



MINISTRY  
OF ENVIRONMENT  
OF THE SLOVAK REPUBLIC

# Climate change adaptation policies

***Jozef Škultéty***

*Director of Climate Change Policy Department  
Ministry of Environment of the Slovak Republic*

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# Climate change and global risks according likelihood and impact

## Top 5 Global Risks in Terms of Likelihood

2015	2016	2017	2018	2019	2020
Interstate conflict	Involuntary migration	Extreme weather	Extreme weather	Extreme weather	Extreme weather
Extreme weather	Extreme weather	Involuntary migration	Natural disasters	Climate action failure	Climate action failure
Failure of national governance	Climate action failure	Natural disasters	Cyberattacks	Natural disasters	Natural disasters
State collapse or crisis	Interstate conflict	Terrorist attacks	Data fraud or theft	Data fraud or theft	Biodiversity loss
Unemployment	Natural catastrophes	Data fraud or theft	Climate action failure	Cyberattacks	Human-made environmental disasters

## Top 5 Global Risks in Terms of Impact

2015	2016	2017	2018	2019	2020
Water crises	Climate action failure	Weapons of mass destruction	Weapons of mass destruction	Weapons of mass destruction	Climate action failure
Infectious diseases	Weapons of mass destruction	Extreme weather	Extreme weather	Climate action failure	Weapons of mass destruction
Weapons of mass destruction	Water crises	Water crises	Natural disasters	Extreme weather	Biodiversity loss
Interstate conflict	Involuntary migration	Natural disasters	Climate action failure	Water crises	Extreme weather
Climate action failure	Energy price shock	Climate action failure	Water crises	Natural disasters	Water crises

■ Economic   
 ■ Environmental   
 ■ Geopolitical   
 ■ Societal   
 ■ Technological

Source : World Economic Forum , Global Risks Report 2020

# Global (UN) framework – UNFCCC / Paris Agreement



## Five global goals

- Global temperature limit
- Mitigation
- Adaptation
- Climate finance
- Technology

Redrawn by DNV GL from: Lemmen, D. (2016) UNFCCC Adaptation Committee: 3rd Adaptation Forum. Adaptation Futures 2016.

**Adaptation:** Pursue efforts globally to enhance adaptive capacity, strengthen resilience and reduce vulnerability to climate change. The agreement acknowledges that climate change impacts are already visible. It emphasises the very short-term nature of climate change, and hence the need to place adaptation on a par with mitigation with an emphasis on co-benefits.

# Global (UN) framework – Agenda 2030

## 169 SDG targets – 54 focus on environment

<b>1</b> NO POVERTY	1.1	1.2	1.3	1.4	1.5	1.a	1.b												
<b>2</b> ZERO HUNGER	2.1	2.2	2.3	2.4	2.5	2.a	2.b	2.c											
<b>3</b> GOOD HEALTH AND WELL-BEING	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	3.a	3.b	3.c	3.d						
<b>4</b> QUALITY EDUCATION	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.a	4.b	4.c									
<b>5</b> GENDER EQUALITY	5.1	5.2	5.3	5.4	5.5	5.6	5.a	5.b	5.c										
<b>6</b> CLEAN WATER AND SANITATION	6.1	6.2	6.3	6.4	6.5	6.6	6.a	6.b											
<b>7</b> AFFORDABLE AND CLEAN ENERGY	7.1	7.2	7.3	7.a	7.b														
<b>8</b> DECENT WORK AND ECONOMIC GROWTH	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	8.10	8.a	8.b							
<b>9</b> INDUSTRY, INNOVATION AND INFRASTRUCTURE	9.1	9.2	9.3	9.4	9.5	9.a	9.b	9.c											
<b>10</b> REDUCED INEQUALITIES	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.a	10.b	10.c									
<b>11</b> SUSTAINABLE CITIES AND COMMUNITIES	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.a	11.b	11.c									
<b>12</b> RESPONSIBLE CONSUMPTION AND PRODUCTION	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.a	12.b	12.c								
<b>13</b> CLIMATE ACTION	13.1	13.2	13.3	13.a	13.b														
<b>14</b> LIFE BELOW WATER	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.a	14.b	14.c									
<b>15</b> LIFE ON LAND	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	15.a	15.b	15.c							
<b>16</b> PEACE, JUSTICE AND STRONG INSTITUTIONS	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	16.10	16.a	16.b							
<b>17</b> PARTNERSHIPS FOR THE GOALS	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	17.10	17.11	17.12	17.13	17.14	17.15	17.16	17.17	17.18	17.19

169 SDG targets

107 substantive targets

62 means of implementation

54 focus on environment

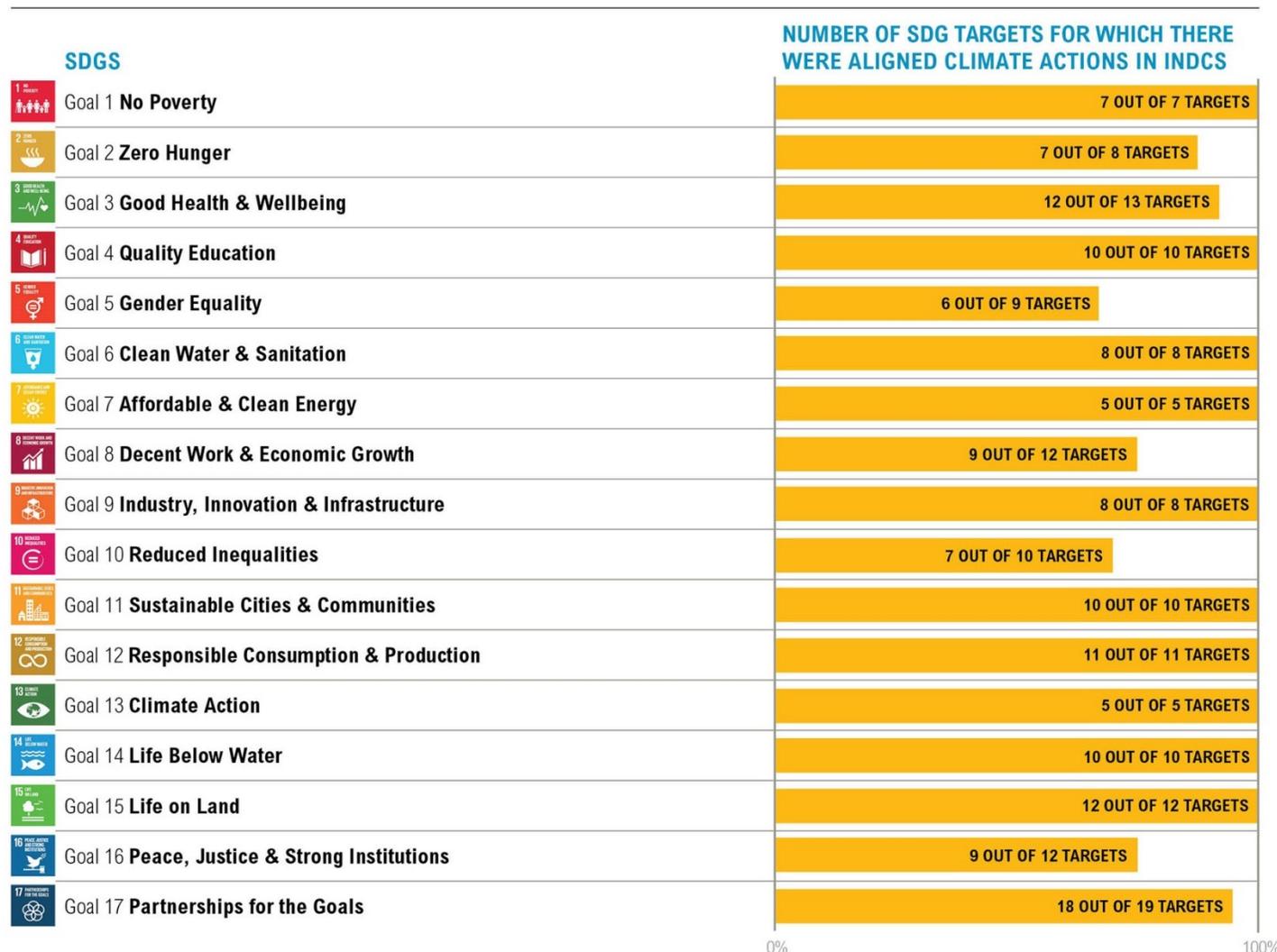
# Global (UN) framework – Sustainable Development Goals

## Analyzing the Degree of Alignment between the SDGs and INDCs

**SDGs and PA**  
(state of art)

although sharing a lot in common they are largely administered in isolation from one another

they involve different secretariats, engage separate communities and use different metrics to measure progress



**SDGs and PA**  
(should be done)

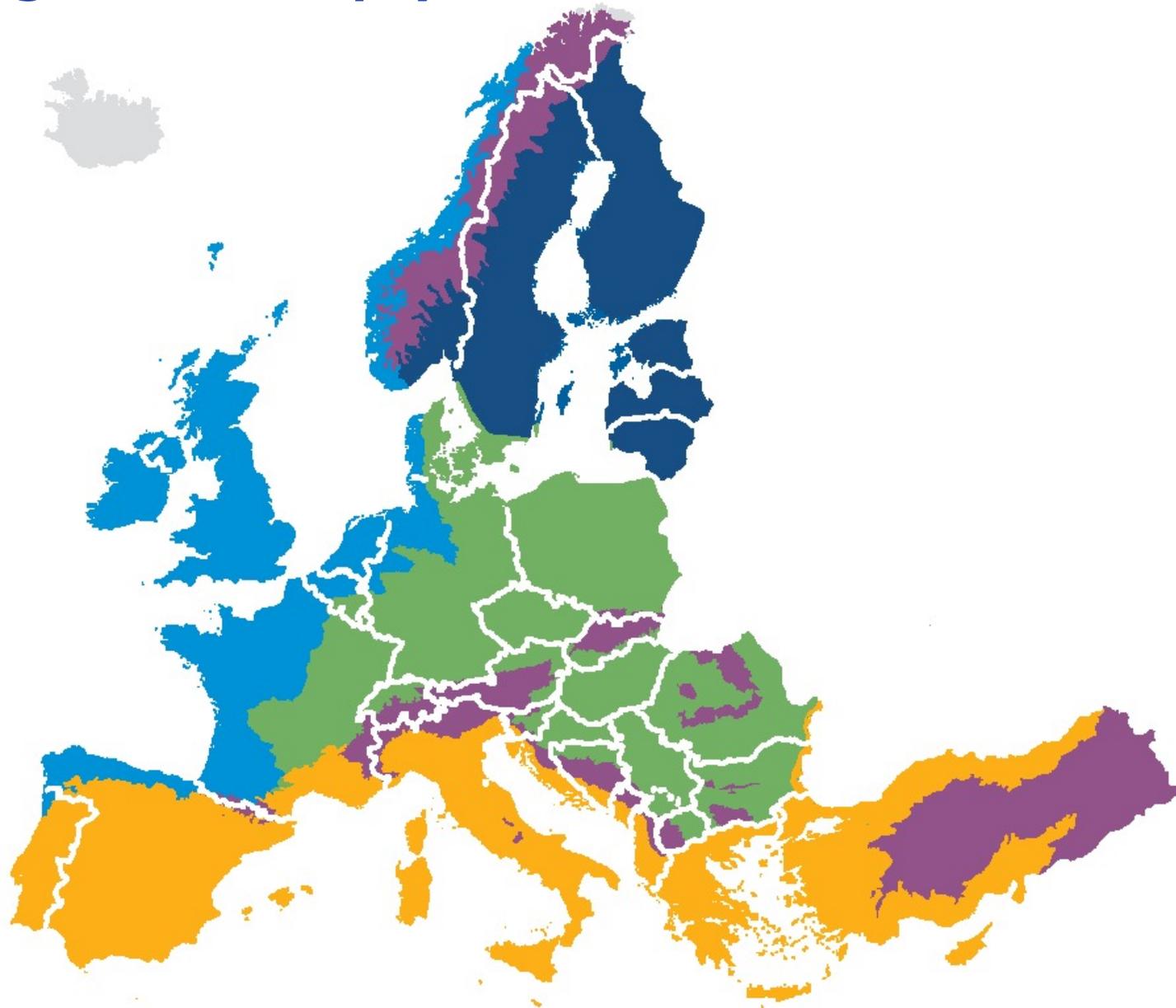
provided with a common agenda for both framework actors, entities and procedures

implementation strategies must be designed with each other in mind

improved coordination to design coherent programs, maximize cross-department impact, while reducing overall costs.

Source: WRI, 2016, Examining the Alignment between the Intended Nationally Determined Contributions and the Sustainable Development Goals

# Key observed and projected climate change and impacts for the main regions in Europe)



## Mountain regions

- Temperature rise larger than European average
- Decrease in glacier extent and volume
- Upward shift of plant and animal species
- High risk of species extinctions
- Increasing risk of forest pests
- Increasing risk from rock falls and landslides
- Changes in hydropower potential
- Decrease in ski tourism

## Continental region

- Increase in heat extremes
- Decrease in summer precipitation
- Increasing risk of river floods
- Increasing risk of forest fires
- Decrease in economic value of forests
- Increase in energy demand for cooling

Source: European Environmental Agency

**FRAMEWORK**  
***UNFCCC - PARIS AGREEMENT***

# EU adaptation strategy (EUAS 2013)

## The EU Strategy in a Nutshell



Priority 1: Promoting action by Member States	
Action 1.	Encourage MS to adopt Adaptation Strategies and action plans
Action 2.	LIFE funding, including adaptation priority areas
Action 3.	Promoting adaptation action by cities along the Covenant of Mayors Initiative
Priority 2: Better informed decision-making	
Action 4.	Knowledge-gap strategy
Action 5.	Climate-ADAPT
Priority 3: Key vulnerable sectors	
Action 6.	Climate proofing the Common Agricultural Policy, Cohesion Policy, and the Common Fisheries Policy
Action 7.	Making infrastructure more resilient
Action 8.	Promote products & services by insurance and finance markets



## Evaluation of the EUAS:

- report on lessons learned and reflections on improvements,
- staff working document presenting the evaluation in detail
- assessments of each of the Member States' national adaptation policy framework
- summaries of each of these assessments
- horizontal assessment of the 28 country fiches

### Adaptation Preparedness Scoreboard SK

- Summary for Slovakia
- Country fiche for Slovakia

- Institutional structure
- Quality of national vulnerability assessments
- Knowledge creation (scenarios, projections, research)
- Action plans (NAS, NAP, regional and local plans)
- Funding mechanisms (ESIF, Life +, EEA and Norway Grants)
- Mainstreaming into sectoral policies, in particular: Disaster risk reduction, Spatial planning, Environmental impact assessment (EIA), Insurance policy
- Transboundary cooperation (Carpathian Convention, Danube region, INTER-REG)
- Monitoring mechanisms in different sectors and governance levels

In the initial roadmap of the **European Green Deal** (12/2019), steps to increase the EU's climate ambition for 2030 and 2050 include the Commission adopting **a new, more ambitious EU strategy on adaptation to climate change.**

Sources :  
[https://ec.europa.eu/clima/policies/adaptation/what\\_en](https://ec.europa.eu/clima/policies/adaptation/what_en)  
[https://ec.europa.eu/clima/sites/clima/files/adaptation/what/docs/country\\_fiche\\_sk\\_en.pdf](https://ec.europa.eu/clima/sites/clima/files/adaptation/what/docs/country_fiche_sk_en.pdf),  
[https://ec.europa.eu/clima/sites/clima/files/adaptation/what/docs/summary\\_fiche\\_sk\\_en.pdf](https://ec.europa.eu/clima/sites/clima/files/adaptation/what/docs/summary_fiche_sk_en.pdf)

## **Preparing the ground for adaptation**

### *Creation of National Adaptation Policy*

**2012:** Commission for Climate Change Policy established

**2013:** National Expert Group of Adaptation established (currently 50 members)

**2014:** The strategy of adaptation of the Slovak Republic to the adverse impacts of climate change

**2016:** 1st National progress report – Information on the progress made in implementing adaptation measures in the Slovak Republic (2014 – 2016)

**2017 – 2018:** Revision and update of the NAS (SEA, intergovernmental consultation process)

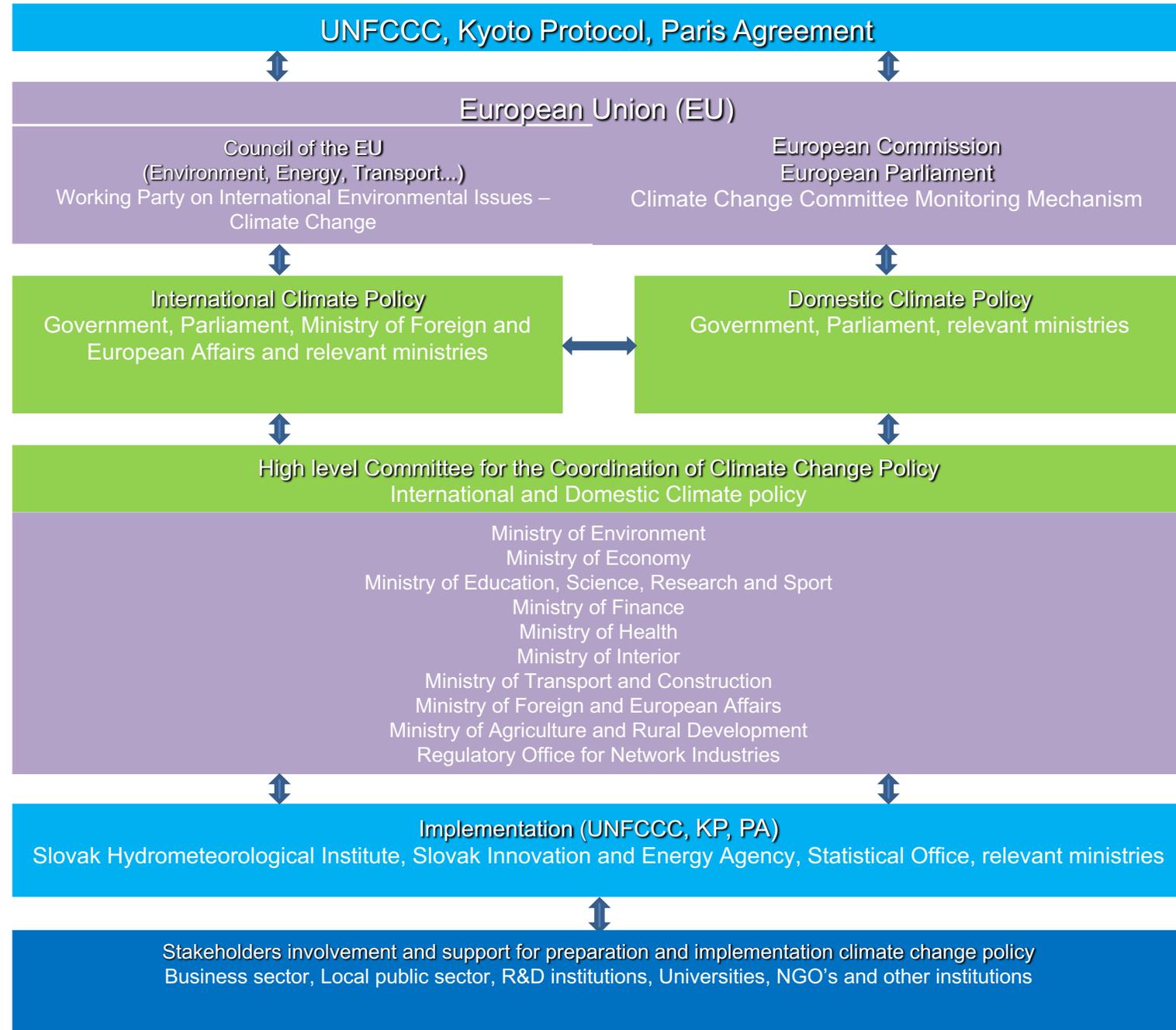
**2018:** Climate Change Adaptation Strategy of the Slovak Republic

**2018 – 2019:** Preparation of the National Adaptation Action Plan

**2020:** Strategic environmental assessment of the NAP

**2021:** Approval of the NAP, Adaption reporting according Art. 19, Part 1 Annex VIII of the EU Governance Regulation

# Addressing climate change Institutional framework



# Assessing risks and vulnerabilities to climate change

## *Climate change and trends in Slovakia*

Following **trends** were observed from 1881 to 2018:

- ❑ increase of average annual air temperature by about 1.7 – 1,9 °C,
- ❑ spatially different trend of annual precipitation totals (in the south of Slovakia decrease up to 10 %, small increase in the northern border of Slovakia about 3 %),
- ❑ decrease of all snow cover characteristics by altitude 1000 m a. s. l.; increase of snow cover days and depths was recorded only in higher mountains,
- ❑ increase of potential evapotranspiration and decrease of soil humidity – southern Slovakia gradually dries out which is visible on the characteristics of evapotranspiration, soil humidity and solar radiation,
- ❑ changes in climate variability - examples of alternating extremely wet and dry years in a short period of time
- ❑ increase in the occurrence of extreme daily and several-day precipitation totals, resulting in an increased risk of local floods in different regions
- ❑ on the other hand local or nationwide drought

## Identifying adaptation goals and adaptation options in key strategic documents

- ❑ Agenda 2030 – Vision and development strategy of the Slovak Republic– landscape, agriculture, forestry, cities and towns
- ❑ “Greener Slovakia” Strategy of the Environmental Policy of the Slovak Republic until 2030 (2019) – including CCA at subregional level
- ❑ Adaptation Strategy of the Slovak Republic on Adverse Impacts of Climate Change (2014)
- ❑ Adaptation Strategy of the Slovak Republic on Adverse Impacts of Climate Change (2018)
- ❑ First Climate Change Adaptation Action Plan (2018 – 2021)
- ❑ „Water is Value” Action plan to address the consequences drought and water scarcity (2018)

# Climate Change Adaptation Policy Goals in Slovakia

1. Ensuring active development of national adaptation policy:
2. Effective implementation of adaptation measures and monitoring of their effectiveness in practice:
3. Strengthening the objectives and recommendations of the national adaptation strategy in multilevel governance and business :
  - Adaptation at the horizontal level of management – into sectoral, socio-economic and territorial policies
  - Adaptation at the vertical level of management and strengthening of the adaptation process at regional and local levels
  - Addressing businesses and their corporate activities
4. Raising public awareness of climate change and building a knowledge base for more effective adaptation
5. Promoting synergy between adaptation and mitigation measures and prioritizing the ecosystem approach in implementing adaptation measures
6. Continued coordination of Agenda 2030 for Sustainable Development, UNFCCC and the Paris Agreement

# **Prioritization of measures and Implementation**

## *First Climate Change Adaptation Action Plan*

### **Need:**

- Slovakia does not have a document proposing priority adaptation measures and a plan for their implementation, including indicators for their monitoring, evaluation and revision.

### **Goal:**

- To increase Slovakia's readiness to face the adverse effects of climate change through the proposed priority adaptation measures and tasks.
- Better mainstreaming of adaptation measures in the sectoral policies.
- To set up the monitoring and evaluation system.

### **Process of elaboration:**

- 2018 – 2019 Project with Slovak Academy of Sciences - Centre for Social and Psychological Sciences
- Qualitative and quantitative analyses and technical bases
- Participatory process, consultation with more than 200 experts, questionnaire survey

# First Climate Change Adaptation Action Plan

The NAP will include:

- Short-term measures for 2021 – 2023 and mid-term measures for 2024 – 2027
- Strategical priorities, cross-cutting adaptation measures (5) and tasks (18)
  - strengthening political, strategic, legislative and financial framework
  - national information system on climate change
  - disaster risk reduction
  - support of science and research
  - green infrastructure and ecosystem based adaptation
  - awareness raising and education
- Specific priorities for selected sectors (7), priority adaptation measures (46) and tasks (176)
  - Water management, Agriculture, Forestry, Biodiversity, Health,
  - Built environment, Technical, economical and social measures
- Establishment of the coordinators, indicative financial sources, timetable and indicators
- Mapped legislation, organizational and financial barriers to implementation

# Monitoring and Evaluation of Adaptation Action

## Before 2020

- ❑ No specific methodology for monitoring and evaluating the impact of adaptation measures in Slovakia.
- ❑ Methodology for assessing adaptation measures for Slovakia and a specific set of indicators will be designed in the process of preparing the NAP.
- ❑ **UNFCCC**  
National communications (2017) (Chapter VI., Vulnerability Assessment, Climate Change Impacts and Adaptation Measures in selected sectors)
- ❑ **EU**  
Reporting according to the Monitoring Mechanism Regulation (2014) and update (2019)
- ❑ **National level**  
Progress report (2016)

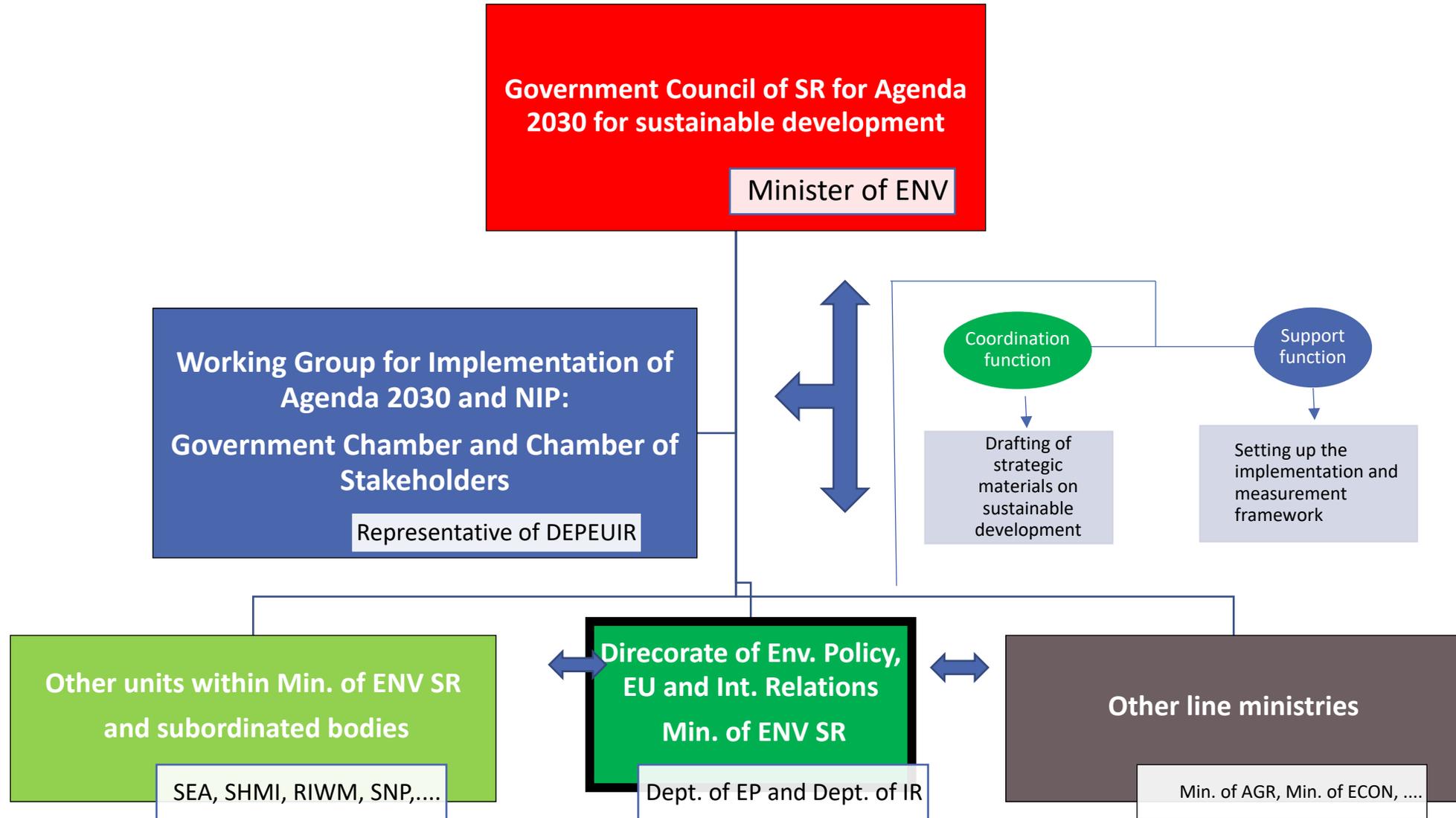
## Upcoming reports and challenges

- ❑ **UNFCCC**  
National communications (2021) (Chapter VI., Vulnerability Assessment, Climate Change Impacts and Adaptation Measures in selected sectors)
- ❑ **Paris Agreement**  
Biennial transparency reports or Adaptation Communications (after 2020)
- ❑ **EU Governance Regulation**  
Art. 19, Part 1 Annex VIII – Biennial integrated reporting on national adaptation actions and implementing act (2021) and Progress report of INECP (2023)
- ❑ **National level**  
Progress report (2023)

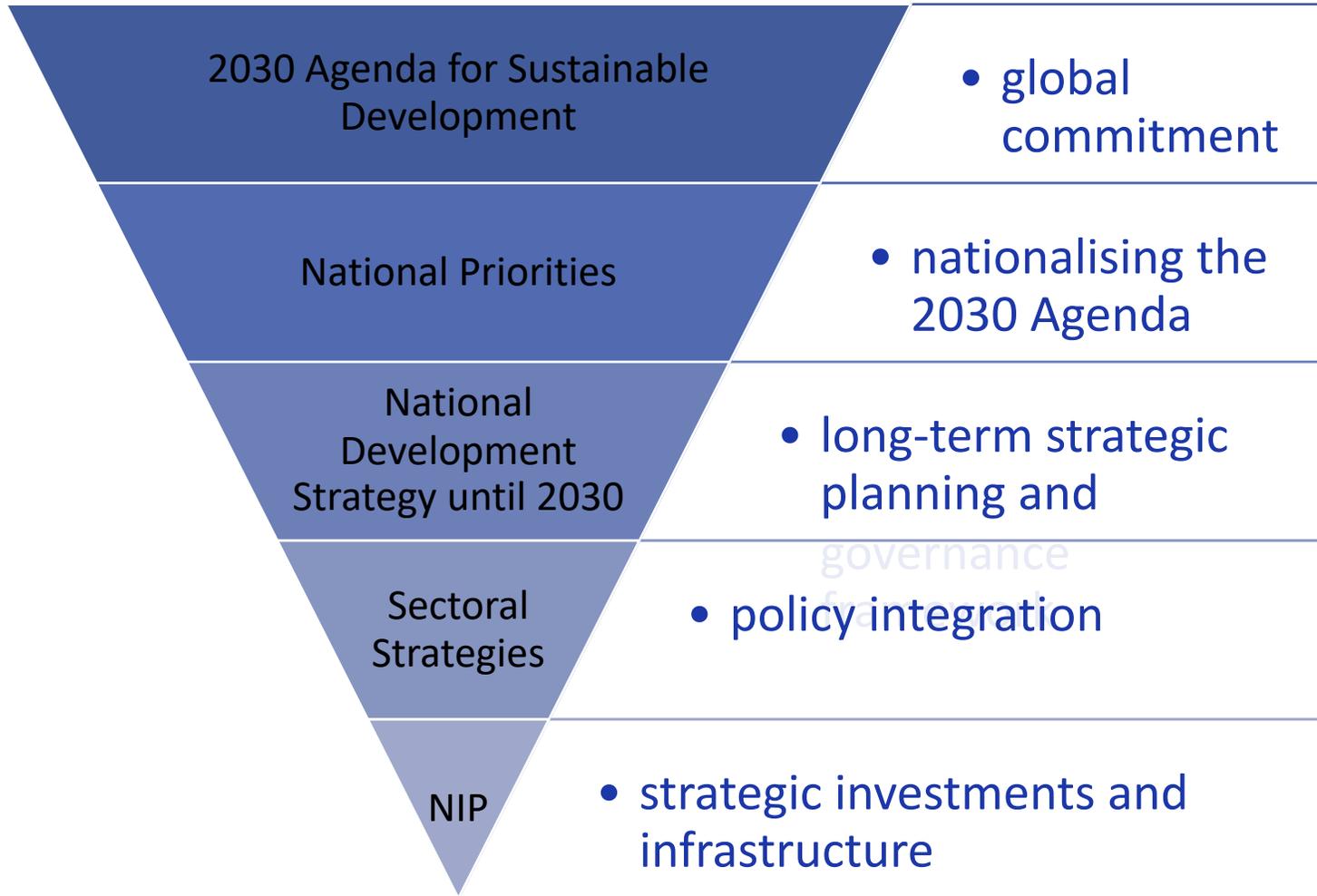
**FRAMEWORK**  
***UN AGENDA 2030***

# Agenda 2030 in Slovakia

## *Institutional framework and involvement of Ministry of Environment*



# Pyramid of Strategic Planning



**July 2017** – Road Map for the Implementation of the 2030 Agenda

**September 2017** – Beginning of cooperation with the OECD

**November 2017** – Baseline analysis of the Slovak Academy of Sciences

**February – May 2018** – Stakeholder participation process

**June 2018** – National priorities for the implementation of the 2030 Agenda

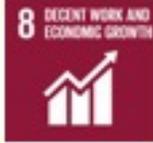
**July 2018** – Slovakia's first Voluntary National Review (VNR)

National Development Strategy until 2030

**February 2020** - Slovakia has signed up to conduct and present Voluntary National Reviews (VNR) in 2021.

In cooperation with the Slovak Academy of Sciences, the Ministry of Environment of the SR has produced an **analysis of global megatrends and their significance for Slovakia, based on trends identified by the European Environment Agency.**

# National priorities for the implementation of the Agenda 2030

Education for a life in dignity	  
Transformation towards a knowledge-based and environmentally sustainable economy in the face of changing demography and global context	    
Poverty reduction and social inclusion	  
Sustainable settlements, regions and countryside in the face of climate change	    
Rule of law, democracy and security	 
Good health	 

# SDG 13 - Take urgent action to combat climate change and its impacts

## 13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries



# SDG 13 - Take urgent action to combat climate change and its impacts

## 13.2 Integrate climate change measures into national policies, strategies and planning

**Low-carbon strategy of the Slovak Republic** until 2030 with a view to 2050

- **Goal** - to identify and support the most cost-effective opportunities to reduce emissions.
- **Basis : Low-carbon growth study** (developed over the last 2 years in cooperation with the World Bank and various experts from different sectors. It models the possibilities and costs of reducing emissions of the Slovak Republic by 2030 with a view to 2050.
- **Overview of the reduction potential** of the different measures and the estimated costs of their implementation.

Revised **Climate Change Adaptation Strategy** (2018)

- **Goal** - to improve the readiness of Slovakia to adequately address the adverse impacts of climate change, to provide information on adaptation processes, to establish institutional framework and coordination mechanism and to raise public awareness on climate change.
- **Support to the implementation of cross-cutting goals** of the 2030 Agenda for Sustainable Development, PA, Sendai Framework for Disaster Risk Reduction and CBD.
- Conscious **adaptation** policy-making, effective implementation, monitoring and evaluation, multi-level governance and cooperation, strengthening the synergies between adaptation and mitigation measures and promoting nature based solutions are of key importance.

First **Climate Change Adaptation Plan - NAP** (under preparation)

- **Goal** - better mainstreaming of adaptation measures to the sectoral policies of the key sectors. To be proposed - monitoring and evaluation system of the adaptation measures based on selected set of indicators.
- **Short-term measures** for 2021- 2023 and **mid-term measures** for 2024 - 2027 will be proposed
- The measures will be prioritized according to their importance, feasibility and availability of financial resources
- The NAP will be submitted to the Government for adoption in 2020.

**Action plan "Water is value"** (2018)

- **Goal** - to address the consequences of drought and water scarcity.
- **Measures** in the area of water management, agriculture and forestry management, urban areas, and science and research.
- **Measures** on monitoring and early warning systems for drought and disaster risk management.

New **National Environmental Strategy of the Slovak Republic - "Greener Slovakia"** (2019)

It includes a **chapter on climate change** and proposes key mitigation and adaptation measures. Almost **each of its chapters** is relevant to **climate change adaptation**.

**Slovakia has been integrating climate change policies into its national policies in the form of various strategies and plans.**

# SDG 13 - Take urgent action to combat climate change and its impacts

## 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

13.A Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible

- **National Adaptation Strategy** - to raise public awareness about vulnerability, climate change impacts and develop a knowledge base to address adaptation.
- National project of the Slovak Environmental Agency - - **Improvement of information and advice on improving the quality of the environment in Slovakia** : six main activities, key Activity 6 focuses on climate change adaptation and risk management and includes a number of tasks to improve communication and awareness, such as organizing conferences on climate change, seminars for regional and local representatives, thematic and informational days for the public, festivals, competitions for schools, publishing publications and preparing a two-set documentary film about climate change adaptation in the country.
- **MoENV website** hosts a section dedicated to climate change, including adaptation information. The adaptation subsection presents a general overview about the national adaptation process and provides general information and links to the key documents related to climate change adaptation. Additional relevant information - the **websites of the Slovak Environment Agency and SHMI**.

- Slovakia has been making a significant effort to fight against adverse effect of climate change, also through financial contributions mainly through ODA. Contributions have progressive growing tendencies.
- **Contribution 100.000 € to IPCC Trust fund (2019)**
- **Contribution 2 mil. US dollars in 2019 and total 2 mil. EUR in 2021-2023 to the Green Climate Fund** to support developing countries that are particularly vulnerable to adverse effects of climate change, Cont
- New **Midterm development strategy** has been adopted for the years 2019 – 2023 in which climate change has become a cross-cutting priority.



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# Thank you!

[jozef.skultety@enviro.gov.sk](mailto:jozef.skultety@enviro.gov.sk)

[www.minzp.sk](http://www.minzp.sk)