

# CLIMATE PROTECTION/CLIMATE CHANGE MITIGATION

## Climate change policy framework

### International level

• United Nations Framework Convention on Climate Change (1992), entry into force 1994 • Kyoto Protocol to the Framework Convention (1995), entry into force 2005 • Doha Amendment to the Kyoto Protocol (2012), entry into force 2015 • Paris Agreement (2015), entry into force 2016 • Agenda 2030 for Sustainable Development (2015), goal 13 – Take urgent action to combat climate change and its impacts • Sendai Framework for Disaster Risk Reduction 2015 – 2030

### European level

• Green Paper „Adapting to Climate Change in Europe - options for EU action“ (2007) • Covenant of Mayors for Climate and Energy (2008) • White Paper „Adapting to climate change: Towards a European framework for action“ (2009) • Europe 2020 – A strategy for smart, sustainable and inclusive growth (2010) • EU Strategy on adaptation to climate change (2013) • 7<sup>th</sup> EU Environment Action Programme by 2020: „Living well, within the limits of our planet“ (2013) • Green Infrastructure EU strategy — Enhancing Europe’s Natural Capital (2013) • 2030 Framework for Climate and Energy Policies (2014)

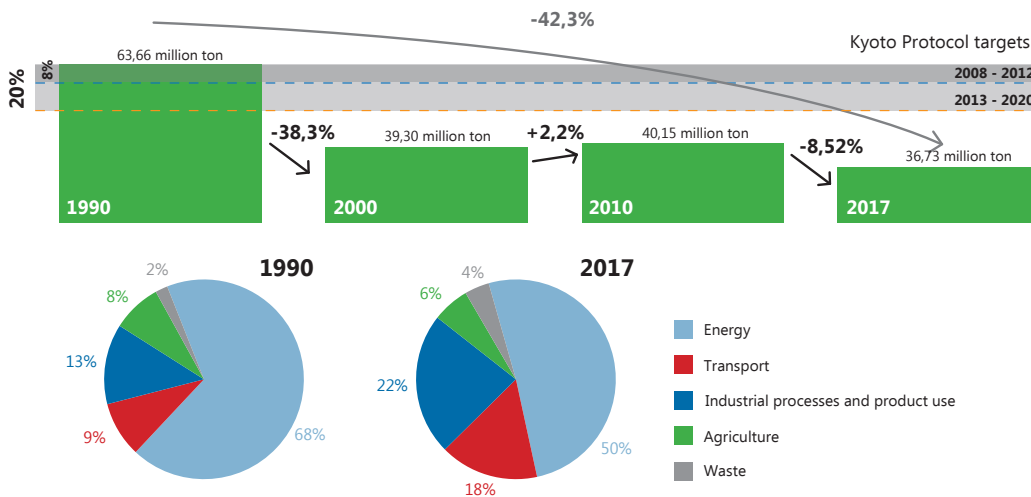
### National level

Implementing the Climate and Energy Package in the Slovak Republic (2011) • Adaptation Strategy of the Slovak Republic on Adverse Impacts of Climate Change (2014) • Adaptation Strategy of the Slovak Republic to Climate Change – update (2018) • National Priorities of Implementation of the Agenda 2030 (2018) • The Value of Water - National Action Plan to Combat Drought and Water Scarcity (2018) • Greener Slovakia – Environmental Policy Strategy of the Slovak Republic by 2030 (2019) • Low-Carbon Strategy of the Slovak Republic by 2030 with an outlook to 2050 (under preparation)

## Sector documents forming the starting point for updating Climate change policy framework



## Development of aggregated antropogenous emissions of greenhouse gases and proportions of their underlying causes during 1990 – 2017 in CO<sub>2</sub> equivalent (million ton)



Source: Slovak Hydrometeorological Institute

The main goal of the updated Adaptation Strategy of the Slovak Republic to Climate Change is to improve the readiness of SR to face adverse impacts of the climate change, to bring the most extensive information about the current adaptation processes in SR and, on the basis of their analysis, to determine an institutional framework and coordination mechanism to ensure efficient implementation of adaptation measures at all levels and in all areas as well as to raise the overall awareness of such issue.

## Aggregated antropogenous emissions of greenhouse gases in CO<sub>2</sub> equivalent (million ton)

	1990	2010	2011	2012	2013	2014	2015	2016	2017
CO <sub>2</sub> (excluding LULUCF)	61,58	38,50	38,07	35,98	35,57	33,64	34,47	34,89	36,03
CO <sub>2</sub> (including LULUCF)	51,77	32,30	31,54	28,47	27,43	27,47	27,79	28,12	29,39
CH <sub>4</sub> (excluding LULUCF)	6,99	4,75	4,82	4,44	4,57	4,34	4,50	4,56	4,60
CH <sub>4</sub> (including LULUCF)	7,00	4,77	4,84	4,48	4,59	4,36	4,53	4,58	4,62
N <sub>2</sub> O (excluding LULUCF)	4,48	2,40	2,01	1,97	1,91	2,00	1,92	2,01	1,93
N <sub>2</sub> O (including LULUCF)	4,57	2,43	2,05	2,01	1,93	2,04	1,96	2,05	1,96
HFC <sub>s</sub>	NO	0,60	0,61	0,63	0,65	0,65	0,73	0,67	0,74
PFC <sub>s</sub>	0,31	0,03	0,02	0,03	0,01	0,01	0,01	0,01	0,01
SF <sub>6</sub>	0,00	0,02	0,02	0,02	0,02	0,01	0,01	0,01	0,01
NF <sub>3</sub>	NO	NO	NO	NO	NO	NO	NO	NO	NO
Total (excluding LULUCF)	<b>73,36</b>	<b>46,30</b>	<b>45,55</b>	<b>43,06</b>	<b>42,73</b>	<b>40,66</b>	<b>41,64</b>	<b>42,15</b>	<b>43,32</b>
Total (including LULUCF)	<b>63,66</b>	<b>40,15</b>	<b>39,08</b>	<b>35,63</b>	<b>34,63</b>	<b>34,54</b>	<b>35,03</b>	<b>35,43</b>	<b>36,73</b>

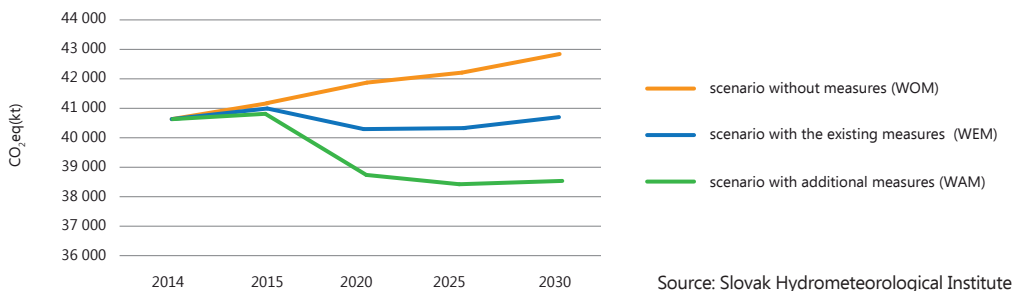
Emissions determined as of 11 April 2019, LULUCF (Land use-Land use change and forestry), NO = No Occurrence

Source: Slovak Hydrometeorological Institute

By 2030, emissions of greenhouse gases will decrease in non-ETS sectors in Slovakia by 20% compared to 2005. Green and fiscally neutral tax reform together with higher environmental taxes will be considered. Publicly funded projects will be assessed from the point of view of green infrastructure. Emission zones will be introduced in towns and transport solutions without negative climate impacts will be supported. Based on the Adaptation Strategy, local governments will introduce particular measures.

**Greener Slovakia – Environmental Policy Strategy of the Slovak Republic by 2030**

**Projections of emissions of greenhouse gases**

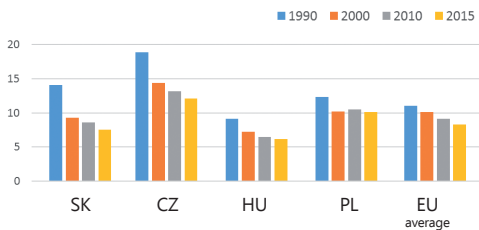


**Emissions quotas trading**

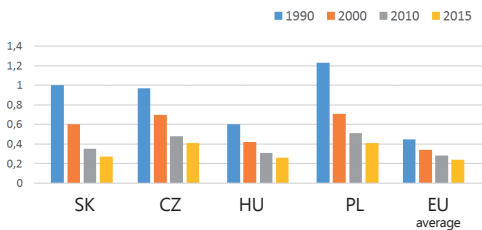
A significant measure for reducing emissions of greenhouse gases is the European Union Emissions Trading System (EU ETS) covering more than 11,000 of the largest issuers of emissions of greenhouse gases in 31 European countries. The scheme covers approximately 50% of emissions of greenhouse gases in SR and since 2005, emissions within EU ETS sectors have decreased by 16% in Slovakia.

**International comparison**

Comparison of the amount of total emissions of greenhouse gases per capita (kg/inhabitant)



Comparison of the amount of total emissions of greenhouse gases per GDP unit (kg/US\$ 1,000)



Source: OECD

# CLIMATE CHANGE AND THE SLOVAK REPUBLIC



**Manifestations of Climate change**

**Trends in selected climate elements in Slovakia (1881 - 2018)**

<p>rise of the average annual air temperature by about 1.73°C</p>	<p>spatially differentiated trend of annual precipitation by about 0.5% on average (in the south of SR the decrease at certain places amounted to over 10%; in the north and north-east the annual rainfall increased by up to 3% in a few cases)</p>	<p>decrease in the relative air humidity (in the south of Slovakia by 5% from 1900 until now; in the remaining area the decrease is smaller)</p>	<p>drop in all characteristics of snow cover up to the altitude of 1,000 m on almost the entire territory of SR (its increase was seen at higher altitudes)</p>
<p>the increase in potential evaporation and the drop in soil humidity - characteristics of water evaporation from soil and from plants, soil humidity and solar radiation confirm that mainly the south of Slovakia is gradually drying up</p>	<p>short time interval between extremely wet and extremely dry years</p>	<p>extremely dry years (2003, 2007), significantly dry years (1990 – 1994, 2000, 2002, 2015, 2017) extremely wet years (2010, 2016), extremely dry years (2011, 2012)</p>	<p>extreme rainfall, higher risk of local floods and much more frequent occurrence of local or country-wide droughts</p>