creating the jobs in waste management and environmental management. The number of these jobs for people

Sustainable Growth- Lessons Learned

- Clearly defined objective of the survey and evaluation are important, as well as **setting boundaries right** – key challenge in climate/environment/sustainability;
- **Value for Money?** Problem with quantification of financial flows: it is practically impossible to say exactly on a EUR what has been earmarked to green growth objectives;
- It is relatively easy to evaluate individual project (e.g., local "field" and social capital, outcomes{bottle necks), yet aggregated data are more complicated for interpretation especially in in **complex issues, such as sustainable growth**;
- **Combination of quantitative and qualitative** methodologies works well in identifying other or "hidden" factors;
- Public image vs. **Secondary effects** (often underestimated): development and question of "soft skills"
- "Low hanging fruits" are slowly over – future investment needs to move to **more complex approaches** (e.g., from highways to sustainable mobility or from insulation to demand side management)?
- How to resolve conflict between **labor cost** as a competitive advantage in industry and low **purchasing power** influencing development plans?

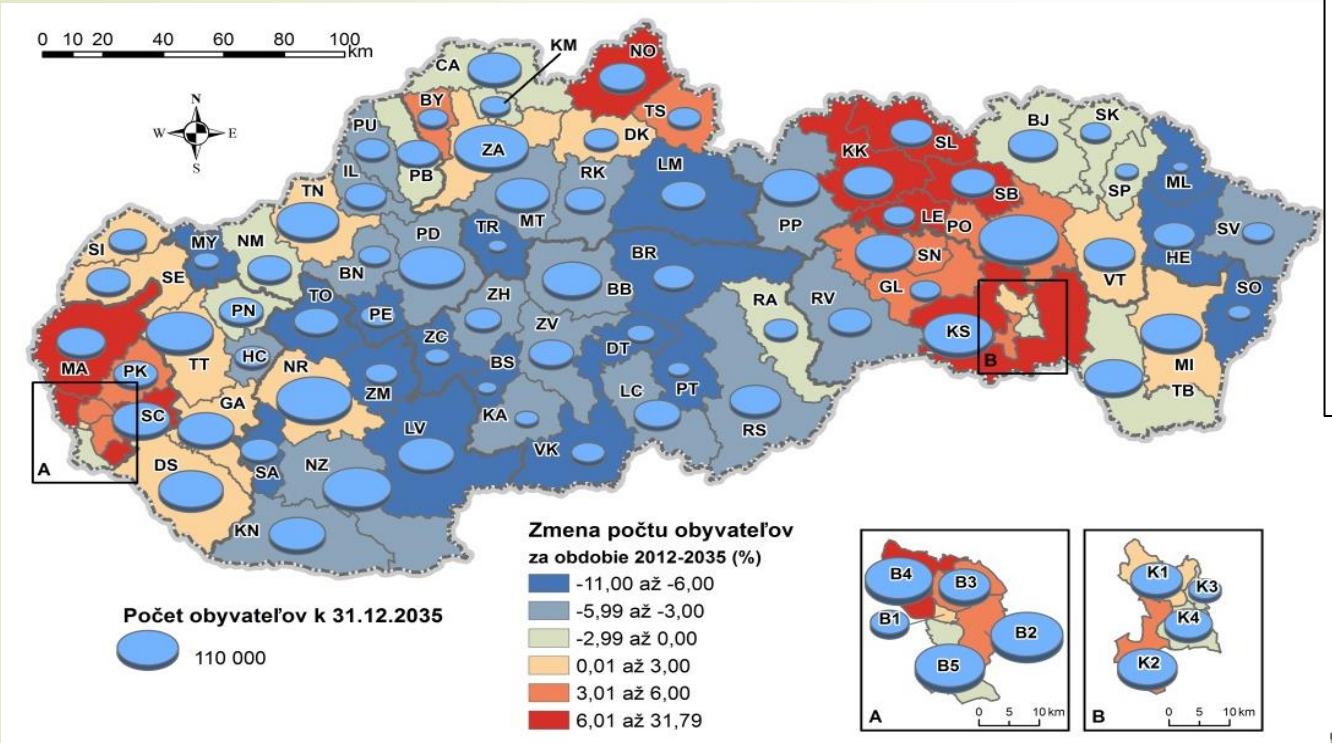
Lessons Learned and open questions

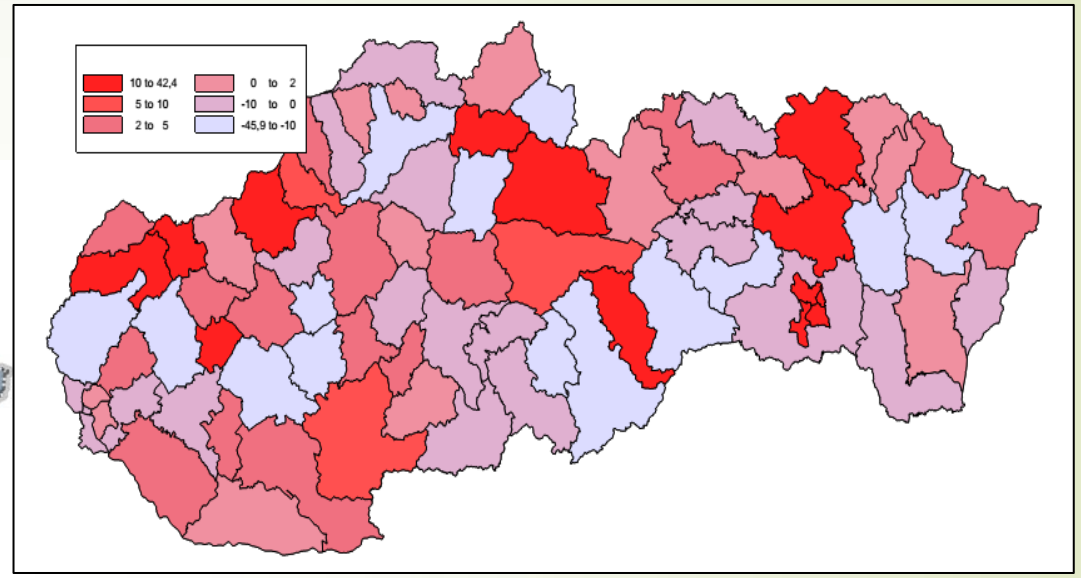
- If we are on the track of decoupling economic growth from environmental impacts, why the environmental quality deterioration (i.e., problem of biodiversity, biotopes)?
- How to improve horizontal coordination? Early identification of conflicting areas and horizontal management (e.g., Transport and sustainable mobility, Biodiversity and tourism, or Renewable energy and nature protection, agricultural sustainability)
- The interventions successful in reaching national targets scale, but how to improve performance on 2 main fronts:
  - Structural long-term unemployment and Social inclusion - Why the low potential of "green jobs" (both high/low end)?
  - Leveraging regional disparities – is there a turning point? How much we may really challenge economic forces of the with regional cohesion interventions?

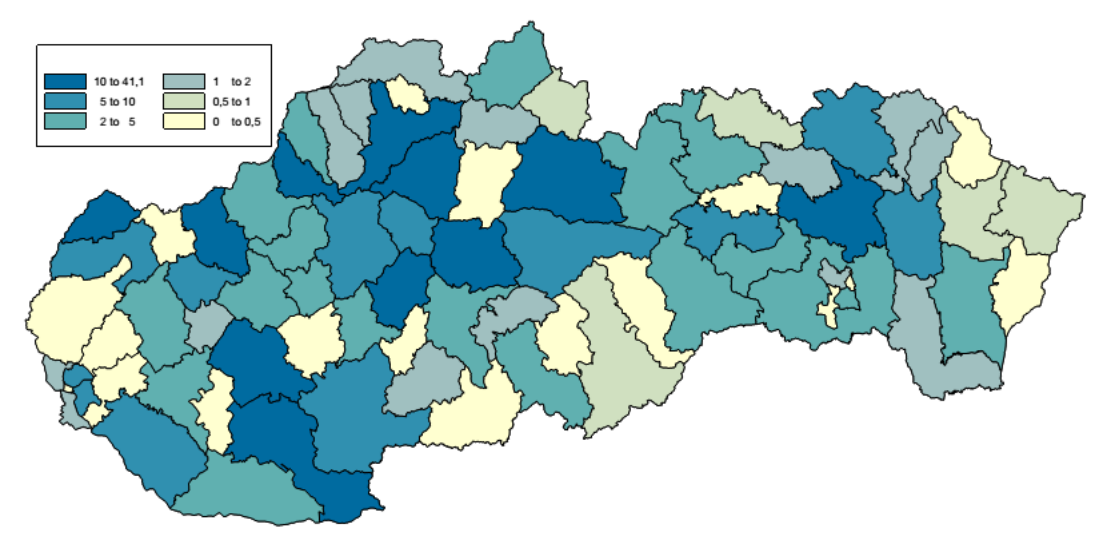

Cohesion policy eligibility
2014-2020
Forecast for cohesion policy eligibility
(2012, 2013, 2014 regional GDP average)
CRPM CPMR
Category
LDR
Transition
MDR
Eligibility changes
Cohesion policy eligibility based on GDP PPS average of 2007, 2008 and 2009.
Data extracted on 2013, source Eurostat.
www.crpm.org
0
500 km
Data extracted on 26 of february 2016, source Eurostat.

a) Change in CO_2 emissions (%)
as 2010 – 2015 average compared to 2008 – 2009
average by districts
b) Financial allocations from the measures in the OP E 3.1 in EUR million

Demography and trends 2012 - 2035







Source: National Strategic Reference Framework: Withdrawal and lists and calculations by authors.

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