

Adaptation preparedness scoreboard:

Country fiche for Romania

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

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

¹ The first versions of the fiches, prepared in consultation with the Member States in 2014-15, were unpublished and used to fine-tune the scoreboard.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.

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

ANAR	National Administration Romanian Waters
ANM	National Meteorological Administration
EEA	European Economic Area
EIA	Environmental Impact Assessment
ESIF	European Structural and Investment Funds
EUSDR	EU Strategy for the Danube Region
GIES	General Inspectorate for Emergency Situations
MEWF	Ministry of Environment, Waters and Forests
NAP	National Adaptation Plan
NAS	National Adaptation Strategy
NCCC	National Commission for Climate Change
SEA	Strategic Environmental Assessment

POLICY FRAMEWORK

Adaptation strategies

A1. National adaptation strategy

Romania adopted its National Climate Change Strategy (NAS) 2013-2020³ in July 2013. The Strategy is divided in two parts, the first describes the mitigation-related aspects, the second addresses climate adaptation to climate change, so is hereafter referred to as the National Adaptation Strategy (NAS). The aim of the NAS is to provide an overall framework for action, as well as guidelines that would enable each of the priority sectors identified to develop their own action plans and align them with national strategic principles. The 13 priority sectors identified in the NAS are: industry; agriculture and fisheries; tourism; public health; buildings and infrastructure; transport; water resources; forests; energy; biodiversity; insurance; recreation activities; and education.

The NAS identifies two major sets of adaptation actions to be undertaken – specific actions at the national level, and indicative categories of sectoral adaptation actions. A very preliminary vulnerability and impact analysis is sketched out for the 13 priority sectors, and potential adaptation actions are recommended for most sectors. The NAS provides a brief outline of the existing and necessary resources dedicated to adaptation (touching in general terms on human resources, funding and information/knowledge). It also presents the proposed overall institutional framework for coordinating and implementing future adaptation actions.

A two-year programme to operationalise the National Climate Change Strategy⁴ resulted in the development of a National Climate Change and Low Carbon Green Growth Strategy (2016-2030)⁵ and an associated Action Plan on Climate Change (2016-2020)⁶, adopted through Government Decision 739/2016. The new Strategy and Action Plan cover both mitigation and adaptation. The priority sectors identified in the NAS 2013-2020 were maintained in the new NAS.

A2. Adaptation strategies adopted at subnational levels

For the time being, there is no centralised information or evidence about adaptation strategies being developed at regional, sub-regional or local levels. However, there are some projects that aim to develop strategies, measures and local guidelines for adapting to climate change.

³ Ministerul Mediului și Schimbărilor Climatice, 2013, Strategia națională a României privind schimbările climatice 2013 – 2020. Available at: http://www.mmediu.ro/beta/wp-content/uploads/2013/10/2013-10-01_SNSC.pdf

⁴ World Bank, 2015, Romania: Climate Change and Low Carbon Green Growth Program, project website available at: <http://www.worldbank.org/en/country/romania/brief/romania-climate-change-and-low-carbon-green-growth-program>

⁵ Strategia națională privind schimbările climatice și creșterea economică bazată pe emisii reduse de carbon pentru perioada 2016-2030 [National Climate Change and Low Carbon Green Growth Strategy 2016-2020], Annex 1 to Government Decision 739/2016, available at: <http://www.mmediu.ro/categorie/strategia-nationala-privind-schimbarile-climatice-rezumat/171>

⁶ Planul național de acțiune pentru implementarea Strategiei naționale privind schimbările climatice și creșterea economică bazată pe emisii reduse de carbon pentru perioada 2016-2030 [National action plan for the implementation of the National Climate Change and Low Carbon Green Growth Strategy 2016-2020], Annex 2 to Government Decision 739/2016, available at: <http://www.mmediu.ro/categorie/strategia-nationala-privind-schimbarile-climatice-rezumat/171>

The project “Danube Delta Integrated Sustainable Development Strategy (2030)”⁷ (completed in 2015) identified a series of priority areas for intervention and key projects within each sector based on a number of criteria: expected impact towards the strategic objectives, geographical breadth, level of preparedness, and financial and administrative sustainability. Among the actions proposed was a reference to develop clear and easy to use local guidelines for climate change and energy efficiency programmes.

The Environmental Protection Agency Sibiu, the monitoring and coordination environmental body for the Region 7 Centre, implemented a project aiming to develop a set of good practices on adaptation to climate change, “Greenways for Sustainable Development” in February 2015 – April 2016. The project was part of the RO 07 programme, financed via the Financial Mechanism of the European Economic Area (EEA Grants).⁸ This project was also intended to provide a valuable model of good practices that could be replicated in other regions and to support the capacity building on climate data and climate experts in the field. The project promoted concerted and coordinated action to adapt to climate change in the Central Region of Romania and contributed to a better understanding of climate impacts and variability in all vulnerable sectors. The project supported local public authorities in three municipalities - Braşov⁹, Sibiu¹⁰ and Târgu Mureş¹¹ – to develop local strategies and action plans on climate adaptation. These three municipalities represent about 3% of the population of Romania.¹²

Adaptation action plans

B1. National adaptation plan

A National Climate Change Action Plan¹³ with a distinct adaptation component (hence, hereafter referred to as the National Adaptation Plan – NAP) was developed within the project Romania: Climate Change and Low Carbon Green Growth Programme¹⁴ undertaken

⁷ The project was developed by the Government of Romania through the Ministry of Regional Development and Public Administration (MRDPA) with the support of the World Bank. More information available at: http://www.mdrap.ro/userfiles/delta_dunarii/draft_Danube_Delta_Strategy.pdf

⁸ Calea Verde, Project website, URL: <https://caleaverde.ro/?lang=en>, date accessed: 16/05/2018.

⁹ Cristea, M. and Varvari, S., 2016, Strategie privind adaptarea la schimbarile climatice in Municipiul Brasov, available at: <http://caleaverde.ro/wp-content/uploads/2016/08/Plan-de-actiune-privind-adaptarea-la-schimbarile-climatice-in-Municipiul-Brasov.pdf>

¹⁰ Cristea, M. and Varvari, S., 2016, Strategie privind adaptarea la schimbarile climatice in Municipiul Sibiu, available at: <http://caleaverde.ro/wp-content/uploads/2016/08/Strategia-privind-adaptarea-la-schimbarile-climatice-in-Municipiul-Sibiu.pdf>

¹¹ Cristea, M., 2016, Strategie privind adaptarea la schimbarile climatice in Municipiul Târgu Mureş, available at:

<http://tirgumures.ro/pdf/caleaverde/Strategia%20privind%20adaptarea%20la%20schimbarile%20climatice.pdf>

¹² Based on 2016 data from the National Statistics Institute, URL: <http://www.insse.ro/cms/ro/content/populația-româniei-pe-localități-la-1-ianuarie-2016>

¹³ Planul național de acțiune pentru implementarea Strategiei naționale privind schimbările climatice și creșterea economică bazată pe emisii reduse de carbon pentru perioada 2016-2030 [National action plan for the implementation of the National Climate Change and Low Carbon Green Growth Strategy 2016-2020], Annex 2 to Government Decision 739/2016, available at: <http://www.mmediu.ro/categorie/strategia-nationala-privind-schimbarile-climatice-rezumat/171>

¹⁴ World Bank, 2015, Romania: Climate Change and Low Carbon Green Growth Program, project website available at: <http://www.worldbank.org/en/country/romania/brief/romania-climate-change-and-low-carbon-green-growth-program>, date accessed: 16/05/2018

by the Government of Romania, through the Ministry of Environment, Waters and Forests (MEWF) with the World Bank. The NAP, adopted in 2016, includes actions and timelines, identifies institutions responsible for each action, and recommends criteria and indicators to assess how the objectives can be/have been met.

B2. Adaptation plans adopted at sub-national level

There is currently no centralised information or evidence about adaptation action plans developed at subnational levels.

As mentioned in Section A2, climate adaptation plans for three municipalities – Sibiu¹⁵, Târgu Mureş¹⁶ and Braşov¹⁷ – were developed in the framework of the project “Green Path towards Sustainable Development”. It is unclear whether any other adaptation plans exist at sub-national level.

B3. Sectoral adaptation plans

The NAS 2013¹⁸ outlined a set of national adaptation actions to be developed and implemented (including mainstreaming adaptation into various policy areas). The NAS was also intended to enable the priority sectors to start developing and implementing their own sectoral adaptation plans. These sectors were: industry; agriculture and fisheries; tourism; public health; constructions and infrastructure; transport; water resources; forestry; energy; biodiversity; insurance; recreational activities; education. We could not find information on the existence of separate sectoral adaptation plans. However, the NAS 2016-2030 and the NAP 2016-2020¹⁹ provide a series of proposed adaptation actions at sectoral level addressing the priority sectors identified in the previous NAS 2013-2020: industry; agriculture and rural development; tourism and recreational activities; public health; human environment, infrastructure and urbanism; transport; drinking water and water resources; forestry; energy; biodiversity; insurance; education. Furthermore, some adaptation measures are already

¹⁵ Cristea, M. and Varvari, S., 2016, Plan de acţiune privind adaptarea la schimbările climatice în Municipiul Sibiu, URL: <http://caleaverde.ro/wp-content/uploads/2016/08/Plan-de-actiune-privind-adaptarea-la-schimbarile-climatice-in-Municipiul-Sibiu.pdf>

¹⁶ Cristea, M. and Varvari, S., 2016, Plan de acţiune privind adaptarea la schimbările climatice în Municipiul Târgu Mureş, URL: <http://caleaverde.ro/wp-content/uploads/2016/08/Plan-de-actiune-privind-adaptarea-la-schimbarile-climatice-in-Municipiul-Targu-Mures.pdf>

¹⁷ Cristea, M. and Varvari, S., 2016, Plan de acţiune privind adaptarea la schimbările climatice în Municipiul Braşov, URL: <http://caleaverde.ro/wp-content/uploads/2016/08/Plan-de-actiune-privind-adaptarea-la-schimbarile-climatice-in-Municipiul-Brasov.pdf>

¹⁸ National strategy on tackling climate change 2013-2020, available at: http://www.mmediu.ro/beta/wp-content/uploads/2013/10/2013-10-01_SNSC.pdf

¹⁹ Planul naţional de acţiune pentru implementarea Strategiei naţionale privind schimbările climatice şi creşterea economică bazată pe emisii reduse de carbon pentru perioada 2016-2030 [National action plan for the implementation of the National Climate Change and Low Carbon Green Growth Strategy 2016-2020], Annex 2 to Government Decision 739/2016, available at: <http://www.mmediu.ro/categorie/strategia-nationala-privind-schimbarile-climatice-rezumat/171>

included in the existing sectoral strategies and plans, notably for agriculture²⁰ and flood risk management²¹.

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

In Romania, the MEWF²² is the central body designated to coordinate the adaptation policy-making process, NAS and NAP. The ministry co-ordinates the integration of environmental protection requirements into national legislation and sectoral policies, including the creation of legal, institutional, administrative and financial instruments for promoting the integration of climate change in sectoral policies.²³

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

Yes / In progress / No

During the development of the NAS 2013-2020, a horizontal coordination mechanism was in place. The MEWF consulted a number of line ministries and government agencies, as well as research institutes, an NGO and an umbrella association of the Romanian municipalities. A working group was established to carry out the environmental assessment of the NAS and NAP, comprising representatives from all relevant ministries.²⁴

In November 2014, Government Decision no. 1026/2014 led to the reorganisation of the National Commission for Climate Change (NCCC) as a framework that enhances inter-ministerial coordination towards meeting Romania's climate objectives. According to this regulatory document, the proposed structure of the NCCC includes representatives from 16 ministries or agencies with competencies in the climate change area and also contains a technical working group of the representatives of 34 institutions at the operational level. The Government Decision no. 1026/2014, enables the NCCC to modify and update the NAS and

²⁰ Ministerul Agriculturii și Dezvoltării Rurale, 2015, Strategia pentru dezvoltarea sectorului agroalimentar pe termen mediu și lung orizont 2020-2030, URL: <http://www.madr.ro/strategia-pentru-dezvoltarea-sectorului-agroalimentar-pe-termen-mediu-si-lung-orizont-2020-2030.html>

²¹ Government of Romania, 2010, Strategia Națională de Management al Riscului la Inundații pe termen mediu și lung (perioada 2010 – 2035), URL: http://www.mmediu.ro/app/webroot/uploads/files/2012-01-10_risc_inundatii_hg846din2010aprobarenmri.pdf

²² See: <http://www.mmediu.ro/>

²³ Strategia națională privind schimbările climatice și creșterea economică bazată pe emisii reduse de carbon pentru perioada 2016-2030 [National Climate Change and Low Carbon Green Growth Strategy 2016-2020], Annex 1 to Government Decision 739/2016, available at: <http://www.mmediu.ro/categorie/strategia-nationala-privind-schimbarile-climatice-rezumat/171>

²⁴ Raport de Mediu la Strategia națională privind schimbările climatice și creșterea economică bazată pe emisii reduse de carbon (CRESC) și Planul Național de Acțiune 2016-2020 privind schimbările climatice, available at: http://www.mmediu.ro/app/webroot/uploads/files/2015-09-24_Raport_Mediu_CRESC_final.pdf

NAP. Thus, the NCCC is designated as the principal operational structure ensuring a proper governance system for adaptation.

The new NAS was adopted in 2016. A working group, composed of representatives from ministries involved in activities regarding the NAP, was established at ministerial level, with the participation of the NCCC. The working group has held several meetings with the line ministries, agencies, municipalities and organisations with responsibilities for implementation of the NAP in order to prioritise or reconsider the implementation of actions included in the Plan. To date, consultations have been held with the Ministry of Transport, National Regulatory Agency for Energy, Ministry of Labour, Ministry of Regional Development and Public Administration, Bucharest City Hall, Environmental Fund Administration, Ministry of European Funds and Chamber of Commerce and Industry.²⁵

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

Although no regional organisations or county administrations (i.e. NUTS-2 or NUTS-3 levels respectively) were directly involved in the development of the NAS 2013-2020, the active participation of the Association of the Romanian Municipalities (an umbrella organisation) provided satisfactory vertical coordination across various levels of administration.

As noted under Indicator 1b, a working group composed of representatives of ministries involved in the implementation of the NAP held meetings and consultations which included municipalities.

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

Stakeholders that were actively involved in the development of the NAS 2013-2020 included the research sector (represented by several research institutes) and an NGO active in tackling climate change. Furthermore, during a self-assessment exercise carried out by the European Environment Agency (EEA) in 2013, the Romanian authorities reported that the private sector, various interest groups and the wider public were duly informed and consulted during the process.

A stakeholder consultation process also took place during the development of the NAS and NAP 2016-2030, as part of the Strategic Environmental Assessment (SEA) procedure. The first version of the NAS 2016-2030 was subject to a public consultation.

²⁵ Personal communication with MS contact.

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

Yes / No

While transboundary cooperation is not mentioned in the NAS (2013 or 2016), Romania is part of various transnational initiatives focusing on adaptation.

Transnational and cross-border cooperation comprises research components, policy-making activities and some implementation measures (mainly related to flood risk management). As such, teams of climate researchers, hydrologists, experts in environmental protection, experts in disaster management, and stakeholders from the forestry and agriculture sectors have participated in a number of transnational projects dealing with vulnerability assessments and adaptation measures.

With regard to policy-making processes, Romania contributed to the development of the EU Strategy for the Danube Region (EUSDR). This macro-regional strategy includes, among others, measures and actions for tackling the flood risk along the Danube. From an implementation point of view, relevant activities include joint planning, sharing best practices and joint capacity building facilitated by the EUSDR, as well as the proposed joint actions for tackling flood risks, desertification and heat waves to be implemented with the support of the Romania-Bulgaria Cross-border Cooperation Programme 2014-2020²⁶.

Romania is an active party to the Commission on the Protection of the Black Sea Against Pollution²⁷. Within this framework, the Strategic Action Plan for the Environmental Protection and Rehabilitation of the Black Sea adopted on 17 April 2009 in Sofia, Bulgaria considered, among other objectives, the assessment of climate impacts on the Black Sea ecosystem and sustainable development of the coastal population.

Romania was a partner in the transnational project "Joint Disaster Management risk assessment and preparedness in the Danube macro-region" (SEERISK) and contributed to the elaboration and testing of a common risk assessment methodology for the Danube region. The project partners (including Romania) also elaborated a guideline on climate adaptation and risk assessment in the Danube macro-region in 2014.²⁸

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

²⁶ Interreg V-A - Romania-Bulgaria, URL: http://ec.europa.eu/regional_policy/en/atlas/programmes/2014-2020/Territorial%20co-operation/2014tc16rfcb021, date accessed: 15/05/2018

²⁷ More information can be found at: <http://www.blacksea-commission.org/bssap2009.asp>, date accessed: 15/05/2018

²⁸ SEERISK, 2014, Guideline on Climate Change Adaptation and Risk Assessment in the Danube Macro-Region, URL: http://www.rsoe.hu/projectfiles/seeriskOther/download/climate_change_adaptation.pdf

The Romanian National Meteorological Administration (ANM in Romanian) is monitoring climate change and extreme weather events and has its own department for research. Thus, it plays a key role in providing data and research for climate adaptation. The ANM is also an active partner in a number of EU-funded transnational research projects that produced climate models and projections, such as the FP7 project European Reanalysis and Observations for Monitoring (EURO4M)²⁹. The ANM website provides information about the current and future climate. The ANM is responsible for monitoring meteorological parameters – such as air temperature and pressure, precipitation, humidity, wind speed and direction – while the National Administration Romanian Waters (ANAR in Romanian) is responsible for monitoring surface water, groundwater and water quality. The ANM is also performing research regarding variability and change in climate-related hazards, predictability and regional numerical modelling.

The General Inspectorate for Emergency Situations (GIES), part of the Ministry of Internal Affairs is responsible for the coordination, prevention and management of emergency situations. GIES relies largely on information from ANM and ANAR to forecast climate-related emergency situations (e.g. floods).³⁰ Records of historical extreme events exist, including floods, forest fires and droughts.

As regards the observation and monitoring of impacts (e.g. casualties, financial losses), the World Bank study underpinning the development of the NAS 2016-2030 mentions that several assessments of past impacts have been conducted by various organisations, but notes the lack (in 2014) of a standard evaluation methodology and national database containing information on damages.³¹ As we could not find evidence that the observation systems in place include systematic records on impacts, this indicator is assessed as being ‘in progress’.

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 from the ANM are available for Romania.³² Climate scenarios to 2001-2030 (compared to 1961-1990) were elaborated through a project which commenced in 2008, funded by the MEWF.³³ Climate projections for Romania were obtained through both statistical and dynamic downscaling methods, applied to global and regional climate models, based on the IPCC Fourth Assessment Report (AR4) emissions scenario A1B.

²⁹ EURO4M project website, URL: <http://www.euro4m.eu/projectinfo.html>, date accessed: 16/05/2018

³⁰ World Bank, 2014, Monitorizarea efectelor schimbărilor climatice și a riscurilor în România: Evaluarea situației și a necesităților, http://www.fonduri-ue.ro/images/files/studii-analize/48145/Raport%20A.2.2.%20Monitorizare%20efecte%20si%20riscuri%20climatice_RO.pdf

³¹ Ibid.

³² Website of the National Administration of Meteorology, <http://www.meteoromania.ro/anm2/clima/>

³³ Busuioc, A., Caian, M., Bojariu, R., Boroneant, C., Cheval, S., Baci, M. and Dumitrescu, A., undated, Scenarii de schimbare a regimului climatic in Romania pe perioada 2001-2030, available at: <http://www.mmediu.ro/categorie/link-uri-utile/103>

Results from numerical experiments with ensembles of EURO-CORDEX models under new representative concentration scenarios RCP 4.5 and 8.5 (IPCC AR5) have also been analysed to document climate change over the Romanian territory.³⁴

Several modelling exercises based on different scenarios were carried out to support the development of the NAS 2016-2020, including:

- Agricultural sector: modelling the effects by 2040 of three climate scenarios (low, medium, high) on the productivity of different crop types and on water demand for irrigation, in 12 hydrographical regions of Romania; the effect of different adaptation measures was also assessed.³⁵
- Water sector: climate impacts on mean annual flow were quantified for four river basins of Romania: Buzau, Ialomita, Arges, and Mures.³⁶ Recently, in another study, the Arges, Mures, Prut, Siret and Somes basins have been analysed from the standpoint of variability and change in their monthly potential run-off under scenarios RCP 4.5 and RCP 8.5.³⁷
- Energy sector: modelling climate impacts on hydropower under different scenarios.³⁸

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

Yes / In progress / No

A number of studies are available regarding climate impacts on water supply, water scarcity and drought impacts on agriculture, and comprehensive flood risk assessments have been

³⁴ Bojariu R, Bîrsan MV, Cică R, Velea L, Burcea S, Dumitrescu A, Dascălu SI, Gothard M, Dobrinescu A, Cărbunaru F, Marin L., 2015, Climate change – from physical basis to risks and adaptation (in Romanian with abstract in English), Editor Printech, Bucharest, 200 p, ISBN: 978606-23-0363-1, DOI: 10.13140/RG.2.1.1341.0729, URL: <http://www.meteoromania.ro/anm/images/clima/Schimbariclimatice2014.pdf>

³⁵ Strategia națională privind schimbările climatice și creșterea economică bazată pe emisii reduse de carbon pentru perioada 2016-2030 [National Climate Change and Low Carbon Green Growth Strategy 2016-2020], Annex 1 to Government Decision 739/2016, available at: <http://www.mmediu.ro/categorie/strategia-nationala-privind-schimbarile-climatice-rezumat/171>

³⁶ Pahuja, S., Bica, I., Niculescu, C., Ionita, G., Fagarasan, A., Stanciu, P., Davy, T., Talbi, A., Paul, T., and Liden, R., 2014, Romania - Climate change and low carbon green growth program: component B sector report - integrated water resources rapid assessment, Washington DC; World Bank Group, available at: <http://documents.worldbank.org/curated/en/675851468094456585/Romania-Climate-change-and-low-carbon-green-growth-program-component-B-sector-report-integrated-water-resources-rapid-assessment>

³⁷ Bojariu, R, S I Dascălu, M Gothard, A Dumitrescu, R Cică, S Burcea, L Velea, M-V Bîrsan, V Craciunescu, A Irimescu, M Matreata, V Chendeș, B Boincean, Valeriu Cazac, V Potopová and A Nita, 2018, Variability and Change in Water Cycle at the Catchment Level, in Engineering and Mathematical Topics in Rainfall, T V Hromadka II (Ed.), IntechOpen. ISBN: 978-1-78923-019-2, URL: <https://www.intechopen.com/books/engineering-and-mathematical-topics-in-rainfall/variability-and-change-in-water-cycle-at-the-catchment-level>

³⁸ Strategia națională privind schimbările climatice și creșterea economică bazată pe emisii reduse de carbon pentru perioada 2016-2030 [National Climate Change and Low Carbon Green Growth Strategy 2016-2020], Annex 1 to Government Decision 739/2016, available at: <http://www.mmediu.ro/categorie/strategia-nationala-privind-schimbarile-climatice-rezumat/171>

completed for the major river basins. Furthermore, the NAS 2013-2020 involved a very rough and preliminary impact assessment at sectoral level. However, the NAS also acknowledged that a more detailed impact assessment should be run at sectoral level for identifying the main climate threats (or opportunities) and identifying appropriate adaptation measures.

Through the project developed by MEWF and World Bank³⁹, rapid assessment reports were delivered in 2014, including climate impacts and vulnerabilities for six sectors: water, agriculture, forestry, energy, urban, and transport. The analytical work carried out within the project developed by the MEWF and the World Bank expanded upon and replaced existing work from several completed EU-supported, multi-country/multi-year assessments, in particular, Climate Change and Variability: Impact on Central and Eastern Europe (CLAVIER), completed in 2009, and Central and Eastern Europe Climate Change Impact and Vulnerability Assessment (CECILIA), completed in 2010 (see below).

Case studies about heat waves risk assessment in Western Romania's urban areas were developed by the SEERISK project.⁴⁰

An overarching methodology was developed through the project RO-RISK – support for the fulfilment of ex-ante Conditionality 5.1. – risk assessment at national level.⁴¹ The project was completed in 2016.

Additionally, a risk analysis and screening approach for climate mitigation and adaptation options was delivered to the MEWF as a milestone within the project 'Climate Change and Low Carbon Green Growth' (see above) – "Report on the analysis and risk assessment mitigation and adaptation actions and options in key policies".⁴²

Other recently completed international projects which provide information on climate impacts and vulnerability in Romania include:

- CECILIA: Central and Eastern Europe Climate Change Impact and Vulnerability Assessment⁴³ - provides studies on air quality in urban areas, water management and water quality, hydrology, agriculture and forestry. The National Meteorological Administration was involved in the study "Climate change impacts on Agriculture and Forestry sectors."

³⁹ World Bank, 2015, Romania: Climate Change and Low Carbon Green Growth Program, project website available at: <http://www.worldbank.org/en/country/romania/brief/romania-climate-change-and-low-carbon-green-growth-program>

⁴⁰ Ppathoma-Koehle M, Promper C, Bojariu R, Cica R, Sik A, Perge K, Laszlo P, Czikora EB, Dumitrescu A, Turcus C, Birsan MV, Velea L, Glade T., 2016, A common methodology for risk assessment and mapping for south-east Europe: an application for heat wave risk in Romania, Nat Hazards, 82, pp. 89-109, doi 10.1007/s11069-016-2291-3; SEERISK project website, URL: <http://www.seeriskproject.eu/seerisk/#main>, date accessed: 16/05/2018

⁴¹ Country report 5.1 Conditionality Romania 2016, deliverable of the "National Risk Assessment – RO RISK", available at: https://www.igsu.ro/documente/RO-RISK/Raport_Final_de_tara.pdf; Metodologia de evaluare a riscurilor și de integrare a evaluărilor de risc sectoriale, <https://www.igsu.ro/documente/RO-RISK/Metodologia%20de%20evaluare%20unitara%20a%20riscurilor%20-%20versiune%20finala.pdf>

⁴² World Bank (2015) Romania: Climate Change and Low Carbon Green Growth Program, project website available at: <http://www.worldbank.org/en/country/romania/brief/romania-climate-change-and-low-carbon-green-growth-program>

⁴³ CECILIA project website, URL: <http://www.cecilia-eu.org/>, date accessed: 16/05/2018

- CLAVIER: Climate Change and Variability: Impact on Central and Eastern Europe⁴⁴ - the main objective of this project was to investigate climate impacts on weather patterns, air pollution, extreme events and water resources in Central and Eastern Europe. Romania was involved in the projects "Impact on the hydrological and agricultural regime" and "Economic Vulnerability of CEE Societies and Economic Impact Assessment."
- WATERCoRe: Water scarcity and droughts - Co-ordinated activities in European Regions⁴⁵ - provides a platform for information exchange on water deficit, drought and climate change problems, as well as a manual of good practices and technological measures.
- CCWaters - Climate Change and Impacts on Water Supply⁴⁶: the main objective of this project was to identify and evaluate climate impacts on availability and safety of public drinking water supply for several decades into the future, and resulting land-use changes.
- Climate adaptation measures in Romanian agriculture⁴⁷ - pilot project (within the OrientGate project) providing adaptation options in agriculture.

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

Yes / **In progress** / No

At transnational level, a hazard map for flood risk in the Danube river basin is available (developed in the framework of the Danube FloodRisk Project).⁴⁸ However, there is not yet evidence that transboundary risks are systematically taken into account in other sectors.

The Environmental Impact assessment (EIA) that accompanied the NAP 2016-2020 ascertained that there were no measures and actions included in the plan that could generate significant cross-border effects.

4. Knowledge gaps

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

Yes / **In progress** / No

The NAS 2013-2020 includes as the first two priority actions with regard to adaptation: updating climate scenarios; and supporting research activities in the field of climate change and creating a national climate change database. The NAS 2016-2030 also identifies knowledge gaps regarding climate impacts on the water sector, flood risk management, and the energy sector. However, information could not be found on the progress in research efforts to date, or on the processes employed for periodically tackling knowledge gaps. It is

⁴⁴ CLAVIER project website, URL: <http://www.clavier-eu.org/>, date accessed: 16/05/2018

⁴⁵ WATERCoRe project website, URL: <http://www.watercore.eu/>, date accessed: 16/05/2018

⁴⁶ CC-WaterS project website, URL: <http://ccwaters.eu/>, date accessed: 16/05/2018

⁴⁷ ORIENTGATE project website, URL: <http://www.orientgateproject.org/>. See also: <http://climate-adapt.eea.europa.eu/metadata/publications/climate-change-adaptation-measures-in-romanian-agriculture>, date accessed: 16/05/2018

⁴⁸ Danube FloodRisk Project, URL: <http://www.icpdr.org/main/activities-projects/danube-floodrisk-project>, date accessed: 4/05/2018

also unclear how priority knowledge gaps are used to direct funding to climate adaptation research.

The National Administration for Meteorology develops projects and studies based on the strategic documents and guidelines. Studies falling under its remit include SEERISK - Changing risks in changing climate, and OrientGate – a structured network for integration of climate knowledge into policy and territorial planning. The project results are available on the respective project websites (see footnotes 38 and 45 under Indicator 3c).

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

Climate-related information (including some projections and brief information on adaptation-related policies and legislation) is available on the ANM website.⁴⁹ The ANM website has a specific section on climate adaptation.⁵⁰ The MEWF website⁵¹ also contains a section on climate change, with a sub-section dedicated to adaptation. It includes brief information on the international, EU, and national policy framework and links to the NAS and NAP. Vulnerability and risk assessments and adaptation tools are not the subject of specific sections on the ANM or MEWF websites. The visibility and breadth of information on these webpages could be improved.

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 NAS 2013-2020 and NAS 2016-2030 do not explicitly foresee capacity building measures, however, they do refer to actions on information and awareness-raising, particularly among citizens. It is unclear whether capacity building activities are carried out in a coordinated way, driven by the NAS/NAP.

However, a number of projects with capacity building components have recently been carried out in the country, for example:

- ‘Making operational the National Strategy on Climate Change and the Development of the Climate Component of the Operational Programmes 2014-2020’ (a World Bank technical assistance project building the capacity of the MEWF with regard to climate action, including adaptation)

⁴⁹ Website of the National Administration of Meteorology, URL: <http://www.meteoromania.ro/anm2/clima/>, date accessed: 16/05/2018

⁵⁰ Adaptarea la Schimbarile Climatice, URL: <http://www.meteoromania.ro/anm2/clima/adaptarea-la-schimbarile-climatice/>, date accessed: 15/05/2018.

⁵¹ Website of the Ministry of Environment, URL: http://www.mmediu.ro/categorie/adaptarea-asc/101_date_accessed:16/05/2018

- OrientGate (implemented in 2012-2015, a project covering 13 Southern and Eastern European countries, included communication of up-to-date climate knowledge for the benefit of policy makers, such as urban planners, nature protection authorities, regional and local development agencies, and territorial and public works authorities), see footnote 45
- ‘A Green Way to Sustainable Development’ (implemented in 2015-2017; one of the project’s objectives was to educate, inform and develop knowledge through training programmes focused on climate adaptation and effects of vulnerable sectors).⁵²

One of the strategic objectives of the RO 007 Programme (see Section A2) was “enhancing capacity, knowledge and awareness on assessing and reducing the vulnerability to climate change of institutions, organizations and the public in Region 7”. Promotional materials were developed to disseminate project results, to inform and raise awareness of climate adaptation among stakeholders (brochures, flyers, press releases, publications) and were used in workshops and conferences. At the same time, the project website, Facebook page and knowledge base were created. An awareness and information campaign on climate adaptation at local and regional level was conducted, including through press releases, press conferences, a TV advertising campaign, street campaigns, exhibitions, etc.⁵³

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 2013-2020 mentions some preliminary potential adaptation actions for many of the 13 priority sectors. The NAS 2016-2030, extending the previous one, was complemented with a NAP with identifiable actions, timelines and indicators.⁵⁴ The actions proposed in the NAP cover all the sectors prioritised in the NAS. The proposed actions address geographical specificities where applicable. For six sectors, the selection of the actions was underpinned by rapid risk assessments (as described with respect to Indicator 3c). For the remainder, the methodology used for the identification of adaptation options is unclear.

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

⁵² ClimateADAPT Country Information: Romania, URL: <http://climate-adapt.eea.europa.eu/countries-regions/countries/romania>, date accessed: 16/05/2018

⁵³ Personal communication from Member State contact.

⁵⁴ Planul național de acțiune pentru implementarea Strategiei naționale privind schimbările climatice și creșterea economică bazată pe emisii reduse de carbon pentru perioada 2016-2020 2030 [National action plan for the implementation of the National Climate Change and Low Carbon Green Growth Strategy 2016-2020], Annex 2 to Government Decision 739/2016, available at: <http://www.mmediu.ro/categorie/strategia-nationala-privind-schimbarile-climatice-rezumat/171>

The selection of actions in the NAP was done through stakeholder consultation, taking into consideration primarily the sectoral priorities, the availability of additional financing apart from the national budget sources and the climate relevance of the actions. Expert judgement prevailed (also during the stakeholder consultations), although more complex tools were at times employed, especially in relation to climate change measures and actions proposed in sectors with a higher co-financing rate from European Structural and Investment Funds.

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**

It is not clear how climate change considerations are integrated into disaster risk reduction planning. A National Platform for Disaster Risk Reduction was established in October 2016⁵⁵ and rendered operational in December 2017,⁵⁶ but it is unclear to what extent climate change considerations will be integrated in its work.

Disaster risk reduction does not feature prominently in the NAS 2013-2020, however, the it mentions that “the General Inspectorate for Emergency Situations should be more involved in the process of climate adaptation, given that climate change represents a matter of national security.” In the updated NAS 2016-2030⁵⁷ and associated NAP⁵⁸, the emergency response services are discussed in connection with public health. The NAS 2016-2030 also considers flood risks. It foresees that “knowledge regarding flood risk management will be improved taking into account the expected effects of climate change” and that investments in the water sector will be prioritised on the basis of hazard and flood risk maps, taking into account, as far as possible, the climate impacts.

Regarding institutionalised cooperation and procedures, the institutional mandate for the coordination, prevention and management of emergency situations lies with the General Inspectorate for Emergency Situations (GIES), part of the Ministry of Internal Affairs.⁵⁹ The 2015 version of this fact sheet noted that “a cross-institutional consultation group operates under the coordination of the GIES to facilitate a uniform approach towards climate risk-related drivers. However, this group does not carry regular meetings with an agenda established well in advance and encompassing preventive and analytic adaptation features.” Information on this group and whether it has been established could not be found.

⁵⁵ Government of Romania, 2016, Organizarea și funcționarea Platformei naționale pentru reducerea riscurilor la dezastre, reglementată de Guvern, <http://gov.ro/ro/guvernul/sedinte-guvern/organizarea-si-functionarea-platformei-nationale-pentru-reducerea-riscurilor-la-dezastre-reglementata-de-guvern>

⁵⁶ MAI: Platforma națională pentru reducerea riscurilor la dezastre a devenit operațională, URL: <https://www.agerpres.ro/social/2017/12/19/mai-platforma-nationala-pentru-reducerea-riscurilor-la-dezastre-a-devenit-operationala--25086>, date accessed: 15/05/2018.

⁵⁷ Strategia națională privind schimbările climatice și creșterea economică bazată pe emisii reduse de carbon pentru perioada 2016-2020 2030 [National Climate Change and Low Carbon Green Growth Strategy 2016-2020], Annex 1 to Government Decision 739/2016, available at: <http://www.mmediu.ro/categorie/strategia-nationala-privind-schimbarile-climatice-rezumat/171>

⁵⁸ Planul național de acțiune pentru implementarea Strategiei naționale privind schimbările climatice și creșterea economică bazată pe emisii reduse de carbon pentru perioada 2016-2020 2030 [National action plan for the implementation of the National Climate Change and Low Carbon Green Growth Strategy 2016-2020], Annex 2 to Government Decision 739/2016, available at: <http://www.mmediu.ro/categorie/strategia-nationala-privind-schimbarile-climatice-rezumat/171>

⁵⁹ ClimateADAPT Country Information: Romania: <http://climate-adapt.eea.europa.eu/countries-regions/countries/romania>

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

Funding is available for increasing climate resilience in a number of sectors (with an important contribution expected from the European Structural and Investment Funds - ESIF, which will also bring in national co-financing). Under Romania's Partnership Agreement 2014-2020, EUR 2 billion is allocated to the thematic objective "promoting climate adaptation, risk prevention and management" (EUR 0.5 billion from the Cohesion Fund and EUR 1.5 billion from the European Agricultural Fund for Rural Development).⁶⁰ The NAP – which identifies funding sources for each proposed action (including for cross-cutting actions, such as capacity-building and climate research) – indicates that some adaptation actions will also be funded through other ESIF funds, such as the European Regional Development Fund and the European Social Fund. By 2017, EUR 639 million was disbursed to ESIF-funded projects linked to this thematic objective.⁶¹

Other funding sources identified in the NAP include the national budget (however, a budget line is not always specified), local budgets (without further specification), Horizon 2020, LIFE, SEE/INTERREG.

Given that funding sources are identified for all actions within the NAS and evidence shows that funds are being disbursed a positive score is justified.

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**

The revision of the national framework for EIA is underway in order to align it with the new EIA Directive. The new legislative act has been approved by the Romanian Government and has been submitted to the Romanian Parliament for final endorsement. All relevant climate adaptation aspects are considered in the new legislation.⁶²

The Strategic Environmental Assessment (SEA) Directive was transposed in Romania through Government Decision 1076 of 8 July 2004. With respect to climate change, the

⁶⁰ Summary of the Partnership Agreement with Romania, 2014-2020, available at: https://ec.europa.eu/info/publications/partnership-agreement-romania-2014-20_en

⁶¹ ESIF 2014-2020: Fin. Implementation by Theme for a Member State (2017; filter by fund and MS), URL: <https://cohesiondata.ec.europa.eu/EU-Level/ESIF-2014-2020-Fin-Implementation-by-Theme-for-a-M/k79g-g6rq>, date accessed: 7/05/2018.

⁶² Personal communication with MS contact.

Decision requires that the assessment takes into account potential impacts of the plan or programme on climate factors, but does not mention adaptation or consideration of the climate impacts on the plan or programme.

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

Yes / No

The General Inspectorate for Emergency Situations (GIES) implemented the RO-RISK “Support to fulfil the ex-ante conditionality 5.1. – risk assessment at national level” project, whose aim was to develop a common risk assessment methodology.⁶³

The methodology aims to develop an integrated approach to risk assessment (natural, biological, technological). Its objective is to assure a common framework for sectoral risk assessment that provides information regarding the types of national risks. On the basis of this methodology, risk assessments were carried out for 10 risks, including floods, drought, forest fires and landslides. Climate projections were taken into consideration for the assessments regarding drought and forest fires.⁶⁴ The risk assessments will be followed by the preparation of risk management plans at sectoral level.

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 2016-2030 mentions the need to update current building and infrastructure codes and norms in view of climate change and extreme events. The NAP also sets out a series of actions with respect to the human environment, infrastructure and urbanism, such as: improving the integration of climate change considerations in sectoral planning processes; providing capacity-building to local authorities regarding the integration of climate change considerations in spatial planning documents and processes; investing in climate resilient infrastructure; and modifying building codes and norms. However, information regarding progress in the implementation of these actions could not be found.

The Territorial Development Strategy of Romania⁶⁵ adopted in 2016 mentions measures related to climate adaptation, for example, protecting cities, rural areas, and natural habitats from climate risks, preventing natural disasters, and developing urban green space and green belts surrounding urban areas.

In terms of individual projects contributing to the integration of climate adaptation in these sectors, the pilot project RO 007 - Greenways for Sustainable Development contributed to

⁶³ Country report 5.1 Conditionality Romania 2016, deliverable of the “National Risk Assessment – RO RISK”, available at: https://www.igsu.ro/documente/RO-RISK/Raport_Final_de_tara.pdf; Metodologia de evaluare a riscurilor și de integrare a evaluărilor de risc sectoriale, <https://www.igsu.ro/documente/RO-RISK/Metodologia%20de%20evaluare%20unitara%20a%20riscurilor%20-%20versiune%20finala.pdf>

⁶⁴ Country report 5.1 Conditionality Romania 2016, deliverable of the “National Risk Assessment – RO RISK”, available at: https://www.igsu.ro/documente/RO-RISK/Raport_Final_de_tara.pdf

⁶⁵ Strategia de Dezvoltare Teritorială a României, URL: http://www.fonduri-structurale.ro/Document_Files/Stiri/00017493/7hctm_Anexe.pdf, date accessed: 16/05/2018.

increasing the resilience of transport and communications infrastructure to extreme weather, storms, and floods. A pilot project on the creation of underground infrastructure of electricity/communication cables in Sibiu aimed at protecting the electricity and communication systems against storms and floods. The project also involved tree planting in bus stations to increase thermal comfort of public transport users.⁶⁶

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

It is unclear whether there are coordinated actions to mainstream adaptation into national policies and policy instruments. However, one of the actions included in the NAS 2013-2020 foresaw that adaptation would be mainstreamed at the national level.

The sectors for which evidence of the integration of adaptation considerations could be found are agriculture, flood risk management and territorial development. The policy instruments promoting adaptation in these sectors are:

- The National Strategy for Rural Development and the National Rural Development Programme 2014-2020: mention climate adaptation as a priority and set out a number of related actions. Actions related to climate adaptation were implemented as part of Rural Development Programmes. The integration of adaptation considerations in these documents appears to be driven mainly by the requirements of the Common Agricultural Policy, particularly those concerning funds, rather than the national adaptation strategy.
- The ‘National medium and long term strategy for flood risk management’⁶⁷: one of its objectives is to mitigate or avoid climate impacts on the occurrence of floods; the strategy also mentions that flood prevention and protection measures should take into account current and future climate conditions as well as climate change. This strategy predates the NAS.
- The Territorial Development Strategy of Romania⁶⁸ (see Indicator 8c above). It is unclear whether the NAS was a driver for the inclusion of climate considerations in this instrument.

In addition, the National Sustainable Development Strategy Romania 2013-2020-2030 (adopted in 2008) includes among its objectives a reference to the ability to anticipate the climate impacts, to prepare solutions for adaptation in the long run and to develop cross-sector contingency plans comprising portfolios of alternative crisis-management solutions in case of natural or man-made disasters.

⁶⁶ Personal communication with MS contact.

⁶⁷ Government of Romania, 2010, Strategia Națională de Management al Riscului la Inundații pe termen mediu și lung (perioada 2010 – 2035), URL: http://www.mmediu.ro/app/webroot/uploads/files/2012-01-10_risc_inundatii_hg846din2010aprobarenmri.pdf

⁶⁸ Strategia de Dezvoltare Teritorială a României, URL: http://www.fonduri-structurale.ro/Document_Files/Stiri/00017493/7hctm_Anexe.pdf, date accessed: 16/05/2018.

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

Yes / **No**

The NAS 2016-2030 mentions the need to mainstream climate adaptation in this sector and the NAP sets out a list of measures in this regard, but so far, 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

As described in Section B1, a NAP was adopted in October 2016. Since it is relatively recent, no progress report on its implementation has been issued so far.

Some autonomous adaptation actions are being undertaken, e.g. at a sectoral level for agriculture and water management, and flood risk management, or at a local level regarding coastal erosion, flood protection or analysis of climate impacts. However, it is unclear whether these actions are coordinated with the NAS, and sectoral adaptation action plans are not yet in place. The ‘Large Infrastructure Operational Programme 2014-2020’ includes as a priority axis the promotion of climate adaptation, prevention and risk management that will be applied to projects financed through EU funds. The National Rural Development Plan 2014 – 2020 provides certain areas targeting climate adaptation actions (M01 - Knowledge transfer and information actions (art 14); M02 - Advisory services, farm management and farm relief services (art 15); M11 - Organic farming (art 29).

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

Yes / **No**

We could not find any information regarding specific cooperation mechanisms with regions and cities for implementation. The implementation of the project RO 007 - Greenways for Sustainable Development (see above) supported the increase of institutional capacity and the more active involvement of municipalities in reducing vulnerability to the climate impacts.⁶⁹

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**

⁶⁹ Personal communication with MS contact.

Apart from various guidelines issued by the European Commission, specific procedures or guidelines issued or used by the Romanian authorities for assessing climate impacts on major projects or programmes and for facilitating their adaptation were not identified.

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

Yes / No

It is unclear whether specific mechanisms for ensuring the involvement of stakeholders in implementation have been 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

Reports on the implementation of the NAS/NAP have so far not been published.

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

Yes / No

Currently, there appears to be no system in place for monitoring the integration of climate adaptation in sectoral policies. Sectoral reports including information on adaptation aspects could not be found.

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

Yes / No

No evidence of information on reporting by sub-national administrations is available.

11. Evaluation

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

Yes / No

A schedule for periodic review of adaptation action was included in the NAS 2013-2020. Specifically, the NAS was to be reviewed and its objectives updated during the first half of 2015. The World Bank technical assistance project mentioned above and the development of the NAS 2016-2030 responded to this requirement. The new NAS 2016-2030 does not specify when it will be reviewed.

The NAS does not foresee periodic review of the NAP. The latter contains actions planned for the period 2016-2020, which are intended to be evaluated post-2020.

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

Yes / **No**

Information could not be found on the involvement of stakeholders in monitoring and evaluation of national adaptation policy. Additionally, the new NAS and NAP adopted in 2016 are not explicit on this point.

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.	<u>Yes</u> / In progress / No
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)	<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 / <u>In progress</u> / No
4 <i>Knowledge gaps</i>		
4a	Work is being carried out to identify, prioritise and address the knowledge gaps	Yes / <u>In progress</u> / No

Adaptation Preparedness Scoreboard		
No.	Indicator	Met?
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
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	<i>Identification of adaptation options</i>	
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 / In progress / <u>No</u>
7	<i>Funding resources identified and allocated</i>	
7a	Funding is available to increase climate resilience in vulnerable sectors and for cross-cutting adaptation action	<u>Yes</u> / In Progress / No
Step D: Implementing adaptation action		
8	<i>Mainstreaming adaptation in planning processes</i>	
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 climate change impacts and projections	<u>Yes</u> / No
8c	Key land use, spatial planning, urban planning and maritime spatial planning policies take into account the impacts of climate change	Yes / <u>No</u>
8d	National policy instruments promote adaptation at	Yes / <u>In progress</u> /

Adaptation Preparedness Scoreboard		
No.	Indicator	Met?
	sectoral level, in line with national priorities and in areas where adaptation is mainstreamed in EU policies	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 <i>Implementing adaptation</i>		
9a	Adaptation policies and measures are implemented, e.g. as defined in action plans or sectoral policy documents	Yes / <u>In progress</u> / No
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 <i>Monitoring and reporting</i>		
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 <i>Evaluation</i>		
11a	A periodic review of the national adaptation strategy and action plans is planned	Yes / <u>No</u>
11b	Stakeholders are involved in the assessment, evaluation and review of national adaptation policy	Yes / <u>No</u>