



Adaptation preparedness scoreboard:

Draft country fiche for Slovakia

Disclaimer

This draft country fiche was prepared in the context of the implementation of the EU's Strategy for Adaptation to Climate Change (EUAS). The indicators were developed and agreed with experts from the Member States (MS). This draft version of the fiche is published as background information to the public stakeholder consultation about the evaluation of the EUAS running from early December 2017 to early March 2018. It constitutes work in progress, a particular stage of information collection and dialogue between the Commission and the Member States. It presents a snapshot of the status in the country as of September or October 2017. The fiches are planned to be finalised and published as an annex to the strategy's evaluation report in the fourth quarter of 2018, before which they will be further updated and modified. Should you have any specific comments on the draft fiche, please send it to the mailbox CLIMA-CLIMATE-CHANGE-ADAPTATION@ec.europa.eu

Please note that the assessments (yes/no/in progress) need to be read in conjunction with the narrative that accompanies them. They assess the state of play *within* each country. While all effort has been made to ensure the coherence across fiches in the assessment of the same indicator, it should not be directly compared across the MS. Two countries with a "yes" on the same indicator could have a different national situation leading to that assessment. Not all indicators have the "in progress" status, some can only be "yes" or "no". For a more detailed explanation of what each indicator means and how its value is determined, please refer to the description of the scoreboard, a document published alongside the country fiches.

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POLICY FRAMEWORK

Adaptation strategies

A1. National adaptation strategy

Slovakia adopted its National Adaptation Strategy ("The strategy of adaptation of the Slovak Republic to the adverse impacts of climate change" – hereinafter referred to as the "NAS")¹ by Government Resolution No 148/2014 in March 2014.² The NAS examines the climate impacts and proposes adaptation options in a number of areas, such as: environment, biodiversity, built environment, public health, agriculture, forestry, water management and transport. Priority actions are proposed and potential funding sources are identified. It also presents the proposed overall institutional framework for coordinating and implementing future adaptation actions, as well as a proposal for monitoring and evaluation arrangements.

¹ National Adaptation Strategy of Slovakia (2014), Ministry of the Environment of the SR, available at <http://www.minzp.sk/files/oblasti/politika-zmeny-klimy/nas-sr-2014.pdf>

² Government Resolution No 148/2014, March 2014, available at Government Resolution No 148/2014 in March 2014

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The main drivers for adopting a NAS were the impacts of extreme weather events and the economic damages caused by these, and the EU policy on adaptation. A further strong incentive was the use of the European Structural and Investment Funds (ESIF) 2014-2020. The availability of a NAS was part of an ex ante conditionality for the adoption of the Operational Programme Quality of the Environment 2014-2020. Slovakia uses the support of ESIF 2014-2020, among others, for increasing the resilience to the impacts of climate change by reducing the risks related to floods, for the promotion of risk management in the area of climate change, as well as for improved water management in agriculture, restoration of ecosystems and prevention of forest fires. The ESIF funding is being complemented by national public and private funding.

In 2016, the government adopted a progress report "*Information on the progress made in implementing adaptation measures in the Slovak Republic*",³ which analyses the process of adaptation in Slovakia between April 2014 and April 2016. The short time frame for evaluation (approximately 1,5 year) made it difficult to quantify the progress on implementing adaptation measures. The report deals mainly with qualitative characteristics of the adaptation efforts in Slovakia and has the following structure: information on NAS, priority areas, monitoring of the environment, adaptation in the area of health, adaptation at local level, conclusion).

In the beginning of 2017 the Ministry of Environment of SR launched the revision and update of the NAS. In March 2017, the members of the group evaluated the strategy and proposed new texts. In June the first draft of the updated strategy was discussed. The high level commission on climate change policy considered the draft in June as well. In September 2017, the process of strategic environmental assessment was launched. Within the process the draft will be widely consulted with public concerned.⁴ The approval by the Government is foreseen in 2018.

In addition to the NAS, the Ministry of Environment is preparing the Slovak National Strategy for Environment (approval foreseen in 2018), which includes a chapter on climate change mitigation and adaptation. The adaptation part addresses two areas – green and blue measures in land management and adaptation at the local level.

A2. Adaptation strategies adopted at subnational levels

Regional (sub-regional) level:

No vulnerability assessments and planning documents have been yet developed at the 'kraje' level (NUTS III regions), with the exception of the capital Bratislava. This is not surprising, given that currently the climate change policy is centralised in Slovakia.

The first regional adaptation strategy for region Horná Ondava was elaborated in 2015. It has 3 main parts – strategical part, action plan and a catalogue of adaptation measures (Regionálna adaptačná stratégia Hornej Ondavy)⁵.

³ <http://www.rokovania.sk/Rokovanie.aspx/BodRokovaniaDetail?idMaterial=25576> – document „vlastny material“

⁴ The announcement on the beginning of the strategic environmental assessment and the draft of the NAS is available in Slovak at <http://www.minzp.sk/aktualne/oznamenie-vypracovani-strategickeho-dokumentu-strategia-adaptacie-slovenskej-republiky-nepriaznive-dosledky-zmeny-klimy.html>

⁵ more information in Slovak available at http://www.ondavaprezivot.sk/download/RASHO%20WEB/16_P1_Katalog_opatreni_f15.pdf

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Bratislava Self-Governing Region adopted a catalogue of adaptation measures for towns and villages in April 2017 (Katalóg adaptačných opatrení miest a obcí BSK na nepriaznivé dôsledky zmeny klímy)⁶.

Local level:

At the local level, various initiatives have been launched.

- Slovakia has to date 10 signatories to the Covenant of Mayors for Climate & Energy with respect to adaptation.⁷ The capital city Bratislava acceded to Mayors Adapt initiative in April 2012, other cities only in 2016-2017.
- The capital city Bratislava:
The Adaptation Strategy of Bratislava (Stratégia adaptácie na nepriaznivé dôsledky zmeny klímy na území hlavného mesta SR Bratislavy) was adopted in September 2014.⁸
In 2016, Bratislava joined a Horizon2020 project called RESIN. The RESIN project is investigating climate change adaptation practices in European cities and assessing impact and vulnerability in order to develop standardised methodologies and decision support tools that cities can use to develop local adaptation strategies.⁹
- Other examples of local initiatives are:
 - The Adaptation Strategy of Trnava on heat waves,¹⁰ and the Adaptation Strategy of Košice - Západ districts on heat waves.¹¹ These three cities cover approximately 15% of the population in Slovakia.
 - A pilot study on adaptation measures in Čierny Balog (Adaptačné opatrenia na zmenu klímy – projektová štúdia pre Čierny Balog)¹²
 - The adaptation strategy of Spišská Nová Ves and its surroundings (Stratégia adaptácie na dopady zmeny klímy v meste Spišská Nová Ves a okolí)¹³
- The adaptation strategy of Zvolen on rainwater utilization (Adaptačná stratégia na zmenu klímy –využitie dažďovej vody).¹⁴

⁶ available in Slovak at <http://www.region-bsk.sk/clanok/aktualne-spravy-kraj-znizuje-negativne-d%C3%B4sledky-klimatickych-zmien.aspx>

⁷ Covenant of Mayors for Climate & Energy, Adaptation, Slovakia, available at http://www.covenantofmayors.eu/about/about/signatories_en.html?q=Search+for+a+Signatory...&country_s_earch=sk&population=&date_of_adhesion=&status=&commitments2=1 (accessed on 20 June 2017)

⁸ Adaptation Strategy of Bratislava (2015), the City of Bratislava, available at http://www.bratislava.sk/VismoOnline_ActionScripts/File.ashx?id_org=700000&id_dokumenty=11051660

⁹ more information available in English at <http://www.resin-cities.eu/cities/tier1/bratislava/>

¹⁰ Adaptation Strategy of Trnava on heat waves (2015), the City of Trnava, available at http://www.trnava.sk/userfiles/download/attachment/Strategia_adaptacie_Trnava%20schv%C3%A1len%C3%A1.pdf

¹¹ Adaptation Strategy of Kosice on heat waves – Zapad districts (2014), the City of Kosice, available at http://www.kri.sk/web_object/435.pdf

¹² available in Slovak at http://www.obnovadediny.sk/Upload/POD/priklady/dokumentacia/2016_%C4%8Cierny%20Balog.pdf

¹³ available in Slovak at http://www.spiskanovaves.eu/fileadmin/snv/user_upload/editor/editor1/dokumenty/projekty/strategicke_dokumenty/Strategia_adaptacie_navrh_3-2012.pdf

¹⁴ available in Slovak at http://www.zvolen.sk/download_file_f.php?id=603216

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- Adaptation strategy of Kežmarok on heavy rainfall (Stratégia adaptácie mesta Kežmarok na zmenu klímy so zameraním na rast častosti intenzívnych zrážok).¹⁵

Adaptation action plans

B1. National adaptation plan

No specific national adaptation action plan has been adopted yet.

The Ministry of Environment will approve the first national action plan addressing drought until the end of 2017. The action plan will consist of three parts: monitoring and warning systems for drought, science and research (for identifying vulnerabilities) and adaptation measures combating drought in areas of water management, agriculture, forestry and urban areas.

B2. Adaptation plans adopted at sub-national level

The Adaptation Action Plan of Bratislava for years 2017-2020 (Akčný plán adaptácie na nepriaznivé dôsledky zmeny klímy na území hlavného mesta Slovenskej republiky Bratislavy na roky 2017-2020) was adopted in March 2017¹⁶.

B3. Sectoral adaptation plans

Some adaptation actions are included in the existing sectoral strategies and plans for water management (flood risk management), agriculture, forestry and disaster risk management

SCOREBOARD

Step A: preparing the ground for adaptation

1. Coordination structure

1a. A central administration body officially in charge of adaptation policy making

Yes / No

The Ministry of Environment of the Slovak Republic (MZP SR), Directorate for Climate Change and Air Protection, Department of Climate Change Policy is the central body designated to coordinate the adaptation policy-making process.¹⁷

1b. Horizontal (i.e. sectoral) coordination mechanisms exist within the governance system, with division of responsibilities

Yes / In progress / No

The Ministry of Environment is responsible for the development and implementation of climate change policy, including climate change adaptation. A High Level Committee for Coordination of the Climate Change Policy was established on January 15, 2012. There are two special working groups created under this committee: the working group on adaptation was designed to prepare the NAS. The members include representatives from other ministries (the Ministry of Education, Science, Research and Sport, the Ministry of

¹⁵ available in Slovak at https://www.kezmarok.sk/download_file_f.php?id=806813

¹⁶ the action plan is available in Slovak at <https://zastupitelstvo.bratislava.sk/data/att/14595.pdf>

¹⁷ Climate Adapt website <http://climate-adapt.eea.europa.eu/countries-regions/countries/slovakia>

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Health, the Ministry of the Economy, the Ministry of the Interior, the Ministry of Agriculture and Rural Development, the Ministry of Transport and Construction), and other institutions, such as the Public Health Authority of the Slovak Republic, the Slovak Hydrometeorological Institute (SHMU), the Slovak Academy of Science and other professional institutions, research and non-governmental organisations as the Carpathian Development Institute, the Association of Towns and Municipalities of Slovakia or the Union of Slovak Cities. The NAS was adopted by the government as Resolution No 148/2014 in March 2014, giving clear tasks upon ministries and municipalities to achieve the objectives of the NAS.¹⁸

The working group on adaptation commented on the progress report "*Information on the progress made in implementing adaptation measures in the Slovak Republic*" and facilitated the elaboration of the updated version of NAS. There was coordination with the Ministry of the Interior under the elaboration of the Strategy on the management of security risks, in which natural hazards and disaster risk management are included as well. The horizontal coordination has still mainly an ad-hoc character.

1c. Vertical (i.e. across levels of administration) coordination mechanisms exist within the governance system, enabling lower levels of administration to influence policy making

Yes / In progress / **No**

The NAS Resolution No 148/2014 recommends that municipalities and cities take on the responsibilities in implementing the NAS.¹⁹ Hence, some vertical coordination should exist, however, no evidence of this has been found. There is also no evidence that lower levels of administrations were involved in NAS development.

There is no regional level coordination of cities in the framework of the Covenant of Mayors. The most active cities in the area of adaptation are Bratislava and Trnava. Regional development plans don't take into account climate change impacts at the moment. River Basin Management Plans/Flood Risk Management Plans take into account climate change impacts in the form of impacts in the extension of the series of monitored hydrological data.

2. Stakeholders' involvement in policy development

2a. A dedicated process is in place to facilitate stakeholders' involvement in the preparation of adaptation policies

Yes / No

The working group on adaptation to prepare the NAS has involved (and still involves, the list of representatives was extended recently) multiple government stakeholders, other institutions and public bodies, research organisations and NGOs. The National Contact Point on Adaptation (MZP SR) provides communication with international organizations and coordinates national activities in collaboration with the Working Group on Adaptation.²⁰ Furthermore, the Slovak authorities have reported that the private sector and the wider public were duly informed during the process.

¹⁸ Ibid

¹⁹ The NAS Resolution No 148/2014 <http://www.rokovania.sk/File.aspx/ViewDocumentHtml/Uznesenie-14024?prefixFile=u>

²⁰ Climate Adapt website <http://climate-adapt.eea.europa.eu/countries-regions/countries/slovakia>

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2b. Transboundary cooperation is planned to address common challenges with relevant countries

Yes / No

No evidence was identified in the NAS supporting or planning for trans-national and/or cross-border cooperation arrangements aimed at promoting common adaptation action or co-ordinating national efforts in this field.

Trans-national cooperation is currently ongoing with the other European countries crossed by the Carpathians under the Carpathian Convention – in October 2017 a new article dealing with climate change shall be adopted at the conference of parties.

Trans-national cooperation is currently ongoing with the other European countries crossed by the Danube river for tackling the flood risks, preparing anti-flooding action plans, and building flood defences. In the framework of the International Commission for the Protection of the Danube, a climate adaptation strategy was adopted in 2012.

Slovakia has been involved in other cross-border cooperation through INTERREG/ERDF funded projects, such as "Green and blue space adaptation for urban areas"²¹, and "Regio Clima"²². Regional and cross-border cooperation is also implemented through other regional conventions, such as the Carpathian Convention²³, where specific adaptation projects have received EU funding (e.g. CARPIVIA), or the Ramsar Convention.²⁴

Moreover, some Slovak institutions are participating in several international research projects, for example the Comenius University participates in the CC-TAME Project (Terrestrial Adaptation & Mitigation in Europe) and RESIN project (Bratislava Municipality and Comenius University are partners from the Slovak side). The SHMU participates in the project Joint Disaster Management Risk Assessment and Preparedness in the Danube macro-region (SEE Risk) which is focused on risk assessment and with the purpose to foster awareness and effectiveness of the measures in emergency situations caused by climate change.²⁵ The SHMU also participates in the project DriDanube focusing on drought in the Danube region.²⁶

Step B: assessing risks and vulnerabilities to climate change

3. Current and projected climate change

3a. Observation systems are in place to monitor climate change, extreme climate events and their impacts

Yes / **In progress** / No

The Slovak Hydro-meteorological Institute (SHMU) is regularly monitoring climate change and extreme weather events and has its own research capacity. Thus, it plays a

²¹ GRaBS: Green and Blue Space Adaptation for Urban Areas and Eco Towns, <http://climate-adapt.eea.europa.eu/metadata/projects/green-and-blue-space-adaptation-for-urban-areas-and-eco-towns>

²² Regioclima, <http://www.interreg4c.eu/projects/project-details/index-project=19-regional-cooperation-towards-adaptation-to-climate-change&.html>

²³ Carpathian Convention, <http://www.carpathianconvention.org/>

²⁴ Ramsar Convention, <http://www.ramsar.org/>

²⁵ Climate Adapt website <http://climate-adapt.eea.europa.eu/countries-regions/countries/slovakia>

²⁶ more information in English at website <http://www.interreg-danube.eu/approved-projects/dridanube>

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key role in providing data and research for adaptation to climate change and indeed was a valuable source of expertise and knowledge for drafting the NAS. The website of the institute provides potential warnings for floods, wind and drought and heatwaves in the summer period. There is a section on the impacts of climate change in Slovakia. But this section only describes in general what the impacts are in Slovakia, there is no monitoring system.²⁷ The listed impacts are:

- Average temperature rising of air in the last 100 years by 1.1. degree Celsius.
- Decrease of precipitation on average of 5.6%.
- Wind catastrophes
- Decrease of water reservoirs
- Changes in the forestry vegetation and threat to biodiversity of forests
- Impact on agricultural production.

The framework for complex environmental monitoring in Slovakia has been determined by the resolutions of the Slovak Government No. 623/1990 Coll., No. 449/1992 Coll. and No. 620/1993 Coll. The Monitoring Subsystem "Meteorology and Climatology" is one of the most important and it includes the observing networks of monitoring stations, remote sensing measurements and observations of some biological subjects (phenology). Other subsystems are focused on air, water and radioactivity monitoring.

Within the framework of the national environmental monitoring system of the Slovak Republic there are different sub-systems: air, water (including mineral and mining waters), land, biota (fauna, flora), forests, geological factors, waste, foreign substances in food and feed, meteorology and climatology and radioactivity in the environment. The SHMU is responsible for: air, water, meteorology and climatology and radioactivity in the environment.

3b. Scenarios and projections are used to assess the economic, social and environmental impacts of climate change, taking into account geographical specificities and best available science (e.g. in response to revised IPCC assessments)

Yes / In progress / No

Climate projections are available from the Climate Change and Adaptation Report of the SHMU project²⁸ for 8 selected sectors from 2011 mainly from downscaling the outputs of GCM and RCM models. These climate projections were used in assessing the economic and environmental impacts of climate change in the priority sectors considered by the NAS. The sectors covered in the report include: agriculture, forestry, biodiversity, energy, water management, transport, tourism, and health.

The climate change studies in Slovakia use the outputs from several Global General Circulation Models and Regional General Circulation Models. These outputs enable to design local and national climate change scenarios by methods of statistical and dynamic downscaling with the use of measured data from Slovak meteorological stations gathered in the period 1951-2010. From 2010 to 2014 the GCMs CGCM3.1 (Canada) and

²⁷ Slovak Hydrometeorological Institute <http://www.shmu.sk/sk/?page=1>

²⁸ Climate Change and Adaptation Report of the Slovak Hydrometeorological Institute (SHMU) Project, 2011 (EFRA, Dôsledky klimateckej zmeny a možné adaptačné opatrenia v jednotlivých sektoroch)

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ECHAM5 (Germany), Regional General Circulation Models KNMI (Netherlands) and MPI (Germany) outputs were applied.²⁹

3c. Sound climate risks/vulnerability assessments for priority vulnerable sectors are undertaken to support adaptation decision making

Yes / In progress / No

The SHMU 2011 report³⁰ mentioned above analyses in detail 8 sectors, which were covered by the NAS as well. The SHMU report feeds into decision making via the NAS, because the adaptation measures were selected on the basis of vulnerability assessment, which comes from SHMU report.

The NAS uses in particular this study to briefly describe the impacts and vulnerabilities in the sectors covered.³¹ Also, under the revision of the NAS there were new chapters elaborated for the following sectors: industry, energetics, private sector, tourism. The NAS does not refer to any specific sources that were used to provide these assessments (besides the SHMU study)³² and states that the industry has not yet showed interest in adaptation in Slovakia.

3d. Climate risks/vulnerability assessments take transboundary risks into account, when relevant

Yes / In progress / **No**

Slovakia is involved in the Danube Region Strategy with all relevant countries, which addresses a wide range of issues, including environmental risks.³³ However, there is not yet evidence of systematically taking into account, e.g. as part of the NAS, the cross-border climate risks when carrying out vulnerability and risks assessments.

4. Knowledge gaps

4. Work is being carried out to identify, prioritise and address the knowledge gaps

Yes / In progress / **No**

The NAS does not provide information on identified knowledge gaps, neither is there a process outlined on how to address potential knowledge gaps. There is ongoing research on the topic of climate change adaptation, however, it is unclear where the knowledge gaps are and how to address them.

A science-policy interface was set up, i.e. the working group to prepare the NAS. Various research institutes and the national meteorological administration ensured valuable feedback in that process. However, the NAS does not contain any provision on actions regarding the science/policy interface along the implementation of the strategy.

²⁹ Climate Adapt website <http://climate-adapt.eea.europa.eu/countries-regions/countries/slovakia>

³⁰ Climate Change and Adaptation Report of the Slovak Hydrometeorological Institute (SHMU) Project, 2011 (EFRA, Dôsledky klimatickej zmeny a možné adaptačné opatrenia v jednotlivých sektoroch)

³¹ The National Adaptation Strategy of the Slovak Republic, January 2014

³² Climate Change and Adaptation Report of the Slovak Hydrometeorological Institute (SHMU) Project, 2011 (EFRA, Dôsledky klimatickej zmeny a možné adaptačné opatrenia v jednotlivých sektoroch)

³³ Danube Region Strategy, <http://www.danube-region.eu/>

5. Knowledge transfer

5a. Adaptation relevant data and information is available to all stakeholders, including policy makers (e.g. through a dedicated website or other comparable means)

Yes / **In progress** / No

The Ministry of Environment website hosts a section dedicated to climate change, including both mitigation and adaptation information. The adaptation sub-section³⁴ presents some general information, documents (the Resolution³⁵, the NAS³⁶ and the SHMU 2011 study³⁷), and links that are relevant for adaptation (including links to CLIMATE-ADAPT and DG Climate Action).

The information on this sub-page is very basic. There are no data or projections presented, only a link to the few documents mentioned above. There is no section on planned activities or follow up. It is not clear from the website what has been done to implement the NAS since its adoption in 2014.

5b. Capacity building activities take place; education and training materials on climate change adaptation concepts and practices are available and disseminated

Yes / In progress / **No**

There is no evidence on any capacity building activities or education and training activities in the field of climate change adaptation since the adoption of the NAS.

Following the phase of drawing up the NAS when various interactions took place, there is currently no evidence about ongoing specific activities on education and capacity building with regard to adaptation, or dissemination of training/awareness raising materials.

The NAS itself acknowledges that information campaigns and training on adaptation are not implemented systematically and on the basis of a specific concept, but rather ad hoc and irregularly, through conferences, lectures and articles in professional journals. Other sources of information include the results of scientific tasks and projects that are published on the internet portals of professional bodies, and the results of EU-funded projects.

³⁴ Ministry of Environment website, adaptation related information <http://www.minzp.sk/sekcie/temy-oblasti/ovzdušie/politika-zmeny-klimy/aktualne-temy/adaptacia.html>

³⁵ The NAS Resolution No 148/2014 <http://www.rokovania.sk/File.aspx/ViewDocumentHtml/Uznesenie-14024?prefixFile=u>

³⁶ The National Adaptation Strategy of the Slovak Republic, January 2014

³⁷ Climate Change and Adaptation Report of the Slovak Hydrometeorological Institute (SHMU) Project, 2011 (EFRA, Dôsledky klimatickej zmeny a možné adaptačné opatrenia v jednotlivých sektoroch)

Step C: identifying adaptation options

6. Adaptation options' identification

6a. Adaptation options address the sectoral risks identified in 3c, the geographical specificities identified in 3b and follow best practices in similar contexts

Yes / No

The NAS presents adaptation options and measures for each sector analysed in the NAS. The adaptation options proposed in the NAS for the priority sectors are based on expert judgement, after considering the sectoral impacts of climate change. The measures seem to build on good practices identified elsewhere for similar contexts, with some stronger sectors leading and capitalising on a more detailed expertise on adaptation (e.g. agriculture, forestry, water management). However, the use of sectoral risk assessments in the process is not totally clear.

6b. The selection of priority adaptation options is based on robust methods (e.g. multi-criteria analyses, stakeholders' consultation, etc.) and consistent with existing decision-making frameworks

Yes / No

Chapter 9 of the NAS describes the criteria for prioritisation of adaptation options and measures. The adaptation options described in the NAS have been reported as being based on robust methods (e.g. expert judgement supported by multi-criteria analysis).

6c. Mechanisms are in place to coordinate disaster risk management and climate change adaptation and to ensure coherence between the two policies

Yes / In progress / **No**

Although the NAS describes the synergies between adaptation and disaster risk management, it is yet unclear what mechanisms are in place (if any) for coordinating the adaptation to climate change with the disaster risk management strategies and actions (besides the Joint Disaster Management Risk assessment project in the Danube macro-region³⁸, where it is assumed that the stakeholders for the two communities are well integrated).

In the Strategy on the management of security risks (adopted in December 2015) natural hazards, disaster risk management and adaptation measures are included.

7. Funding resources identified and allocated

7. Funding is available to increase climate resilience in vulnerable sectors and for cross-cutting adaptation action

Yes / **In progress** / No

The NAS chapter 10 discusses the financial instruments that can be used to finance adaptation measures in Slovakia from 2014.³⁹ The chapter explains the different funding programmes (national and EU) that are available for financing adaptation projects. In

³⁸ SEERISK project, <http://www.seeriskproject.eu/seerisk/#main>

³⁹ The National Adaptation Strategy of the Slovak Republic, January 2014

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annex 2 of the NAS, there is an overview of all projects with an adaptation element financed through these programmes (one table per programme) after 2013.

The funding programmes include:

- National revitalisation and integrated management of floods programme.
- EU Operational Programme (OP) for Environment (2007-2013), and EU Operational Programme (OP) for the Quality of Environment (2014-2020) European programming cycle will include over € 730 million support from the European Structural and Investment Funds (ESIF) for adaptation projects (which will tackle flood risks and address specific issues in agriculture, forestry and biodiversity). National funding supported adaptation measures in agriculture, forestry and water management. Annual reports of the OP Environment include a list of financed projects, some of which tackle these sectors.⁴⁰
- a Swiss Contribution Financial Mechanism
- the European Economic Area grants and Norway grants
- The LIFE programme (3rd phase) and LIFE+.
- Transnational cooperation programmes (not clear what kind of programmes these are).

The NAS mentions that one of the mid-term and long-term goals of the Strategy is to map the use of financial instruments for planned and pro-active adaptation, and if possible, to monitor the link between the costs and benefits of such investments.

There is no dedicated budget available for financing cross-cutting/coordinated adaptation action.

Step D: Implementing adaptation action

8. Mainstreaming adaptation in planning processes

8a. Consideration of climate change adaptation has been included in the national frameworks for environmental impact assessments

Yes / No

Slovakia has transposed the revised Environmental Impact Assessment Directive. Act (142/2017) is in force since 15th June 2017 and it considers climate change adaptation,

8b. Prevention/preparedness strategies in place under national disaster risk management plans take into account climate change impacts and projections

Yes / **No**

A national framework for single and multi-hazard risk assessment is in place and considers some current climate-related risks (notably floods). Strategies are in place for tackling those risks, i.e. the Management of Flood Risks plan from 2012⁴¹, Strategy of Floods protection until 2020 from 2013⁴². The first Flood management plans from the

⁴⁰ <http://www.opzp.sk/>

⁴¹ <http://www.minzp.sk/files/sekcia-vod/casovy-a-vecny-harmonogram-navrhu-prvych-planov-manazmentu-povovodnoveho-rizika.pdf>

⁴² <http://www.minzp.sk/sekcie/temy-oblasti/voda/ochrana-pred-povodnami/strategia-protipovodnej-ochrany-sr-do-roku-2020/>

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end of 2015⁴³ take into account the impacts of climate change and climate change adaptation.⁴⁴

The NAS quotes several civil protection legislative provisions, and calls for including adaptation to climate change within complex risk assessment activities linked to civil protection.

However, it is unclear to what extent the future climate-related risks (based on projections) are being considered in current disaster risk management plans.

8c. Key land use, spatial planning, urban planning and maritime spatial planning policies take into account the impacts of climate change

Yes / **No**

The NAS advocates (see chapter 11 of NAS) mainstreaming adaptation into the national legislation on land-use planning, for instance when it comes to investments with a long life cycle, such as industry or energy infrastructure. However, for the time being no evidence could be found of the inclusion of climate change adaptation considerations in land use or spatial/urban planning policies.

8d. National policy instruments promote adaptation at sectoral level, in line with national priorities and in areas where adaptation is mainstreamed in EU policies

Yes / In progress / **No**

Coordinated actions of mainstreaming adaptation into national policies and policy instruments have not yet started, as the NAS has only been adopted in 2014. However, some limited autonomous mainstreaming of adaptation has been carried out for the civil protection policy and actions (mainly flood protection).

8e. Adaptation is mainstreamed in insurance or alternative policy instruments, where relevant, to provide incentives for investments in risk prevention

Yes / **No**

The NAS includes an extensive section on Insurance, which recognises the relevance of this instrument in adaptation, and the need to take into account the impact of climate change. However no evidence could be found that adaptation is mainstreamed in insurance policies or alternative policy instruments to provide incentives for investments in risk prevention.

9. Implementing adaptation

9a. Adaptation policies and measures are implemented, e.g. as defined in action plans or sectoral policy documents

Yes / **In progress** / No

Some autonomous adaptation actions are being undertaken at sectoral level, e.g. in agriculture, forestry, and flood risk management. However, no evidence was found that these actions are clearly coordinated with the national adaptation strategy and the

⁴³ <http://www.minzp.sk/mpr/>

⁴⁴ Ministry of Environment website, floods protection related information <http://www.minzp.sk/sekcie/temy-oblasti/voda/ochrana-pred-povodnami/povoden-uvod.html>

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sectoral adaptation action plans are still not in place. It seems each sector is preparing its own plans without any coordination with the NAS, or reference to adaptation per se. There is for example, the Water Management Plan from December 2015, Forestry development plan from 2009, a number of transport strategies, mainly related to the EU energy and transport legislation.

The NAS itself states that adaptation takes place rather spontaneously, as a response to extreme weather events and their consequences, not systemically as a set of preliminary, planned measures implemented to minimize losses and economic costs.

It seems that the NAS is coordinated with the Operational Programme for the Environment, 2014-2020, hence some of the adaptation measures are mainstreamed into this programme.⁴⁵ With regard to floods protection, more action is undertaken under the Rural Development Programme of the Slovak Republic 2014-2020, the Integrated Regional Operational Programme 2014-2020.

In addition, there are several local initiatives launched recently, i.e. since 2014. For example, the Climate change adaptation strategy of Bratislava was adopted in September 2014, and is linked to the NAS.⁴⁶ There is some adaptation activity also happening in other two cities, Trnava and Kosice.⁴⁷ Overall, it seems that adaptation projects and plans are happening in particular related to water management and the management of floods, and at local level in the main cities. Other sectors at local level are developing their plans according to other EU or national legislation, but not systematically taking into account the NAS.

9b. Cooperation mechanisms in place to foster and support adaptation at relevant scales (e.g. local, subnational)

Yes / **No**

There does not seem to be any cooperation mechanisms for fostering adaptation at sectoral and sub-national levels yet. As described in 9a, sectors seem to work independently on their own plans and strategies, some of them are dated earlier than the NAS from 2014.

9c. Procedures or guidelines are available to assess the potential impact of climate change on major projects or programmes, and facilitate the choice of alternative options, e.g. green infrastructure

Yes / **No**

Apart from various guidelines issued by the European Commission, we could not identify specific procedures or guidelines issued or used by the Slovak authorities for assessing the impact of climate change on major projects or programmes and for facilitating their adaptation.

9d. There are processes for stakeholders' involvement in the implementation of adaptation policies and measures

Yes / **No**

⁴⁵ Climate Adapt website <http://climate-adapt.eea.europa.eu/countries-regions/countries/slovakia>

⁴⁶ Climate Change Adaptation Strategy of Bratislava, 2014

⁴⁷ Climate Adapt website <http://climate-adapt.eea.europa.eu/countries-regions/countries/slovakia>

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Since there is no coordinated implementation yet in place, the specific mechanisms for ensuring the involvement of the stakeholders in those processes are yet to be put in place.

Step E: Monitoring and evaluation of adaptation activities

10. Monitoring and reporting

10a. NAS/NAP implementation is monitored and the results of the monitoring are disseminated

Yes / No

The schedule of the periodic review of the NAS is determined in Resolution of the Government of the Slovak republic No 148/2014.

In 2016 the government adopted a progress report "*Information on the progress made in implementing adaptation measures in the Slovak Republic*", which analyses the process of adaptation in Slovakia between April 2014 and April 2016. The short time frame for evaluation (approximately 1,5 year) made it difficult to quantify the progress on implementing adaptation measures. The report deals mainly with qualitative characteristics of the adaptation efforts in Slovakia and has the following structure: information on NAS, priority areas, monitoring of the environment, adaptation in the area of health, adaptation at local level, conclusion).⁴⁸

10b. The integration of climate change adaptation in sectoral policies is monitored and the results of the monitoring are disseminated

Yes / No

A short chapter on adaptation actions in key sectors is available in the report mentioned under 10a.

10c. Regional-, sub-national or local action is monitored and the results of the monitoring are disseminated

Yes / No

A short chapter on adaptation actions on the local level is available in the report mentioned under 10a.

11. Evaluation

11a. A periodic review of the national adaptation strategy and action plans is planned

Yes / No

The schedule of the periodic reviews of the NAS is determined in Resolution of the Government of the Slovak republic No 148/2014 – information on the progress made in the implementation of adaptation measures (deadline: May 31, 2016), the strategy update regard on new scientific knowledge on climate change (deadline: April 30, 2018).

⁴⁸ The progress report is available in Slovak at website:

<http://www.rokovania.sk/Rokovanie.aspx/BodRokovaniaDetail?idMaterial=25576> – document "vlastny material"

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There is little information available on the Ministry of Environment website on whether such review has taken place, and/ or what were the results of this review.

The results of the review are briefly described in the draft version of the updated NAS⁴⁹

11b. Stakeholders are involved in the assessment, evaluation and review of national adaptation policy

Yes / No

Mechanisms will stay in place: the working group on adaptation was revitalised and new representatives were invited and involved (now up to 40 members) in the process of updating the NAS. Under the strategic environmental assessment the public concerned and those non-governmental organisations, which do not have representatives in the working group will be able to join the process, a public consultation will be organised.

⁴⁹ At the time of publication of this Country Fiche, in the process of a Strategic Environmental Assessment.

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SUMMARY TABLE

Adaptation Preparedness Scoreboard		
No.	Indicator	Met?
Step A: Preparing the ground for adaptation		
1 <i>Coordination structure</i>		
1a	A central administration body officially in charge of adaptation policy making	<u>Yes</u> / No
1b	Horizontal (i.e. sectoral) coordination mechanisms exist within the governance system, with division of responsibilities	<u>Yes</u> / In progress / No
1c	Vertical (i.e. across levels of administration) coordination mechanisms exist within the governance system, enabling lower levels of administration to influence policy making.	Yes / In progress / <u>No</u>
2 <i>Stakeholders' involvement in policy development</i>		
2a	A dedicated process is in place to facilitate stakeholders' involvement in the preparation of adaptation policies	<u>Yes</u> / No
2b	Transboundary cooperation is planned to address common challenges with relevant countries	<u>Yes</u> / No
Step B: Assessing risks and vulnerabilities to climate change		
3 <i>Current and projected climate change</i>		
3a	Observation systems are in place to monitor climate change, extreme climate events and their impacts	Yes / <u>In progress</u> / No
3b	Scenarios and projections are used to assess the economic, social and environmental impacts of climate change, taking into account geographical specificities and best available science (e.g. in response to revised IPCC assessments) Yes / In progress / No (e.g. in response to revised IPCC assessments)	<u>Yes</u> / In progress / No
3c	Sound climate risks/vulnerability assessments for priority vulnerable sectors are undertaken to support adaptation decision making.	<u>Yes</u> / In progress / No
3d	Climate risks/vulnerability assessments take transboundary risks into account, when relevant	Yes / In progress / <u>No</u>
4 <i>Knowledge gaps</i>		
4	Work is being carried out to identify, prioritise and address the knowledge gaps	Yes / In progress / <u>No</u>
5 <i>Knowledge transfer</i>		
5a	Adaptation relevant data and information is available to all stakeholders, including policy makers (e.g. through a dedicated website or other comparable means).	Yes / <u>In progress</u> / No

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Adaptation Preparedness Scoreboard		
No.	Indicator	Met?
5b	Capacity building activities take place; education and training materials on climate change adaptation concepts and practices are available and disseminated	Yes / In progress / No
Step C: Identifying adaptation options		
6 Identification of adaptation options		
6a	Adaptation options address the sectoral risks identified in 3c, the geographical specificities identified in 3b and follow best practices in similar contexts	Yes / No
6b	The selection of priority adaptation options is based on robust methods (e.g. multi-criteria analyses, stakeholders' consultation, etc.) and consistent with existing decision-making frameworks	Yes / No
6c	Mechanisms are in place to coordinate disaster risk management and climate change adaptation and to ensure coherence between the two policies	Yes / In progress / No
7 Funding resources identified and allocated		
7	Funding is available to increase climate resilience in vulnerable sectors and for cross-cutting adaptation action	Yes / In progress / No
Step D: Implementing adaptation action		
8 Mainstreaming adaptation in planning processes		
8a	Consideration of climate change adaptation has been included in the national frameworks for environmental impact assessments	Yes / No
8b	Prevention/preparedness strategies in place under national disaster risk management plans take into account climate change impacts and projections	Yes / No
8c	Key land use, spatial planning, urban planning and maritime spatial planning policies take into account the impacts of climate change	Yes / No
8d	National policy instruments promote adaptation at sectoral level, in line with national priorities and in areas where adaptation is mainstreamed in EU policies	Yes / In progress / No
8e	Adaptation is mainstreamed in insurance or alternative policy instruments, where relevant, to provide incentives for investments in risk prevention	Yes / No
9 Implementing adaptation		
9a	Adaptation policies and measures are implemented, e.g. as defined in action plans or sectoral policy documents	Yes / In progress / No
9b	Cooperation mechanisms in place to foster and support adaptation at relevant scales (e.g. local, subnational)	Yes / No
9c	Procedures or guidelines are available to assess the potential impact of climate change on major projects or programmes,	Yes / No

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Adaptation Preparedness Scoreboard		
No.	Indicator	Met?
	and facilitate the choice of alternative options, e.g. green infrastructure	
9d	There are processes for stakeholders' involvement in the implementation of adaptation policies and measures.	Yes / No
Step E: Monitoring and evaluation of adaptation activities		
10 <i>Monitoring and reporting</i>		
10a	NAS/NAP implementation is monitored and the results of the monitoring are disseminated	Yes / No
10b	The integration of climate change adaptation in sectoral policies is monitored and the results of the monitoring are disseminated	Yes / No
10c	Regional-, sub-national or local action is monitored and the results of the monitoring are disseminated	Yes / No
11 <i>Evaluation</i>		
11a	A periodic review of the national adaptation strategy and action plans is planned	Yes / No
11b	Stakeholders are involved in the assessment, evaluation and review of national adaptation policy	Yes / No