

Adaptation preparedness scoreboard:

Country fiche for Bulgaria

Note to the Reader

Under Action 1 of the EU's Strategy on adaptation to climate change (COM(2013)216), in collaboration with the Member States, the Commission developed an 'adaptation preparedness scoreboard'. Using the scoreboard, the Commission prepared country fiches on each Member State in an iterative consultation process.¹ The country fiches assess the Member States' adaptation policy as of June 2018, including the content of NASs and plans, for the following aspects:

- Institutional structure
- Quality of national vulnerability assessments
- Knowledge creation (national observation systems in relevant sectors² and climate modelling), transfer and use
- Action plans:
 - Quality (incl. the basis used for assessment of adaptation options)
 - Actual implementation mechanisms
- Funding mechanisms
- Mainstreaming into sectoral policies, in particular:
 - Disaster risk reduction
 - Spatial planning
 - Environmental impact assessment (EIA) (how the Directive is transposed)
 - Insurance policy
- Transboundary cooperation
- Monitoring mechanisms in different sectors and governance levels

¹ The first versions of the fiches, prepared in consultation with the Member States in 2014-15, were unpublished and used to fine-tune the scoreboard. The second drafts were published, after consulting the Member States, as background documents to the public consultation on this evaluation in December 2017.

https://ec.europa.eu/clima/consultations/evaluation-eus-strategy-adaptation-climate-change_en The final Member State consultation on the draft fiches took place in June 2018.

² These relate for example to meteorology, floods, drought, sea level, coastal erosion, biodiversity, human/animal/plant health etc.

The fiches are based on internal work by the Commission and on targeted assistance from an external contractor. They also served as input to the assessment of Action 1 of the Strategy during its evaluation. Annex IX of the Commission's SWD(2018)461 on the evaluation of the Strategy presents a horizontal assessment of the 28 country fiches, while Annex X presents the list of scoreboard indicators and the methodology used in applying them.

The assessments in the country fiches (yes/no/in progress) need to be read in conjunction with the narrative that accompanies them. They assess the state of play within each EU Member State. 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 Member States. 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".

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List of abbreviations

EIA	Environmental Impact Assessment (EIA)
IBRD	International Bank for Reconstruction and Development
IPCC	Intergovernmental Panel on Climate Change
NAS	National adaptation strategy
NAP	National adaptation plan
NAMRB	National Association of Municipalities in the Republic of Bulgaria
MoEW	Ministry of Environment and Water
SEA	Strategic Environmental Assessment

POLICY FRAMEWORK

Adaptation strategies

A1. National adaptation strategy

On May 4th, 2018, Bulgaria published a draft national adaptation strategy (NAS)³ that covers the period until 2030. Using resources from the EU structural funds operational programme on Good Governance, the Government of Bulgaria commissioned the World Bank to provide advisory services on: “Strengthening strategic planning on climate adaptation, including providing inputs for the preparation of a National Climate Change Adaptation Strategy, together with an Action Plan – for the Ministry of Environment and Water”⁴. The objectives of this project were to:

- Assess options to address climate risks across the economy
- Formulate the NAS and national adaptation plan (NAP) for the period to 2030
- Strengthen capacity for implementation and cross-sector coordination on climate adaptation.

The draft NAS is intended to serve as a reference document, setting a framework for climate adaptation action and priority directions up to 2030, and identifying and confirming the need for climate adaptation action both at economy-wide and sectoral levels, while highlighting the consequences of no action.

A2. Adaptation strategies adopted at subnational levels

The draft NAS has adopted a sectoral rather than a regional approach to climate adaptation. Nevertheless, regional development plans⁵ developed under the EU Cohesion Policy⁶ each include a separate chapter on climate change related (mainly adaptation) measures relevant at the local level (see B2).

Additionally, a Strategy on Adaptation to Climate Change for Sofia Municipality has been developed under the EU-funded project “Transitioning towards Urban Resilience and Sustainability (TURAS)”⁷. The Strategy has the following objectives: 1. To develop horizontal policies and strategic planning; 2. To increase institutional capacity and improve

³Proposal for a National Climate Change Adaptation Strategy and Action Plan, URL: [http://www.moew.government.bg/static/media/ups/tiny/%D0%9F%D0%98%D0%9A/%D0%9C%D0%9F%D0%90/Strategy%20and%20Action%20Plan%20-%20Full%20Report%20-%20Draft%20\(2018-05-03\)%20-%20EN%20V4.EM.pdf](http://www.moew.government.bg/static/media/ups/tiny/%D0%9F%D0%98%D0%9A/%D0%9C%D0%9F%D0%90/Strategy%20and%20Action%20Plan%20-%20Full%20Report%20-%20Draft%20(2018-05-03)%20-%20EN%20V4.EM.pdf), Access date: 10/05/2018

⁴ Climate Change Adaptation Advisory Support to Bulgaria, URL: <http://www.worldbank.org/en/events/2017/03/01/inception-workshop-in-bulgaria#3>, Access date: 10/05/2018

⁵Ministry of Regional Development website, URL: <http://www.mrrb.government.bg/regionalni-planove-za-razvitiie-na-rajonite-ot-nivo-2-za-perioda-2014-2020-g-prieti-s-reshenie-na-ms/>

⁶Regional Development Plans 2014-2020, URL: <http://www.mrrb.government.bg/?controller=articles&id=521>, Access date: 10/05/2018

⁷Стратегия за адаптация към климатичните промени на Столична община, URL: https://www.sofia.bg/search?p_p_id=101&p_p_lifecycle=0&p_p_state=maximized&p_p_mode=view&101_start_action=%2Fasset_publisher%2Fview_content&101_returnToFullPageURL=%2Fsearch&101_assetEntryId=1395518&101_type=document, Access date: 10/05/2018

co-operation between institutions; 3. To support targeted research and monitoring to fill the knowledge gaps regarding anticipated climate impacts; 4. To improve citizens' awareness through climate change information campaigns; 5. To identify additional benefits of risk prevention and adaptation.

Adaptation action plans

B1. National adaptation plan

A draft NAP was published as a chapter⁸ within the draft NAS. The development of the draft NAP followed an iterative process to identify and select sectoral operational objectives and specify the underlying actions. This was based on a process of developing sector assessment reports for the nine key sectors and has been informed by the disaster risk management and macro-economic analysis reports. The process involved a series of stakeholder consultations that also included relevant government agencies. The stakeholder groups were organised using a multi-criteria analysis approach, following Climate-Adapt guidance⁹. In the selection of draft operational objectives and priority activities for these objectives, with associated implementation details, a consultation between the NAS and NAP writers and sectoral experts was carried out. The NAP, thus, includes operational objectives and priority options, an explanation of proposed activities, expected results and performance indicators.

B2. Adaptation plans adopted at sub-national level

In 2013, the Council of Ministers adopted the 2014-2020 Regional Development Plans of Level 2 regions under the EU Cohesion Policy¹⁰. The plans outline the development of the Northeast, Northwest, Southwest, Southeast, North Central and South-Central Regions, featuring a section about the region's climate vulnerability. The sections include suggested adaptation measures at regional level. The sectors most vulnerable to climate change in the different regions include agriculture, biodiversity, tourism, water resources management, power generation, fisheries, and forestry.

Local authorities (municipalities) have an important role to play, particularly regarding the implementation of adaptation actions, which is reflected in the operational programmes¹¹ for the new programming period.

B3. Sectoral adaptation plans

⁸ Chapter 5, Proposal for a National Climate Change Adaptation Strategy and Action Plan, URL: [http://www.moew.government.bg/static/media/ups/tiny/%D0%9F%D0%98%D0%9A/%D0%9C%D0%9F%D0%90/Strategy%20and%20Action%20Plan%20-%20Full%20Report%20-%20Draft%20\(2018-05-03\)%20-%20EN%20V4.EM.pdf](http://www.moew.government.bg/static/media/ups/tiny/%D0%9F%D0%98%D0%9A/%D0%9C%D0%9F%D0%90/Strategy%20and%20Action%20Plan%20-%20Full%20Report%20-%20Draft%20(2018-05-03)%20-%20EN%20V4.EM.pdf), Access date: 10/05/2018

⁹ Adaptation Support Tool: Prioritise adaptation options and select preferred ones, URL: <https://climate-adapt.eea.europa.eu/knowledge/tools/adaptation-support-tool/step-4/prioritise-and-select>, Access date: 10/05/2018

¹⁰ Regional Development Plans 2014-2020, URL: <http://www.mrrb.government.bg/?controller=articles&id=521>, Access date: 10/05/2018

¹¹ Website of Ministry of Regional Development, URL: <http://www.mrrb.government.bg/regionalni-planove-za-razvitiie-na-rajonite-ot-nivo-2-za-perioda-2014-2020-g-prieti-s-reshenie-na-ms/> -, Access date: 10/05/2018

The draft NAS provides a list of strategic objectives for nine economic sectors, including agriculture, biodiversity and ecosystem services, energy, forestry, human health, tourism, transport, the urban environment (including infrastructure and construction) and water. The overarching objectives relate to mainstreaming adaptation in the policies and strategies within each sector, as well as to building capacity, raising awareness and increasing climate resilience. The process of integrating these objectives has not yet begun, as the NAS is not yet approved.

Outside the policy options planned as a part of the response to the EU Adaptation Strategy, the most recent river basin management plans in 2016¹² provide for the development of environmental protection and water management adaptation measures. These plans focus on the elaboration and implementation of drought management plans. This entails, *inter alia*, options for the construction of facilities to capture and use biogas in waste water treatment plants, water savings and efficiency, reduction of erosion in water catchment areas. In addition, it includes resilience selection criteria for project funding that are based on an assessment of climate impacts on water resources and water use.

Flood risk management plans¹³ for all four river basins in the country were implemented on 29th December 2016 under the Floods Directive¹⁴. The plans were developed on the basis of preliminary flood risk assessments completed in 2011. The Ministry of Environment and Water has developed hazard and flood risk maps and methodologies for preliminary assessment of flood risks. The areas at significant flood risk were identified in 2013 in relation to disaster management.

In 2011, the “Programme of measures to adapt forests in the Republic of Bulgaria and mitigate the negative impact of climate change on them”¹⁵ was adopted by the Ministry of Agriculture, Food and Forestry. Forestry is also covered by the draft NAS. To avoid overlap between policies, coordination between the 2011 forestry adaptation programme and the NAS is planned in the draft NAS. Finally, the Ministry of Agriculture, Food and Forest has adopted the National Forest Strategy 2013 – 2020^{16,17}, which also includes measures to strengthen the climate resilience of forest ecosystems.

SCOREBOARD

¹² River Basin Management Plans in 2016-2021, URL: <http://www.moew.government.bg/bg/vodi/planove-za-upravlenie/planove-za-upravlenie-na-rechnite-basejni-purb/>, Access date: 10/05/2018

¹³ Ministry of Energy and Environment web site, section on Flood Risk Management Plans with links to the respective plans, URL: http://www5.moew.government.bg/?page_id=24259, Access date: 10/05/2018

¹⁴ Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks (Text with EEA relevance), URL: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32007L0060>, Access date: 15/05/2018

¹⁵ Forestry program, URL: http://www.iag.bg/data/docs/Programa_ot_merki.pdf, Access date: 10/05/2018

¹⁶ National Forest Strategy 2013, URL: http://www.mzh.government.bg/MZH/en/ShortLinks/cross_compliance/Gorskisektor.aspx, Access date: 10/05/2018

¹⁷ Национална стратегия за развитие на горския сектор в Република България за, URL: <http://www.strategy.bg/StrategicDocuments/View.aspx?lang=bg-BG&Id=875> - Access date: 10/05/2018

Step A: Preparing the ground for adaptation

1 Coordination structure

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

Yes / No

In Bulgaria, a Climate Change Policy Directorate was established within the Ministry of Environment and Water (MOEW). The body is responsible for the transposition of all EU laws and policies relating to climate change into national law. It is also responsible for the coordination of the policy-making processes relating to the NAS.¹⁸

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

Yes / In progress / No

Horizontal coordination mechanisms exist within the governance system, with division of responsibilities in relation to climate adaptation measures. Article 3, paragraph 4 of the Climate Change Mitigation Act governs the establishment of the National Expert Council on Climate Change, as an advisory body to assist the MoEW in the implementation of state policy on climate mitigation and adaptation. The Council consists of representatives of the different governmental ministries, National Association of Municipalities in Republic of Bulgaria, Regional governmental authorities, the Bulgarian Academy of Sciences, environmental NGOs and businesses. In this sense, the body provides both horizontal and vertical coordination.

Furthermore, a National Coordination Council on Climate Change was created to support the coordination of the operational process relating to the implementation of climate mitigation and adaptation policies. It is led by the MoEW and involves representatives of all relevant ministries, at deputy minister level, and some agencies fostering the development of the NAS. The MoEW is also assisted by the National Expert Council on Climate Change referred to above.

Both bodies take part in the reviews of all reports prepared as a part of the NAS development, and are currently reviewing the draft NAS and NAP.¹⁹ Within the Government, institutions with responsibilities for integration of climate change (both mitigation and adaptation) include: the Ministry of Agriculture, Food and Forestry; the Ministry of Transport, IT and Communications; the Ministry of Finance; the Ministry of Interior; the Ministry of Foreign Affairs; the Ministry of Health; the Ministry of Education and Science; the Ministry of Labour and Social Policy; and the Environment Executive Agency. Moreover, some adaptation measures have been taken up at the national level by the Ministry of Economy, the Ministry of Energy, and the Ministry of Regional Development and Public Works. The draft

¹⁸ Climate policies information, URL: <http://www.moew.government.bg/bg/klimat/>, Access Date: 10/05/2018

¹⁹ Personal communication with MS contact.

NAS makes it clear that each individual Ministry would be responsible for implementing and mainstreaming the measures outlined in the NAS in their respective sector.

Further horizontal coordination is planned in the draft NAS to support capacity building activities, although it is not clear whether this would be done by the National Expert Council on Climate Change and National Coordination Council on Climate Change.

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

At national level, the coordination of municipalities on different issues is carried out through a National Association of Municipalities in the Republic of Bulgaria (NAMRB). All municipalities are members of NAMRB (a total of 265). NAMRB's activity is focused on three main areas:

- Representation of municipalities interests in central governmental affairs: research, analysis, evaluation and development of proposals for change and improvement of policy on local government; and lobbying
- Support to municipalities in executing their powers: studying of municipal opinions and developing consensus positions and strategies; providing a wide range of consulting services and training programs; issuing thematic and advisory guides; and providing its own training centre for municipalities
- Participation in Bulgarian and international forums; and organisational strengthening of NAMRB.

The NAMRB enables municipalities to influence the policy making process in climate adaptation policy through representatives in the National Expert Council on Climate Change (see Indicator 1b).

To ensure efficiency and coordination between competent institutions, the MOEW established a National Coordination Council on Climate Change. All relevant documents regarding the development of the NAS were presented to the Council and its representatives had the opportunity to review the documents and to give their opinions and remarks, which are reflected in the documents.

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 NAS and NAP are being developed with wide public participation through ongoing public consultation and consideration of all key milestones in the development of the NAS at the National Expert Council on Climate Change. For this purpose, an operational body - the National Coordination Council on Climate Change (consisting of deputy ministers and experts from the competent departments) has been established to review, evaluate and deliver opinions and proposals on individual documents before submitting them for discussion to

the National Expert Council on Climate Change. This is to provide support at all levels and in all sectors while developing the NAS and for the measures, which will be included in the NAP.

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

Yes / No

The draft NAS does not include any explicit transboundary cooperation measures. Nevertheless, in the initial development of the draft NAS, a framework document was developed to underpin the preparation of the NAS: "National climate change risk and vulnerability assessment for the sectors of the Bulgarian economy". This document assesses the risk of climate change related natural disasters in Bulgaria based on various climate models and scenarios. The economic sectors included are agriculture, water, urban environment (including urban infrastructure and construction), energy, transport, construction and infrastructure, ecosystems and biodiversity, human health and tourism. The framework document also includes a separate chapter on cross-border cooperation on issues related to climate impacts²⁰.

In addition, Bulgaria is a member of various transboundary initiatives:

- Bulgaria is a member of The EU Strategy for the Danube Region which has facilitated transboundary cooperation between Bulgaria and Romania on issues relevant to climate adaptation. The actions include joint planning and capacity building and best practice sharing.
- Bulgaria also participates in the IPA Cross-border Cooperation Programmes: Bulgaria – Serbia²¹, Bulgaria-Turkey²² and Bulgaria-Macedonia²³. These programmes include a priority axis towards protecting the environment and promoting climate adaptation and mitigation, risk prevention and management.
- In 2013, under the IPA Bulgaria – Serbia programme, a project called "Click"-Climate change - Kick-off" was developed, which aims to raise public awareness of the climate impacts. It assessed how to adapt to climate change by developing the capacity of NGOs to participate actively in the preparation and implementation of measures and policies for adaptation.
- In relation to the preparation of Bulgaria's regional river basins management plans for 2016-2021, Bulgaria has signed declarations on transboundary river cooperation with Greece and Turkey. These declarations have facilitated various meetings and

²⁰ UNFCCC, Report of the technical review of the sixth national communication of Bulgaria, URL: <https://unfccc.int/sites/default/files/resource/docs/2015/idr/bgr06.pdf>, Access date: 16/05/2018

²¹ IPA Cross-border Cooperation Programme Bulgaria – Serbia, URL: <http://www.ipacbc-bgrs.eu/sr>, Access date: 16/05/2018

²² IPA CBC Bulgaria-Turkey, URL: <http://www.ipacbc-bgtr.eu/>, Access date: 16/05/2018

²³ IPA CBC Bulgaria-Macedonia, URL: <http://www.ipa-cbc-007.eu/>, Access date: 16/05/2018

exchange of information for the preparation of the regional river basins management plans (in Bulgaria).²⁴

- In addition, the Bulgaria-Romania Cross-border Cooperation Programme 2014-2020²⁵ supports joint action on tackling flood risks, desertification and heatwaves. This programme includes measures for promoting climate adaptation, risk prevention and management. The same type of programme is also running between Bulgaria and Greece²⁶, and aims at maintaining a sustainable and climate adaptable cross-border area.

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

Climate change is monitored by the National Institute of Meteorology and Hydrology at Bulgarian Academy of Science (NIMH-BAS).²⁷ There is only one Global Atmosphere Watch station in the country (Rojen). Hydrological information is presented on a separate website²⁸. The National Institute of Meteorology and Hydrology has overall responsibility for research and operational activities in meteorology, agrometeorology and hydrology in Bulgaria.

A programme of the Ministry of Agriculture for adaptation of forests to climate change, established in 2011, includes systems for monitoring the following: (i) early detection and warning about forest fires, (ii) forest diseases, and (iii) grass coverage in high altitude mountains. The programme also outlines measures relating to improving forest health and resilience, and ensuring the availability of technology for land and air patrolling and fire control.²⁹

The National Institute of Meteorology and Hydrology at the Bulgarian Academy of Science publishes a monthly hydro-meteorological bulletin³⁰. It provides a national overview of the main processes and phenomena of the meteorology, agrometeorology, hydrology and ecology. Operational information gathered from NIMH's national network enables a rapid

²⁴ Министерство на Околната среда и водите, План за управление на речните басейни, 2016-2021, page 16, URL: http://www5.moew.government.bg/?wpfb_dl=17218, Access date: 16/05/2018

²⁵ Interreg V-A Romania-Bulgaria, URL: <http://www.interregrobg.eu/en/>,

²⁶ Interreg V-A Greece-Bulgaria <http://www.greece-bulgaria.eu/> Access date: 16/05/2018

²⁷ National Institute of Meteorology and Hydrology at Bulgarian Academy of Science (NIMH-BAS), URL: <http://www.meteo.bg/en>, Access date: 16/05/2018

²⁸ National Institute of Meteorology and Hydrology, URL: <http://hydro.bg/>, Access date: 16/05/2018

²⁹ Program of Measures of the Ministry of Agriculture for adaptation of the forests of the Republic of Bulgaria to climate change by vulnerability zones, URL: http://www.iag.bg/data/docs/Programa_ot_merki.pdf Access date: 16/05/2018

³⁰ Monthly hydro-meteorological bulletin, URL <http://www.meteo.bg/en> Access date: 16/05/2018

and overall assessment of the impact of these phenomena and processes on different spheres of the economy and public life.

In addition, a National Report on the State of the Environment in Bulgaria is developed every year by experts of the of the Executive Environmental Agency, the MOEW and other institutions. The Report includes a chapter on climate change where current information can be found relating to rainfall, temperature and snow characteristics, assessment of indicators, climate phenomena and climate scenarios for Bulgaria.³¹

No specific observation system is currently in place to monitor extreme weather events and their impacts.

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

Much of the current knowledge regarding the observation of extreme climate events and their impacts derives from the Intergovernmental Panel on Climate Change (IPCC) Working Group II Fifth Assessment Report (IPCC 2014) or from EU-funded projects (e.g. CLAVIER (Climate Change and Variability: Impact on Central and Eastern Europe) project³² funded by FP6).

The CLAVIER project supports research on linkages between climate change and its impact on weather patterns, air pollution, extreme events, and water resources. An evaluation of the economic impact on agriculture, tourism, energy supply and the public sector is conducted in this project as well.

The CECILIA (Central and Eastern Europe Climate Change Impact and Vulnerability Assessment) project³³ provides high resolution simulations covering the region. It captures complex topographical and land-use features related to climate impacts on large urban and industrial areas, including hydrology, water quality, and water management (focusing on medium-sized river catchments and the Black Sea coast).

Scenarios and projections for the coming decades derive from the CLAVIER and CECILIA projects mentioned above or from the HadCM3 model.

³¹Климат, URL: <http://eea.government.bg/bg/soer/2015/climate/climate0> Access date: 16/05/2018

³² CLAVIER project, URL: <http://www.clavier-eu.org/?q=node/5> Access date: 16/05/2018

³³ CECILIA project, URL: <http://www.cecilia-eu.org/>, Access date: 17/05/2018

The preparation of the “Assessment of the Vulnerability of the Sectors of the Bulgarian Economy to Climate Change”³⁴ included relevant research from the EU-funded PESETA and PESETA II projects implemented by the European Commission’s Joint Research Centre (JRC).

The “National climate change risk and vulnerability assessment for the sectors of the Bulgarian economy” (2014) was developed by using different scenarios and climate models. The assessments of expected changes in temperature and rainfall were based on IPCC SRES-scenarios using global (HadCM2, HadCM3 and ECHAM4, LMDZ v4, etc.) and regional (HIRHAM, REMO5.7, REMO5. 0, LMDZ-regional, etc.) climate models. The global models used were low resolution; a significantly higher resolution was achieved with the help of regional models. The surveys affecting Bulgaria are generally realized in international projects, which is why much of their results relate not only to Bulgaria but also to larger territories (mainly Central and South-Eastern Europe).

The draft NAS states that the IPCC SRES-scenarios in projections about air temperature and precipitation have been replaced by the IPCC Working Group II Fifth Assessment Report (IPCC 2014). For the purpose of this analysis, computer simulations of the expected changes in temperatures and rainfall in the four RCP- scenarios (RCP 2.6, RCP 4.5, RCP 6 and RCP 8.5) of the IPCC AR5 (2013/2014) were performed. The results obtained were generated using the analytical tools of the Web-Based Research Platform Climate Explorer of the Royal Netherlands Meteorology Institute (KNMI). The data sets used were GCM: CMIP5 (full set) and GCM: CMIP5 extremes (full set) respectively for the annual and seasonal values and for the extreme values. CMIP5 (full set) was created during the Fifth Phase of the Climate Model Intercomparison Project (CMIP5) and assembled 42 global models used in the IPCC Fifth Assessment Report. Climate projections across the four climate variables scenarios cover three 20-year periods (2016-2035, 2046-2065 and 2081-2100), which is consistent with the approach adopted in the IPCC Fifth Assessment Report.

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

Yes / **In progress** / No

In early June 2014, a framework document “National climate change risk and vulnerability assessment for the sectors of the Bulgarian economy”³⁵ was finalised. It addressed: agriculture, forestry, water, urban environment (including urban infrastructure and construction), energy, transport, construction and infrastructure, ecosystems and biodiversity,

³⁴ Sectoral vulnerability assessments (BG), URL: <http://www.moew.government.bg/bg/klimat/mejdunarodni-pregovori-i-adaptaciya/adaptaciya/////>, Access date: 17/05/2018

³⁵ National climate change risk and vulnerability assessment for the sectors of the Bulgarian economy КЛИМАТ / СТРАТЕГИЧЕСКИ ДОКУМЕНТИ / АНАЛИЗ И ОЦЕНКА НА РИСКА И УЯЗВИМОСТТА НА СЕКТОРИТЕ В БЪЛГАРСКАТА ИКОНОМИКА, URL: http://www5.moew.government.bg/?page_id=51457, Access date: 17/05/2018

human health and tourism. A separate chapter on cross-border cooperation on issues related to climate impacts is included in the document.

The framework document on risk and vulnerability assessment should serve as a basis for the further development of the NAS. The competent authorities will be involved in the development of measures for each sector, as well as NGOs and the scientific community.

Another very important issue to be integrated in the NAS is insurance. The MOEW has already developed an analytical document "Financial disaster risk management and insurance options for climate adaptation in Bulgaria". The document was prepared with the financial and technical support of the World Bank. The document's purpose is to analyse the role and importance of the insurance business for the prevention of risks that occur as a result of climate change and for the development of adaptation measures.

In accordance with the reimbursable advisory services agreement signed between the MOEW and the IBRD in July 2017, the Bank presented an interim report to the Ministry with the main findings from the draft sector assessments of the following sectors: agriculture, biodiversity and ecosystems, energy, forestry, human health, tourism, transport, urban environment (including urban infrastructure and construction), and water. In addition, a draft of NAS and NAP was presented in May 2018.

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

Yes / **In progress** / No

In the publication "National climate change risk and vulnerability assessment for the sectors of the Bulgarian economy", a separate chapter on cross-border cooperation on issues related to climate impacts is included.

The main objective of this report is to assess the risk of natural disasters typical of the Bulgarian geographical area on the basis of climate models and scenarios for the country nevertheless consideration is given to climate impacts that will have significant cross-border effect to the management of cross-border river basins. In this respect, due to the peculiarities of local geography, Bulgaria is less dependent on the distribution of water resources than neighbouring countries. However, in view of the expected climate change, it is projected that the cross-border river basins will face major challenges such as: deficiency of water resources and drought, flood risk management and expected pressure on water consumption.

Furthermore, the lead policy document on disaster risk management, the National Disaster Risk Reduction Strategy 2014–2020³⁶, supports the identification and prioritization of areas

³⁶ Стратегия за намаляване риска от бедствията, URL: <http://www.strategy.bg/StrategicDocuments/View.aspx?lang=bg-BG&Id=894>, Access date: 17/05/2018

for trans-boundary and trans-regional cooperation, as well as long-term coordination of disaster risk reduction.

Finally, the draft NAS recognises that the development of transboundary adaptation measures would be required in the area of forestry.

4 Knowledge gaps

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

Yes / **In progress** / No

The draft NAS contains a chapter³⁷ on the knowledge gaps in relation to climate impacts and adaptation options for each of the nine sectors of interest (see Section B2 above). The sectoral measures in the NAP are prioritised according to the identified knowledge gaps and the aim is to address them.

One of the main knowledge gaps outlined by the NAS is the limited academic capacity in the field of climate change. The climate impacts in most sectors are under-researched. There are data gaps in climate and biodiversity models, which mean that the national projections are not detailed enough to support the implementation of adequate adaptation measures.

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

All policy information and vulnerability assessments are published on the MoEW website, section Climate, subsection International Negotiations and Adaptation/Adaptation³⁸.

The National Expert Council on Climate Change³⁹ serves as a science-policy interface, as it includes stakeholders, such as ministries, agencies, municipalities, NGOs and the scientific community (e.g. representatives of the Bulgarian Academy of Science).

³⁷ Chapter 2.1, Proposal for a National Climate Change Adaptation Strategy and Action Plan, URL: [http://www.moew.government.bg/static/media/ups/tiny/%D0%9F%D0%98%D0%9A/%D0%9C%D0%9F%D0%90/Strategy%20and%20Action%20Plan%20-%20Full%20Report%20-%20Draft%20\(2018-05-03\)%20-%20EN%20V4.EM.pdf](http://www.moew.government.bg/static/media/ups/tiny/%D0%9F%D0%98%D0%9A/%D0%9C%D0%9F%D0%90/Strategy%20and%20Action%20Plan%20-%20Full%20Report%20-%20Draft%20(2018-05-03)%20-%20EN%20V4.EM.pdf), Access date: 10/05/2018

³⁸ Adaptation page on the MoEW website Адаптация, URL: <http://www.moew.government.bg/bg/klimat/mejdunarodni-pregovori-i-adaptaciya/adaptaciya/>, Access date: 17/05/2018

³⁹ National Expert Council on Climate Change Климат, URL: <http://www.moew.government.bg/bg/klimat/>, Access date: 17/05/2018

The National Coordination Council on Climate Change comprises representatives of relevant ministries, at Deputy-Minister level, and some agencies. The Council supports the MoEW in the development of the NAS as well as in enhancing capacity to integrate adaptation considerations in policies, programmes and investments.

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

The draft NAS contains planned measures for capacity building and improving awareness on climate impacts and adaptation across the nine sectors of interest. The activities related to these measures have not yet begun, as the NAS has not been formally approved.

The World Bank is providing ongoing ‘advisory services’ to the Government, supporting capacity building and training in the delivery of the NAS. The Government is represented by the MoEW as an institutional coordinator of the preparation process⁴⁰.

Since 2014, Sofia University "St. Kliment Ohridski"⁴¹ started a Master’s programme "Climate Change and Water Management". The programme is focused on the preparation of specialists for analysis and assessment of climate change and integrated water resources management.

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 draft NAS proposes sectoral measures based on the sectoral vulnerability assessments contained in the framework document “National climate change risk and vulnerability assessment for the sectors of the Bulgarian economy” and the Draft Sector Assessments prepared by the World Bank, as a part of the reimbursable advisory services agreement signed between the MOEW and the IBRD (see Indicator 3c). The framework document covers the following sectors: agriculture, forestry, water, urban environment (including urban infrastructure and construction), energy, transport, construction and infrastructure, ecosystems and biodiversity, human health and tourism. Each sector is assessed by a system of indicators regarding vulnerability to future climate change in the period 2016-2035. The

⁴⁰World Bank website, with reference to the inception workshop on preparing a National Adaptation Strategy, URL: <http://www.worldbank.org/en/events/2017/03/01/inception-workshop-in-bulgaria>, Access date: 17/05/2018

⁴¹Sofia University, URL: https://www.uni-sofia.bg/index.php/eng/the_university, Access date: 17/05/2018

draft sector assessments propose a range of priority adaptation actions, arranged according to the following categories: information and knowledge, institutional capacity building, policy reform, and investments. For each of these measures, the section also includes cost-benefit analysis information and provides inputs on monitoring and evaluation (e.g. oversight, implementation, and reporting responsibility, indicator and target). Adaptation options will be prioritised whereas cross-cutting issues, trade-offs and synergies will be discussed.

No explicit reference is made to geographical specifics in the draft NAS or the vulnerability assessments.

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

In the preparation of the draft NAS and in support of priority setting for the identified adaptation options, each sector undertook a prioritisation exercise. This included organising stakeholder meetings following a multi-criteria analysis approach. In addition, the information given in the sector assessment reports was used. The approach produced a tentative short list of priority actions for each sector. Additional assessment/ranking of priority options is provided for some sectors (including, biodiversity and ecosystems services, tourism, and water) based on expert judgment and/or additional feedback from stakeholders.⁴²

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

The draft NAS builds on vulnerability assessments as well as the Disaster Risk Management Assessment report. In addition, disaster risk management is listed as an overarching cross-sectoral adaptation measure that should be taken into consideration in the development of all adaptation policies and measures⁴³.

⁴² Chapter 5.2, Proposal for a National Climate Change Adaptation Strategy and Action Plan, URL: [http://www.moew.government.bg/static/media/ups/tiny/%D0%9F%D0%98%D0%9A/%D0%9C%D0%9F%D0%90/Strategy%20and%20Action%20Plan%20-%20Full%20Report%20-%20Draft%20\(2018-05-03\)%20-%20EN%20V4.EM.pdf](http://www.moew.government.bg/static/media/ups/tiny/%D0%9F%D0%98%D0%9A/%D0%9C%D0%9F%D0%90/Strategy%20and%20Action%20Plan%20-%20Full%20Report%20-%20Draft%20(2018-05-03)%20-%20EN%20V4.EM.pdf), Access date: 10/05/2018

⁴³ Assessment of the Disaster Risk Management Sector, URL: [http://www.moew.government.bg/static/media/ups/tiny/%D0%9F%D0%98%D0%9A/%D0%9C%D0%9F%D0%90/DRM%20-%20Full%20Report%20-%20First%20Draft%20\(2018-04-27\)%20-%20EN%20-%20for%20printing%20v2.pdf](http://www.moew.government.bg/static/media/ups/tiny/%D0%9F%D0%98%D0%9A/%D0%9C%D0%9F%D0%90/DRM%20-%20Full%20Report%20-%20First%20Draft%20(2018-04-27)%20-%20EN%20-%20for%20printing%20v2.pdf), Access date: 10/05/2018

A Disaster Risk Reduction Council⁴⁴ was created as a permanent body to the Council of Ministers to ensure coordination and cooperation in the implementation of state policy in the field of disaster protection. The Council performs the functions of a national disaster risk reduction platform in implementation of the National Strategy for Disaster Risk Management, the Hyogo Framework for Action 2005–2015, and Sendai Framework for Disaster Risk Reduction 2015–2030.

The leading national document on disaster risk reduction, the National Strategy for Disaster Risk Reduction⁴⁵ envisages to enhance coordination between stakeholders (e.g. the disaster risk reduction and climate adaptation community) by:

- The expansion of the scope of activities of the Consultative Council, which supports the work of the Council of Ministers, and transforming the former into an Active National Platform for reducing risks from disasters
- The establishment of an efficient mechanism for coordination and efficient flow of information among all stakeholders; and
- Development of systems for monitoring, forecasting and early warning in relation to disasters.

Finally, the National Coordination Council on Climate Change includes representatives from the Chief Directorate Fire Safety and Civil Protection (CD FSCP) at the Ministry of Interior.

7 Funding resources identified and allocated

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

Yes / **In Progress** / No

Regarding cross-cutting adaptation action, the World Bank is providing ongoing ‘advisory services’ to the Government; supporting capacity building and training in the delivery of the NAS. The draft NAS states that the implementation of adaptation measures would be supported by EU funding, state funding and, potentially, private funding from energy companies. Nevertheless, one of the key barriers to climate adaptation pointed out in the draft NAS is the lack of financial resources and over-dependence on the EU⁴⁶. Each suggested

⁴⁴ Съвет за намаляване на риска от бедствия към Министерския съвет за подпомагане формирането и осъществяването на държавната политика в областта на защитата при бедствия URL: http://www.saveti.government.bg/web/cc_801/1, Access date: 17/05/2018

⁴⁵ Стратегия по намаляването на риска от бедствия, URL: <http://www.strategy.bg/StrategicDocuments/View.aspx?lang=bg-BG&Id=894> Access date: 10/05/2018

⁴⁶ Proposal for a National Climate Change Adaptation Strategy and Action Plan, p.58, URL: [http://www.moew.government.bg/static/media/ups/tiny/%D0%9F%D0%98%D0%9A/%D0%9C%D0%9F%D0%90/Strategy%20and%20Action%20Plan%20-%20Full%20Report%20-%20Draft%20\(2018-05-03\)%20-%20EN%20V4.EM.pdf](http://www.moew.government.bg/static/media/ups/tiny/%D0%9F%D0%98%D0%9A/%D0%9C%D0%9F%D0%90/Strategy%20and%20Action%20Plan%20-%20Full%20Report%20-%20Draft%20(2018-05-03)%20-%20EN%20V4.EM.pdf), Access date: 10/05/2018

measure in the draft NAS includes indicative investment cost estimates to support the funding allocation.

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

National frameworks for Environmental Impact Assessment (EIA)⁴⁷ and Strategic Environmental Assessment (SEA)⁴⁸ have been implemented because of Directives 2011/92/EU and 2001/42/EC. The definition of “environmental impact” adopted in both documents stipulates that any impacts on the environment should be considered, including human health, flora and fauna, biodiversity, soil, climate, air, water, land, natural landmarks and cultural heritage, and the interactions between them. However, no further reference to climate adaptation is made in the documents. Despite that fact, the draft NAS recognises that there is increased consideration of climate adaptation in EIA and SEA projects.

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

Yes / No

The National Strategy for Disaster Risk Reduction⁴⁹ was adopted in 2014. It recognises the impact of climate extremes related to increased occurrence of storms, floods, extended periods of drought, and devastating forest fires. However, there is no evidence of how future climate projections are considered in disaster risk management plans and associated risk analysis. The Ministry of Regional Development has issued an order⁵⁰ on the development of a thorough analysis and mapping of disaster risk that would also include climate impacts.

⁴⁷ Конвенция а оценка на въздействието върху околната среда в трансграничен контекст, URL: http://www.moew.government.bg/static/media/ups/tiny/file/Industry/EIA/KONVENCIO_za_ocenka_na_vyzdej_stviето_vyrhu_okolnata_sreda_v_transgranichen_kontekst.pdf, Access date: 17/05/2018

⁴⁸ Протокол за стратегическа екологична оценка към Конвенцията за оценка на въздействието върху околната среда в трансграничен контекст, URL: http://www.moew.government.bg/static/media/ups/tiny/file/Industry/SEA/protokol_SEA.pdf, Access date: 17/05/2018

⁴⁹National Disaster Risk Reduction Strategy, URL:http://www.preventionweb.net/files/38902_drrstrategybulgariaannex2bg.pdf, Access date: 17/05/2017 -

⁵⁰НАРЕДБА ЗА УСЛОВИЯТА, РЕДА И ОРГАНИТЕ ЗА ИЗВЪРШВАНЕ НА АНАЛИЗ, ОЦЕНКА И КАРТОГРАФИРАНЕ НА РИСКОВЕТЕ ОТ БЕДСТВИЯ, URL: <http://www.strategy.bg/FileHandler.ashx?fileId=2564>, Access date: 17/05/2018

Preparation of this analysis has already started and is being overseen by the Bulgarian Association of Science⁵¹.

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

Yes / No

Climate adaptation is considered in land-use and urban planning policies at national and regional levels. The National Concept for Spatial Development for the period 2013-2025 (NCSD)⁵² is a mid-term strategic document, which outlines directions for land-use planning, governance and protection of national territory and waters. One of the key objectives of the NCSD is to align spatial planning of cities and regions with the threats and challenges of climate change, in addition to globalization, demographic changes, and energy dependence. The development plan for Northern Central Bulgaria is an example of how climate adaptation is being taken into account, including in relation to the enhancement of environmental protection. The TURAS project for the capital city of Sofia is an example of how spatial urban planning policies are seeking to enhance the sustainability of urban areas by promoting climate resilience. Plans for further mainstreaming of climate adaptation in urban and spatial planning is planned in the draft NAS. However, climate impacts have not yet been addressed in maritime spatial planning policies, and are not mentioned in the draft NAS.

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 to mainstream adaptation into national policies and policy instruments have not yet started. The Climate Change Act asks sectoral ministries to mainstream climate adaptation in their respective policies. Implementing this requirement in practice will require streamlining processes and much better interaction between the MoEW and the sectoral ministries, as well as between the sectoral ministries and the scientific community. In addition, the draft NAS includes planned measures to mainstream climate adaptation in policies related to the nine key sectors considered in the document. Each respective Ministry will be in charge of implementing adaptation policies and mainstreaming adaptation in other policies within their sector of expertise.

⁵¹Изработване на анализ, оценка и картографиране на геоложкия риск, URL: <http://www.bas.bg/%D0%BF%D0%BE%D1%80%D1%82%D1%84%D0%BE%D0%BB%D0%B8%D0%BE/%D0%B8%D0%B7%D1%80%D0%B0%D0%B1%D0%BE%D1%82%D0%B2%D0%B0%D0%BD%D0%B5-%D0%BD%D0%B0-%D0%B0%D0%BD%D0%B0%D0%BB%D0%B8%D0%B7-%D0%BE%D1%86%D0%B5%D0%BD%D0%BA%D0%B0-%D0%B8-%D0%BA%D0%B0%D1%80%D1%82%D0%BE%D0%B3/>, Access date: 17/05/2018

⁵²National Concept for Spatial Development, URL: http://www.bgregio.eu/media/Programirane/NKPR_28012013_Last_en.pdf, Access date: 17/05/2018

Despite mainstreaming of adaptation not being currently coordinated across sectors, the Ministry of Regional Development and Public Works has included adaptation measures in the country's six regional development plans, as described in relation to Indicator 8c. In addition, the National Forest Strategy 2013 – 2020⁵³, adopted by the Ministry of Agriculture, Food and Forest, includes measures to strengthen the climate resilience of forest ecosystems⁵⁴.

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

Yes / No

The MoEW developed an analytical document entitled “Financial disaster risk management and insurance options for climate adaptation in Bulgaria”. The document was prepared with the financial and technical support of the World Bank and its purpose is to analyse the role and importance of the insurance business for the prevention of risks that result from climate change and for the development of adaptation measures. This document provides an entry point for enhancing further inclusion of insurance policies into the NAS. In addition, insurance mainstreaming within sectoral adaptation measures is planned in the draft NAS.

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 carried out, for instance, by some cities or at sectoral level for agriculture, forestry, water management, and flood risk management. Examples of such regional actions have been provided earlier in the text, in relation to Indicator 8c and in Section A2.

At the same time, as the draft NAS was only published on 4th May 2018, implementation of policies and measures will not begin until the NAS is reviewed and officially approved.

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

Yes / No

⁵³Национална стратегия за развитие на горския сектор в Република България за периода 2013 - 2020 г., URL: <http://www.strategy.bg/FileHandler.ashx?fileId=4209>, Access date: 17/05/2018

⁵⁴ ПРОГРАМА ОТ МЕРКИ ЗА АДАПТИРАНЕ НА ГОРИТЕ В РЕПУБЛИКА БЪЛГАРИЯ И НАМАЛЯВАНЕ НА НЕГАТИВНОТО ВЛИЯНИЕ НА КЛИМАТИЧНИТЕ ПРОМЕНИ ВЪРХУ ТЯХ, URL: http://www.iag.bg/data/docs/Programa_ot_merki.pdf, Access date: 17/05/2018

No clear mechanism has been set out in the draft NAS at this stage. Nevertheless, the National Expert Council on Climate Change includes regional representatives of the National Association of Municipalities in the Republic of Bulgaria (NAMRB).

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, no specific procedures or guidelines have been issued or used by the Bulgarian authorities for assessing climate impacts on major projects or programmes and for facilitating their adaptation. However, the development of sectoral climate adaptation guidelines is planned in the draft NAS.

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

Yes / **No**

Stakeholders were involved in the development of the draft NAS using a multi-criteria analysis (see Section B1). In addition, the draft NAS outlines key stakeholders for each sector of interest and states that stakeholders should be included in the process of developing measures. However, the mechanism for stakeholder involvement is not defined.

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**

For the time being no system is in place for reporting on the implementation of the NAS and NAP pending their adoption.

Provisions for monitoring and evaluation are included in the draft NAS. Moreover, the NAP summarises the adaptation measures for all sectors identified in the NAS. The focus is on implementation of priority adaptation measures, including consideration of responsible institutions, resources, timeline, targets, and monitoring indicators. A full list of the monitoring indicators is contained in Annex 3 of the draft NAS⁵⁵.

⁵⁵ Annex 3, Proposal for a National Climate Change Adaptation Strategy and Action Plan, URL: [http://www.moew.government.bg/static/media/ups/tiny/%D0%9F%D0%98%D0%9A/%D0%9C%D0%9F%D0%90/Strategy%20and%20Action%20Plan%20-%20Full%20Report%20-%20Draft%20\(2018-05-03\)%20-%20EN%20V4.EM.pdf](http://www.moew.government.bg/static/media/ups/tiny/%D0%9F%D0%98%D0%9A/%D0%9C%D0%9F%D0%90/Strategy%20and%20Action%20Plan%20-%20Full%20Report%20-%20Draft%20(2018-05-03)%20-%20EN%20V4.EM.pdf), Access date: 10/05/2018

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

Yes / No

The draft NAS does not explicitly make clear how sectoral policy implementation will be monitored. The ministries are responsible for mainstreaming climate policies in their respective sectors and for developing and implementing adaptation measures for climate change, in coordination with the MoEW and in consultation with National Expert Council. Responsible ministries and governmental agencies include the Ministry of Agriculture and Food (MAFF); the Ministry of Economy (MEc); the Ministry of Transport, Information Technology, and Communications (MTITC); the Ministry of Finance (MF); the Ministry of Interior (MI); the Ministry of Exterior (MEx); the Ministry of Health (MH); the Ministry of Education and Science; the Ministry of Labour and Social Policy; and the Executive Environment Agency (ExEA).

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

Yes / No

The draft NAS does not make clear how regional, sub-national or local action will be monitored.

11 Evaluation

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

Yes / No

The draft NAS states that regular, five-yearly, updates of the NAS are planned, as a check on the direction that has been taken, together with a review of the actions that are being implemented and a revision of the NAP, as appropriate.

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

Yes / No

No evidence seems to be available on what mechanism (if any) is going to be used for involving stakeholders in future evaluations of adaptation policy.

SUMMARY TABLE

Adaptation Preparedness Scoreboard		
No.	Indicator	Met?
Step A: Preparing the ground for adaptation		
1 Coordination structure		
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.	<u>Yes</u> / In progress / No
2 Stakeholders' involvement in policy development		
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 Current and projected climate change		
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 / <u>In progress</u> / No
3c	Sound climate risks/vulnerability assessments for priority vulnerable sectors are undertaken to support adaptation decision making.	Yes / <u>In progress</u> / No
3d	Climate risks/vulnerability assessments take transboundary risks into account, when relevant	Yes / <u>In progress</u> / No

Adaptation Preparedness Scoreboard		
No.	Indicator	Met?
4 Knowledge gaps		
4a	Work is being carried out to identify, prioritise and address the knowledge gaps	Yes / <u>In progress</u> / No
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 / <u>In progress</u> / No
5b	Capacity building activities take place; education and training materials on climate change adaptation concepts and practices are available and disseminated	Yes / <u>In progress</u> / 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	<u>Yes</u> / 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	<u>Yes</u> / No
6c	Mechanisms are in place to coordinate disaster risk management and climate change adaptation and to ensure coherence between the two policies	Yes/ <u>In Progress</u> / No
7 Funding resources identified and allocated		
7a	Funding is available to increase climate resilience in vulnerable sectors and for cross-cutting adaptation action	Yes / <u>In Progress</u> / 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 / <u>No</u>
8b	Prevention/preparedness strategies in place under national disaster risk management plans take into account	Yes / <u>No</u>

Adaptation Preparedness Scoreboard		
No.	Indicator	Met?
	climate change impacts and projections	
8c	Key land use, spatial planning, urban planning and maritime spatial planning policies take into account the impacts of climate change	<u>Yes</u> / 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 / <u>In Progress</u> / No
8e	Adaptation is mainstreamed in insurance or alternative policy instruments, where relevant, to provide incentives for investments in risk prevention	Yes / <u>No</u>
9 Implementing adaptation		
9a	Adaptation policies and measures are implemented, e.g. as defined in action plans or sectoral policy documents	Yes / In Progress / <u>No</u>
9b	Cooperation mechanisms in place to foster and support adaptation at relevant scales (e.g. local, subnational)	Yes / <u>No</u>
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 / <u>No</u>
9d	There are processes for stakeholders' involvement in the implementation of adaptation policies and measures.	Yes / <u>No</u>
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 / <u>No</u>
10b	The integration of climate change adaptation in sectoral policies is monitored and the results of the monitoring are disseminated	Yes / <u>No</u>
10c	Regional-, sub-national or local action is monitored and the results of the monitoring are disseminated	Yes / <u>No</u>
11 Evaluation		
11a	A periodic review of the national adaptation strategy and action plans is planned	<u>Yes</u> / No

Adaptation Preparedness Scoreboard		
No.	Indicator	Met?
11b	Stakeholders are involved in the assessment, evaluation and review of national adaptation policy	Yes / <u>No</u>