

This document was extracted from the Commission staff working document on the evaluation of the EU Strategy on adaptation to climate change (SWD(2018)461). It replicates annexes IX and X of the staff working document.

Annex IX Horizontal assessment of the adaptation preparedness country fiches

1. Background and objectives

The European Commission adopted the Communication: "An EU Strategy on Adaptation to Climate Change" in April 2013²⁹⁶. The Communication states that "The overall aim of the EU Adaptation Strategy is to contribute to a more climate-resilient Europe. This means enhancing the preparedness and capacity to respond to the impacts of climate change at local, regional, national and EU levels, developing a coherent approach and improving coordination." The Strategy defines three objectives and eight actions to meet this aim. Action 1 is to "Encourage all Member States to adopt comprehensive adaptation strategies" and includes a commitment that "By 2014, the Commission will develop an adaptation preparedness scoreboard, identifying key indicators for measuring Member States' level of readiness."

The Commission's discussions with Member States on the adaptation preparedness scoreboard began in 2013. A detailed draft scoreboard methodology was subsequently developed, largely based on an approach recommended in the Commission guidelines on developing adaptation strategies²⁹⁷, and was published on the Climate-Adapt website²⁹⁸. This methodology was used by the Commission in 2015 to undertake an unpublished pilot assessment and produce a national scoreboard of each Member State's performance.

Based on the lessons learned from the pilot phase, the Commission revised the scoreboard methodology by streamlining the indicators and defining criteria for assessing them, categories of information sought and guidance to enable a consistent approach to analysing the state of play in Member States. The Commission consulted Member States on the modified scoreboard methodology (see Annex X) and carried out a second assessment, as part of the evaluation of the EU Adaptation Strategy in 2017-2018. The resultant draft country fiches, including the national scoreboards, were published in December 2017, in conjunction with the public consultation on the evaluation of the EU Adaptation Strategy.

²⁹⁶ European Commission (2013). Communication from the Commission to the European Parliament, The Council, The European Economic and Social Committee and the Committee of the Regions: An EU Strategy on adaptation to climate change, COM (2013) 216 final. Brussels: European Union. Available from http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52013DC0216&from=EN

European Commission. (2013). Commission Staff Working Document: Guidelines on developing adaptation strategies, SWD (2013) 134 final. Brussels: European Commission. Available from: https://ec.europa.eu/clima/sites/clima/files/adaptation/what/docs/swd 2013 134 en.pdf

See: https://climate-adapt.eea.europa.eu/metadata/guidances/guidelines-on-developing-adaptation-strategies

A further review of the national scoreboards and country fiches was undertaken in April and June 2018 to take account of recent developments and to ensure the quality and coherence of the country fiches. The final documents accompany this evaluation as a separate Staff Working Document (SWD(2018)460).

2. Method

The adaptation preparedness scoreboard methodology addresses 11 main performance areas in relation to the five steps of the adaptation cycle (see Figure IX-1 below). The scoreboard methodology and detailed indicator list can be found in Annex X. A country fiche was developed for each Member State that provides:

- Contextual data on the national adaptation policy framework for each Member State, including dates when national adaptation strategies (NAS) and national adaptation plans (NAP) were adopted and revised
- A narrative in relation to each of the indicators based on the criteria for assessing them. The status of each of the indicators was assessed in relation to this narrative as either already having been met ("Yes") or, for some indicators, as progressively being met by ongoing implementation ("In progress"), or as not met ("No")
- A summary table of the status of all indicators (the national adaptation preparedness scoreboard).

The information used to produce the country fiches was drawn from a review of relevant literature and, in many cases, interacting with Member State representatives.

The narrative and assessment of status in relation to each indicator were reviewed horizontally across all 28 Member States using the scoreboard methodology (see Annex X) to check that the nature and level of information and scoring were consistent.

The information on the national policy frameworks, the narrative associated with the indicators and resultant scores in the final country fiches were used as a basis for this horizontal assessment of the adaptation preparedness of Member States.

Figure IX-1. The adaptation preparedness scoreboard's 11 main performance areas in relation to the five steps of the adaptation policy cycle

Preparing the ground

Step A

- 1. A country-wide governance system is in place for adaptation policy making and vertical and horizontal coordination arrangements are in place between governmental bodies
- 2. Stakeholders (e.g. interest groups, scientists and general public) are involved in the preparation of adaptation policies

Assessing risks and vulnerabilities to climate change

- 3. Systems are in place to monitor and assess current and projected climate change, impacts and vulnerability
- 4. Knowledge gaps on climate change and climate change adaptation are tackled
- 5. Knowledge transfer processes are in place to build adaptive capacity across sectors

Step B

Assessing risks and vulnerabilities to climate change

- 6. For priority sectors, a range of adaptation options is considered, consistent with the results of sectoral risk assessments and taking into account good practices and measures
- 7. Dedicated and adequate funding resources have been identified and made available to implement adaptation action

Step C

Implementing adaptation action

- 8. Climate change adaptation is mainstreamed into priority and key national planning and sectoral policymaking
- 9. Climate change adaptation policies and measures are implemented

Step D

Monitoring and evaluation

- 10. Systems are in place to monitor and report on climate change adaptation, including adaptation-related expenditures, via relevant indicators
- 11. An evaluation framework is in place to assess whether adaptation policy objectives are met and a periodic review of the adaptation strategy is planned

Step E

Methodological limitations

The country fiches were the result of a desk-based exercise, so their accuracy is entirely reliant on the availability of published information and on the input received from Member State representatives.

The scores for each indicator ("Yes", "No", or "In progress") assess the state of play within each country. They should only be considered at a Member State level alongside the narrative that accompanies them in the country fiches. While effort was made to ensure consistency across fiches in the assessment of each individual indicator, scores should not be directly compared across the Member States. The assessment of status requires subjective assimilation of a number of factors, including availability of information, so two countries with a "Yes" in relation to the same indicator may have different national situations leading to that assessment. Nevertheless, some of the indicators with the simplest criteria (e.g. Indicators 1a and 8a, see Annex X) may be more comparable and aggregable than those that have numerous, complex criteria and information requirements (e.g. Indicators 6a, 6b and 9a).

The scoreboard methodology only provides an option for some specific indicators to be scored as "In progress". Scoring the other indicators definitively, as "Yes" or "No", was challenging where insufficient information was published and further verifiable information could not be readily provided by Member State representatives.

Scores were based on strategies, plans and policies that were already adopted. No account was taken in the scoring of proposed documents in development or consultation at the time of the assessment. This was the case even where proposals were described in the country fiches and the adoption of strategies, plans or policies was potentially imminent.

In developing this horizontal assessment, it was important to bear in mind these limitations in the way that the country fiches were produced and national scoreboards were determined. It is equally important that they are borne in mind by readers of this report to avoid over interpretation of the results, analysis and conclusions.

3. Results and analysis

The dates when Member States²⁹⁹ adopted and revised a NAS and/or a NAP³⁰⁰ provide important context for the interpretation of the scoreboard assessment (Table IX-1). A total of 25 Member States have adopted an NAS. Although Bulgaria, Croatia and Latvia have not yet adopted a NAS, the documents are drafted and likely to be adopted in 2018.

²⁹⁹ Country codes are used throughout this section in accordance with the rules of the EU Interinstitutional Style Guide. Hence, the two-letter ISO code (ISO 3166 alpha-2) is used except for Greece and the United Kingdom, for which the abbreviations EL and UK have to be used (provided here at Appendix 2).

³⁰⁰ Different terms are used by different Member States, but these documents essentially capture similar elements. In general, an NAS provides overarching objectives while a NAP includes more specific details on actions to be taken.

Table IX-1. Adoption of first NASs and NAPs

Year	Adoption of 1 st NAS	Adoption of 1st NAP
2005	FI	
2006	ES, FR	ES (1 st NAP)
2007	NL (1 st NAS)	
2008	DE, DK, HU*	
2009		ES (2 nd NAP)
2010	BE, PT (1 st NAS)	HU (1 st NAP only for 2009- 2010)
2011	LU*	DE, FR
2012	AT (1 st NAS), IE (1 st NAS), LT, MT	AT (1 st NAP), DK
2013	PL, RO (1 st NAS), UK*	ES (3 rd NAP), LT (1 st NAP), UK
2014	SK	FI
2015	CZ, IT, PT (2 nd NAS)	
2016	EL, NL (2 nd NAS), RO (2 nd NAS), SI	LT (2 nd NAP), RO
2017	AT (2 nd NAS), CY, EE	AT (2 nd NAP), BE, CZ, CY, EE
2018	IE (2 nd NAS), SE	IE, LT (3 rd NAP), SK, NL
To be adopted/ draft available	BG, HR, LV	BG, EL, HR, IT, LU, LV, PT, SI

^{*} The revision of the first NAS is currently ongoing and is expected to be completed in 2018.

An analysis is set out below in relation to each step of the adaptation policy cycle and each of the 11 main areas of performance. Member States that have achieved positive scores in relation to indicators are listed wherever there are less than 10 of them or for indicators where such information may be important to those Member States that are yet to make progress in that specific regard. Listing of Member States in this way should not be interpreted as meaning that their actions in relation to an indicator are comparable; inevitably different Member States' relevant actions vary widely, as noted under 'Methodological limitations' (above).

Step A: Preparing the ground for adaptation

1. A country-wide governance system is in place for adaptation policy making and vertical and horizontal coordination arrangements are in place between governmental bodies

All Member States have a central administration body officially in charge of adaptation policy making.

Systematic coordination across sectors at a national level is in place in 23 Member States, and is applied in relation to drafting of the NAS and subsequent implementation.

Currently, there is systematic coordination across national, regional and local levels of administration in only 16 Member States (BG, DE, EE, EL, ES, FI, FR, HU, IE, IT, LT, NL, PT, RO, SK, UK), but progress is being made in a further 10 to enable lower levels of administration to influence policy making. In almost all of these Member States (22 out of 26) where vertical coordination is in place in some form, the involvement of subnational governance levels does not seem to have a sectoral focus. Vertical coordination can take place not only during the drafting of the NAS but can also be sustained during implementation. Involvement in both drafting and implementation has taken place in 16 Member States (AT, DE, DK, EE, EL, ES, FI, FR, IE, IT, LT, NL, PT, RO, SK, UK). Box 1 presents a selection of good examples of how vertical coordination mechanisms support adaptation sub-nationally.

Box 1. Vertical coordination mechanisms: supporting sub-national adaptation

The extent of vertical coordination has important implications for the level of involvement of sub-national governance bodies in adaptation policy making. For instance, in Germany, a working group on climate adaptation under the Conference of Environmental Ministers meets twice a year to provide opportunity for the federal states to input into policy-making at the national level, to exchange experiences of NAS processes at the federal-state level, and to coordinate joint activities. Similarly, vertical coordination among national, regional and local authorities is achieved in Greece through the National Climate Change Adaptation Committee, which includes representatives from the Union of Greek Regions and the Central Union of Greek Municipalities. In Ireland, a network of four Climate Action Regional Offices has been established to drive climate action at regional and local levels by building expertise and capacity within the 31 local authorities. A complex vertical coordination structure is also in place in France to involve inter-communal and regional governance levels in adaptation policymaking and implementation. Sweden also has established a vertical coordination mechanism to support adaptation policy-making at the sub-national level, although the mechanism is different in nature compared to those in other Member States, as a result of Sweden's highly devolved governance structure. Since 2009, the administrative boards of the regions have been responsible for coordinating adaptation at regional level and supporting the adaptation work of local authorities. In March 2018, the Swedish Meteorological and Hydrological Institute (SMHI) published new step-by-step guidance for municipalities working

on climate adaptation.301

While the involvement of sub-national governance levels does not seem to have a sectoral focus in most Member States, vertical coordination puts a specific emphasis on flooding issues in Denmark. In 2013, after mandating municipalities to develop their adaptation action plans, the Danish Government established a national task force with detailed and specific expertise in local adaptation issues, which developed web-based mapping of flood, rainfall and storm-surge risk for various time horizons, modelled according to IPCC 2007 scenarios. A team of subject specialists on adaptation, flooding, and erosion was also established by the Danish Environmental Protection Agency and Coastal Authority with the aim to advise, guide, support, and help coordinate municipalities in implementing adaptation solutions. Latvia is another example of a country where vertical coordination has a sectoral focus. Latvian municipalities and planning regions are involved in the development of climate adaptation policy in the following sectors: civil protection and emergency planning, building and infrastructure, biodiversity and ecosystem services, and agriculture, fishery and forestry.

At the city level, involvement in the EU Covenant of Mayors for Climate and Energy³⁰² provides a sound mechanism to foster city-level adaptation policy making. In some cases, this is augmented by further support from national initiatives. For instance, the Spanish Network of Cities for Climate was created in 2009 by the Spanish Federation of Municipalities and Provinces and the Spanish Ministry of Environment to coordinate, foster and provide technical support and to contribute to the translation of the national climate and energy objectives at the local level. Another good example is provided by the Ministry of the Environment of the Czech Republic, which has officially committed to providing strategic guidance, financial and technical support to local authorities that are signatories to the Covenant. The Ministry has, therefore, been recognised by the European Commission as a Covenant National Coordinator.

2. Stakeholders (e.g. interest groups, scientists and general public) are involved in the preparation of adaptation policies

With only two exceptions, all Member States have a dedicated process in place to facilitate stakeholders' involvement in the preparation of adaptation policies. Most country fiches indicate that a wide range of stakeholders have been consulted, including the private sector, non-governmental organisations, research organisations and universities, as well as the general public, in addition to government departments and local authorities (Figure IX-2).

See: http://www.klimatanpassning.se/en/news-archive/new-guide-will-help-municipalities-with-adaptation-to-climate-change-1.132803

³⁰² See: www.covenantofmayors.eu

Government Local authorities Private sector NGOs Research General public

Stakeholder categories

organisations and universities

Figure IX-2. Types of stakeholders involved in the preparation of adaptation policy

All but one Member State integrated transboundary cooperation to address common challenges with relevant countries, almost invariably with regard to water, and more occasionally with regard to biodiversity, energy, health and "other" issues, including mountain ranges (Figure IX-3). The extent of transboundary cooperation and whether it is driven by the NAS/NAP varies between Member States, with 15 of the Member States having addressed this dimension in the NAS/NAP. Other drivers include international initiatives (e.g. the International Commission for the Protection of the Danube River, and the Alpine Convention), and EU initiatives (e.g. EU macro-regional strategies) and projects. Examples of transboundary cooperation are presented in Box 2.

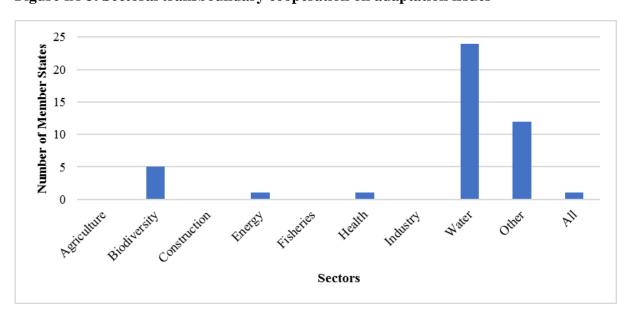


Figure IX-3. Sectoral transboundary cooperation on adaptation issues

departments

Box 2. Examples of transboundary cooperation

The Czech Republic provides a unique and interesting example of transboundary cooperation, as it consulted with the Slovak authorities during the development of the Czech NAS. Transboundary cooperation on adaptation has also been fostered by the British-Irish Council. In 2018, the Council's 15th ministerial meeting focused on how shared challenges on climate adaptation can be jointly

tackled. Portugal also sets a good example in this regard, as one of the thematic focal areas of the NAS is international cooperation. A specific working group was established to foster this action and, particularly, to establish an Iberian cooperation system. An EU co-financed LIFE project, the SAHARA project³⁰³, supports this action.

In addition to LIFE funding, the EU Cohesion Policy supports transboundary adaptation projects (via Interreg projects). About 1,470 territorial cooperation projects dealing with climate change, risks management and sustainable management of natural resources have been identified³⁰⁴, nearly 15% of more than 9,816 projects funded during the programming period 2007-2013. For example, relevant projects include the Climate Change, Impacts and Adaptation Strategies in the Alpine Space project (ClimChAlp), the Adaptation Strategies in Transboundary Areas project (STRADA), and the Climate Change Capitalisation project (C3-Alps) in which AT, DE, IT, FR, SI (CH and LI) are involved. In addition, the Pyrenees Climate Change Observatory (OPCC) provides a knowledge platform about adaptation to climate change in the Pyrenees covering FR and ES bordering regions and Andorra.³⁰⁵

During the summer of 2017, the Interact network launched a thematic network on Climate Change and Risks³⁰⁶ in order to support the Interreg projects. This network brings together practitioners from the Interreg community, regional stakeholders, experts and other EU programmes and knowledge communities active in the field of climate change and risks. Its overall goal is to facilitate the exchange of practices and lessons learnt and to gain further knowledge.

EU-driven transboundary adaptation action is translated through the four macroregional strategies³⁰⁷ that involve 19 Member States. For instance, the EU Strategy for the Danube Region puts a special focus on adaptation to extreme weather events and provides an important platform to foster cooperation between AT, BG, CZ, DE, HR, HU, RO, SK and SI on joint monitoring and flood management. At the same time, this cooperation has benefitted from the prior existence of the International Commission for the Protection of the Danube River³⁰⁸ (ICPDR) under which a specific adaptation strategy was adopted in 2012. The existence of other international river basin committees (e.g. on the Meuse or the Sava) also foster joint climate adaptation actions in other Member States.

In addition to extensive transboundary cooperation on river basins, multiple initiatives exist for mountain ranges and for biodiversity. While these initiatives cover a wide range of issues adaptation to climate change is also addressed. For

308 See: http://www.icpdr.org/main/

³⁰³ See more about LIFE projects at: http://ec.europa.eu/environment/life/project/Projects/index.cfm

Based on the KEEP database: https://www.keep.eu/keep/ – a comprehensive database regarding the territorial cooperation projects and beneficiaries in Europe

³⁰⁵ See more about Interreg projects at: https://www.interregeurope.eu/discover-projects/

³⁰⁶ http://www.interact-eu.net/contact?field_fields_of_expertise_tid=All&field_networks_tid=81

³⁰⁷ The EU Strategy for the Baltic Sea Region, the EU Strategy for the Danube Region, the EU Strategy for the Adriatic and Ionian Region and the EU Strategy for the Alpine Region. See: http://ec.europa.eu/regional_policy/en/policy/cooperation/macro-regional-strategies/

example, transboundary cooperation between AT, DE, FR, IT, SI and LI and CH is fostered by the EU-Strategy for the Alpine Region (EUSALP), and climate adaptation is specifically considered by the 'risk governance' and 'green infrastructure' action groups. Furthermore, international conventions on the Alps³⁰⁹ and Carpathians³¹⁰ are in place. There is also transboundary cooperation with non-EU Members on biodiversity and adaptation issues in Northern Europe. The Fennoscandia Green Belt initiative supports a joint nature conservation cooperation between Finland, Norway and Russia and, among other foci, on threats to ecosystem services from climate change.

Finally, there is a wide range of trilateral initiatives focused on adaptation issues. Examples include the cooperation between Benelux countries (BE, NL and LU), which have cooperated on climate change issues since 2014, the trilateral Wadden Sea cooperation between DK, DE and NL, and the cooperation agreements between CY, EL and Egypt, and CY, EL and Israel. In 2017, the latter focused on the exchange of knowledge and know-how on adaptation policy monitoring, evaluation and good practice at regional and local scales.

Step B: Assessing risks and vulnerabilities to climate change

3. Systems are in place to monitor and assess current and projected climate change, impacts and vulnerability

A total of 14 Member States have established observation systems to monitor climate change, extreme climate events and their impacts, and systems are being developed in all of the other Member States. According to the country fiches, Member States collect data on climate impacts in relation to multiple types of variables. Those most commonly captured are sectors affected (14 Member States), costs (12 Member States), and number of people affected (six Member States: BE, FR, IT, LU NL, RO).

Climate change scenarios and projections are available at national level for 25 Member States, and at a sub-national for 10 Member States. Only three Member States rely solely on international data. Climate change scenarios and projections are being used to assess future economic, social and environmental impacts in at least 23 Member States, with others steadily making progress in this respect.

Sound climate risk and/or vulnerability assessments for priority sectors are being undertaken to support adaptation decision making by at least 22 Member States, with all but one of the other Member States making progress in that regard. The frequency with which different sectors are addressed is shown in Figure IX-4. In addition to those sectors specified in the figure, small numbers of Member States addressed a wide range of "Other" individual sectors or themes, including: coastal; desertification; disaster risk management; economy; finance; ICT networks; infrastructure; insurance; land use; maritime; mountains; natural environment; society; soil; spatial planning; tourism; urban; and waste management. Three Member States (DE, SI, UK) were identified as having assessed all vulnerable sectors. Climate risk and/or vulnerability assessments are:

³⁰⁹ See: http://www.alpconv.org

³¹⁰ See: http://www.carpathianconvention.org/

³¹¹ Climate impact monitoring is not in place in five Member States.

coordinated centrally in 22 Member States, although in six of these countries further assessments have been driven by independent research projects or scientific organisations; sector driven in three countries (PL, PT, SE), albeit independently in one case; and carried out as a wholly independent research project in NL.³¹²

A recent European Environment Agency (EEA) report³¹³ concluded that a variety of approaches is used for impact and vulnerability assessments, including literature review, dedicated research programmes and projects, model-based studies and stakeholder-driven processes. Most of the assessments have a broad scope, with up to 19 different sectors and thematic areas covered, such as in the case of FI and UK. The EEA report found that similar categories to those cited in Figure IX-4 (below) are addressed in the assessments.

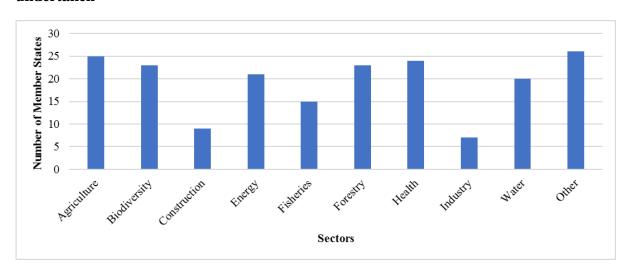


Figure IX-4. Categories of sectors where climate risk/vulnerability assessments are undertaken³¹⁴

Transboundary risks are taken into account in a coordinated manner by three Member States across all or a wide range of sectors (DE, FI, PT) when undertaking climate risk and/or vulnerability assessments. A total of 19 Member States are assessing transboundary risks primarily in relation to the water sector. Consideration of transboundary risks is driven by the NAS in three Member States (UK, plus FI and PT also being driven at a project level) whereas in other countries it is sector-driven or implemented at a project level.

4. Knowledge gaps on climate change and climate change adaptation are tackled

Work is being carried out to identify, prioritise and address the knowledge gaps in 15 Member States (Figure IX-5, below, categorises the knowledge gaps identified in these country fiches). A further 11 countries have identified knowledge gaps but there seems to be limited activity to address the gaps through further research and work. In most of the countries, the NAS includes actions related to knowledge but one-off projects are the primary driver in four countries.

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³¹² It has not been possible to establish whether or not information on climate risk and/or vulnerability assessments is coordinated for one Member State.

EEA, 2018, National climate change vulnerability and risk assessments in Europe, 2018, European Environment Agency, EEA Report 1/2018, ISSN 1977-8449 (https://www.eea.europa.eu/publications/national-climate-change-vulnerability-2018)

³¹⁴ It has not been possible to establish the sectoral coverage of climate risk/vulnerability assessments undertaken for one Member State.

Box 3 (below) summarises principles emerging from the country fiches for good practices in addressing climate change and climate adaptation knowledge gaps. In the EEA report on national impact and vulnerability assessments³¹⁵, most mentioned knowledge gaps and themes where additional knowledge needs remain today are the consideration of non-climatic factors, cross-sectoral interactions and cross-border impacts, common metrics for impacts and vulnerabilities, uncertainties, long-term adaptation and targeted communication.

Sectoral focus

Impacts of climate Scenarios, projection and Vulnerability and risk change and observation modelling assessments systems

Types of knowledge gaps

Figure IX-5. Types of knowledge gaps identified in countries where work is ongoing to address them

Box 3. Principles for good practices in addressing knowledge gaps

Principles for good practices emerging from the country fiches include:

Member States taking responsibility.

National authorities initiate and fund research programmes in order to invest in evidence-based adaptation. Examples: AT, BE, DE, DK, ES, FI, FR, PT, SE, UK.

Linking research and policy to ensure timely results.

Waiting for research results need not be a barrier to implementation. In several Member States, knowledge development occurs together with the policy process, starting with awareness raising, development of scenarios and vulnerability analysis, progressing to applied research and technological development, and supporting application of results in practice. Examples: AT, BE, DE, DK, FI, NL, UK.

• Breadth of knowledge development enables identification of key

EEA, 2018, National climate change vulnerability and risk assessments in Europe, 2018, European Environment Agency, EEA Report 1/2018, ISSN 1977-8449 (https://www.eea.europa.eu/publications/national-climate-change-vulnerability-2018)

vulnerabilities.

Many Member States identify sectoral vulnerabilities, setting priorities that matter most to their economies or are most relevant to their geographical situation. Examples: AT, FR, HR, IE, SI, UK.

 Research responsibilities are shared between researchers and other stakeholders.

Several countries structure research programmes to coordinate effort and enable input from research institutes, sub-national governments, non-governmental organisations and the private sector. Examples: AT, BE, DE, DK, FI, NL, UK.

Addressing knowledge gaps is a path-dependent, self-reinforcing process.

Investment in the development of knowledge on climate change and climate adaptation seems more likely in countries that already have a strong research base, including a high-level meteorological office. Larger Member States with greater critical mass are better able to close knowledge gaps. Examples: DE, FR, UK. Smaller countries and countries with a small research budget make progress by becoming involved in European research projects and by cooperating with countries that face similar issues. Examples: MT, PT, SI.

5. Knowledge transfer processes are in place to build adaptive capacity across sectors

Adaptation-related data and information (e.g. climate projections, vulnerability and risk assessments, adaptation tools) are available to all stakeholders, including policy makers, in 17 Member States. At least some stakeholders have access to such information in a further nine Member States. A total of 19 of these countries have a national web-based platform for disseminating information. In addition, at least one of the countries without a national platform has a regional platform covering part of the Member State. In 2014³¹⁶, only 12 Member States had a dedicated adaptation platform, while also transnational regions such as the Alpine, Baltic Sea or Pyrenees regions had a publicly available adaptation platform.

Coordination of associated capacity-building activities (including education on climate adaptation concepts and practices, and dissemination of training materials), usually driven by the NAS or NAP, is established in half of Member States. However, systematic actions on capacity building are being pursued in a further 11 countries.

Box 4 (below) summarises principles emerging from the country fiches for good practices in relation to knowledge transfer, including capacity building. The challenges

EEA, 2015, Overview of climate change adaptation platforms in Europe, European Environment Agency, EEA Technical Report 5/2015, ISSN 1725-2237 (https://www.eea.europa.eu/publications/overview-of-climate-change-adaptation)

are similar to the ones detected in the 2015 EEA report on adaptation platforms³¹⁷: engaging with stakeholders, identifying relevant information and knowledge, effective presentation and linking platforms across sectors, scales and platforms. Nevertheless, funding and sustaining a platform and technical, structural and design elements of an adaptation platform were also mentioned as challenges.

Box 4. Good practices in knowledge transfer

Provision of a national website on climate change and climate adaptation is an obvious response to the need to facilitate knowledge transfer. It is an option currently being pursued by all but two Member States, however, the comprehensiveness and applicability of the information provided by such online platforms is highly variable. Good practices emerging from the country fiches address two challenges:

How to make knowledge accessible and applicable?

Member States address this challenge by:

- Promoting uptake of knowledge by making information available in the local languages. Examples: AT, DK, EE, ES, FI, FR, HU, LV, NL, PT, SE, UK;
- Presenting inspirational and practical case studies. Examples: AT, DK, FI, FR, PT, SE; and
- Using interactive websites to encourage input and to promote collaboration between different stakeholders. Examples: DK, ES, FR, HU, PT.
- How to guide non-scientific users through multiple sources of information?

Information on climate change and adaptation arising from more than two decades of research is now available, which is disseminated by numerous international and national websites, inside and outside the EU³¹⁸. Some Member States have sought to develop national websites that provide an overview and waymark information. Examples: DE, UK.

In addition to disseminating information, Member States can promote knowledge transfer through capacity building, which:

- Is especially relevant for sub-national governments, as demonstrated by the country fiches. Examples: AT, DE, DK, IE, PT, SE, UK.
- Can be targeted to vulnerable sectors, such as forestry or health.
 Examples: CZ, DK, EE, ES, HR, PT, UK.
- Can include use of workshops that function as a two-way communication

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³¹⁷ See footnote 316

³¹⁸ The Evaluation of the EU Adaptation Strategy (2018) indicates that the EEA Climate-ADAPT website plays an important role in structuring adaptation information. Interviewees from national governments, in particular, noted that Climate-ADAPT is used as a starting point and, as it is interactive, it can be used by Member States to share their experiences.

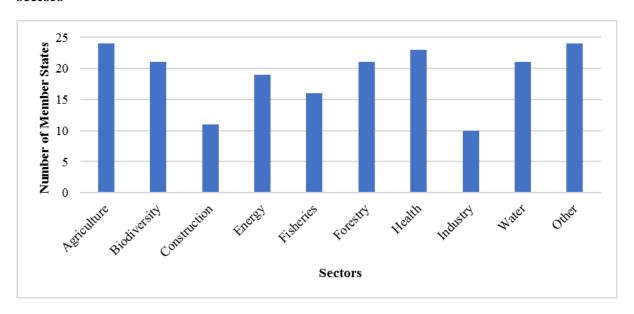
- channel, alerting national stakeholders to new sub-national issues and vice versa. Examples: DE, ES, SE, UK.
- Some countries are seeking to achieve through interactions with the general public and schools. Examples: AT, CZ, DK, EE, FI, HR, IE, PT.

Step C: Identifying adaptation options

6. For priority sectors, a range of adaptation options is considered, consistent with the results of sectoral risk assessments and taking into account good practices and measures

Detailed risk and/or vulnerability assessments have been used by 25 Member States to identify adaptation options for at least a majority of priority sectors. The frequency with which different sectors are addressed is shown in Figure IX-6. In addition to those sectors specified in the figure, small numbers of Member States have addressed a wide range of "Other" individual sectors or themes, including: coastal; desertification; disaster risk management; economy; finance; ICT networks; infrastructure; insurance; land use; maritime; mountains; natural environment; society; soil; spatial planning; tourism; urban; and waste management. Six Member States (FR, NL, PL, PT, RO, SK) were identified as having assessed all priority sectors.

Figure IX-6. Risk assessments and adaptation options identified for priority sectors³¹⁹



The selection of adaptation options appears to be based on robust methods (e.g. multi-criteria analyses and/or stakeholder consultations, see Box 5) in 24 Member States, which have also identified priority actions per sector. Four Member States have yet to progress robust identification and prioritisation of adaptation options.

³¹⁹ Sectoral information on risk assessments and adaptation options is not available for one Member State.

Box 5. Prioritising options using multi-criteria analysis and stakeholder input

Prioritisation of adaptation options is important for the efficient and effective use of limited adaptation resources. Combining the use of multi-criteria analysis (MCA)³²⁰ with literature, modelling, and stakeholder and/or expert input is a good way to achieve more robust outcomes. A selection of examples of Member States adopting such combined approaches are presented here.

In Croatia, a host of potential adaptation measures were identified during the development of the NAS. The measures were discussed with more than 130 stakeholders during a series of workshops, and MCA was used to prioritise each of them as a 'very high, high or medium priority' for implementation. As a result, 79 sectoral measures were selected, and divided into the five foci of the NAS. These measures were then aligned with spending priorities and programmes and 42 included as 'very high priority' measures in the draft NAS.

In Cyprus, the prioritisation of more than 200 adaptation measures, identified across the 11 sectors in the NAS, made use of stakeholder opinion surveys, which were then processed and evaluated using a MCA. Eight criteria were used in the MCA: 1) Efficiency of the measure; 2) Environmental concerns; 3) Supporting the prevention of climate change impacts; 4) Urgency for implementing the measure; 5) Usefulness of implementation irrespective of climate change; 6) Technical viability; 7) Economic viability; and, 8) Public acceptance. The MCA produced alternative adaptation scenarios based on different weightings of system vulnerabilities, evaluation criteria and stakeholder types. The highest performing options across the scenarios were taken forward in a 'sustainable adaptation scenario' and included in the NAS. Performance was ranked equally between the technical, environmental and social criteria, whilst economic aspects were evaluated in a separate cost-benefit analysis (CBA).

In the Czech Republic, adaptation options were selected using expert judgement and prioritised by different ministries and thematic working groups using an MCA. Measures were ranked according to four criteria: 1) multiple adaptation effects to tackle the impacts of climate change; 2) spill-over social, economic or mitigation impacts; 3) impact on the environment and ecosystems; and 4) financial needs for implementation. Criterion 1 was assessed by the thematic working groups and attributed a weight twice as important as the other three criteria, which were evaluated by external consultants. Based on the MCA, measures were categorised into priority one measures and priority two measures.

Similar combined approaches have also been used in Estonia, the Netherlands and the UK (England) among others.

³²⁰ MCA is an analytical approach that allows for quantitative and qualitative criteria to be analysed within the same single framework. It can be combined with weightings to produce rankings and/or scoring of the options being assessed to support decision making.

There has been less progress in coordinating disaster risk management and climate adaptation. Mechanisms are in place to ensure coherence between the two policies in only 10 Member States, although are in progress in 13 of the other countries (see Figure IX-7 below).

7. Dedicated and adequate funding resources have been identified and made available to implement adaptation action

Consistent funding is available for the implementation of adaptation actions to increase climate resilience in vulnerable sectors and in cross-cutting ways (e.g. national scenarios and climate services, capacity building, website) in only nine Member States (DE, DK, EE, ES, FR, LT, PT, RO, SE), but adaptation is financed in at least some sectors in all of the other countries, with one exception. The lack of funding that is specifically labelled for adaptation is also reflected in the fact that only 14 Member States include budget allocations in their NAS or NAP.³²¹

Step D: Implementing adaptation action

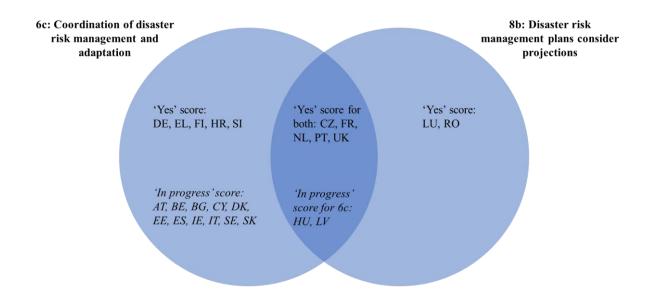
8. Climate change adaptation is mainstreamed into priority and key national planning and sectoral policymaking

The country fiches identify that climate adaptation has been considered in the national frameworks for Environmental Impact Assessment (EIA) in 21 Member States. However, only 15 Member States consider climate adaptation in Strategic Environmental Assessment (SEA).

Only nine Member States (CZ, FR, HU, LU, LV, NL, PT, RO, UK) have taken climate change impacts and projections into account in national disaster risk management plans and associated preparedness/prevention strategies. This is reflective of the current state of play in relation to coordination of disaster risk management and climate adaptation (see Point 6 above and Figure IX-7 below). Box 6 provides a selection of examples of good practice.

³²¹ It is unclear whether or not there are budget allocations associated with the NAS in two Member States.

Figure IX-7. Coordination of disaster risk management plans with adaptation, and consideration of climate projections



Box 6. Coordinating disaster risk reduction and adaptation

Climate change is affecting vulnerability to hazards, changing patterns of exposure and thereby having a significant impact on the risk of natural disasters, which are likely to increase in frequency and severity. Promoting coordination between strategies and actions for adaptation and disaster risk reduction, and fostering systematic integration of climate science and knowledge in disaster risk assessments and management, is crucial for a coherent response to climate and disaster risk.

A small number of Member States exemplify good practice.

Disaster risk management in France is based on plans published at the level of each department, which set out how the response to a range of risks will be organised. These plans include the identification of key climate-related risks and take account of climate change and modelling (e.g. in the relation to flood risk zones). The plans ensure that climate impacts and projections are addressed in disaster prevention and preparedness strategies and management plans.

In the Netherlands, the Dutch Safety Regions³²² are mandated to address disaster risk management on their territory and base their plans on climate

These are 25 regions covering the entire country that have administrative responsibility for risk assessment and response. The emergency services (e.g. fire brigade, police and paramedics) cooperate and are organised in teams corresponding to the Safety Regions. The Safety Regions differ from the country's 12 provinces. For further information see 'Ministry of Security and Justice (nd) Safety

projections. In 2015, the 'Water and Evacuation' programme started, with the aim to improve the preparedness of the Dutch Safety Regions for the consequences of floods due to climate change. Between 2015 and 2017 instruments were developed and made publicly available to assist the Safety Regions in their preparedness for water-related disasters, including floods. The programme is monitored by the Steering Group Management Water Crises and Floods (Stuurgroep Management Watercrises en Overstromingen, SMWO). The SMWO governance structure falls under the Steering Group National Security in which Dutch Safety Regions, the Ministry of Security and Justice, the Ministry of Infrastructure and the Environment and the Dutch Water Authorities, and the Ministry of Defence take part. This structure provides a good practice example of how information sharing and appropriate actions on climate change and disaster risk prevention can be coordinated across all key agencies.

In Portugal, the national authority for civil protection (ANPC) is liaising with the work of the national platform for disaster risk reduction linked to climate adaptation and is coordinating one of the sectoral working groups that integrate with the NAS. In this way, close cooperation and articulation between disaster risk management and climate adaptation is assured. The NAS also includes a sector working group on safety of people and assets, which contributed to the ANPC's 2014 National Risk Assessment³²³. This assessment explicitly includes climate change impacts and how they may accentuate or attenuate natural, technological or hybrid risks. The NAS also acts to support disaster risk reduction at sector level, promotes good practices (e.g. early warning systems) and produces manuals on best practices for risk management and prevention.

Similar coordinated approaches are also established in a small number of other Member States, including the Czech Republic and the UK.

The EEA report on Climate change adaptation and disaster risk reduction in Europe³²⁴ shows that there are opportunities to further enhance coherence between climate change adaptation and disaster risk reduction as both policies use the concept of resilience and this provides common ground to build on more coherent policies and actions. Example include the co-design and co-development of climate services, an area where Copernicus ('Europe's eyes on Earth³²⁵) can contribute. In addition, there are opportunities to improve and harmonise the sharing of vast amount of complementary knowledge available at websites, portals and platforms. Incomplete records of past disasters highlight the need for an improved monitoring and risk assessment as comprehensive, harmonised and interoperable disaster loss databases are needed to improve existing damage and risk models. Finally, national level coordination of

Regions Act. Available from: https://english.nctv.nl/binaries/j-18732-web-eng-wet-veiligheidsregios tcm32-84093.pdf

325 http://www.copernicus.eu/

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³²³ ANPC (2014). Avaliacao Nacional de Risco Available from: http://www.prociv.pt/bk/RISCOSPREV/AVALIACAONACIONALRISCO/Documents/2016_Avaliac ao Nacional Riscos.pdf

³²⁴ EEA, 2017, Climate change adaptation and disaster risk reduction in Europe: enhancing coherence of the knowledge base, policies and practices, European Environment Agency, EEA Report 15/2017, ISSN 1977-8449 (https://www.eea.europa.eu/publications/climate-change-adaptation-and-disaster)

indicators needs improvement to measure progress and better understand and value the co-benefits of nature-based solutions in adaptation and disaster risk reduction.

A total of 15 Member States³²⁶ have land use, spatial, urban and maritime planning policies that explicitly address climate impacts, and require or encourage adaptation.

Only six Member States (BE, DE, FI, SE, SK, UK) have national policy instruments that promote adaptation at sectoral level, in line with national priorities and in areas where adaptation is mainstreamed in EU policies. However, all but two of the other countries are promoting adaptation in certain sectors, with significant gaps in others (e.g. construction, energy, fisheries, health and industry) (see Figure IX-8). In addition to those sectors specified in the figure, small numbers of Member States are mainstreaming adaptation in a wide range of "Other" individual sectors include insurance or alternative policy instruments providing incentives for investments in risk prevention (DE and DK only).

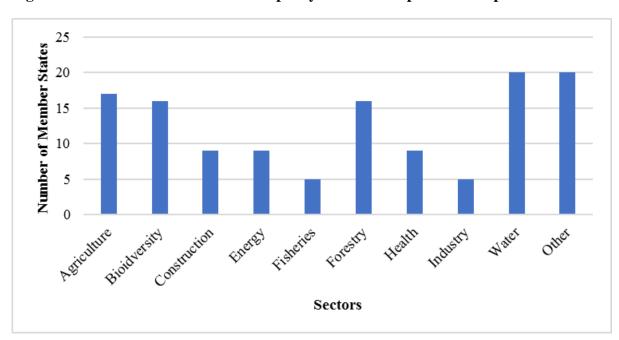


Figure IX-8. Sectors in which national policy instruments promote adaptation

9. Climate change adaptation policies and measures are implemented

At least 22 Member States are implementing their NAS and/or NAP, albeit with gaps in key sectors or in some actions identified as priorities. In one Member State (FI), it is clear that the NAP and associated priorities are being implemented in a coordinated way.

Of those Member States that have progressed implementation, only 14³²⁷ have cooperation mechanisms in place to foster and support adaptation at a local and subnational scale.

³²⁷ AT, DE, DK, ES, FI, HU, IE, LT, NL, PL, PT, SE, SK, UK

³²⁶ BG, CZ, DE, DK, FI, FR, HU, IE, LT, LU, LV, PT, SE, SI, UK

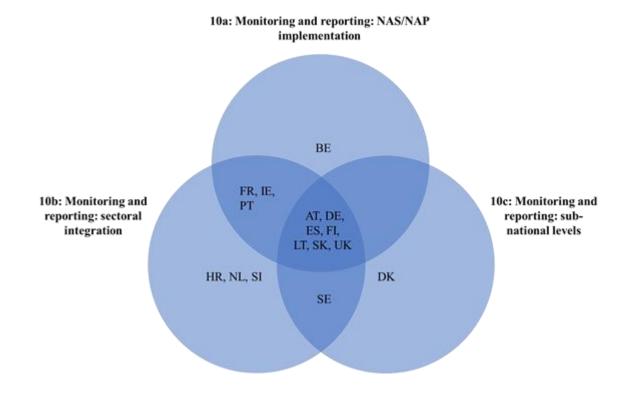
Half of the Member States have made little or no progress, as yet, in making procedures or guidelines available to assess the potential impact of climate change on major projects or programmes, and facilitate the choice of alternative options (e.g. green infrastructure). Thirteen Member States are involving stakeholders in the implementation of adaptation policies and measures.

Step E: Monitoring and evaluation

10. Systems are in place to monitor and report on climate change adaptation, including adaptation-related expenditures, via relevant indicators

A total of 16 Member States are undertaking some monitoring and reporting of adaptation activities. The extent differs to which these Member States are monitoring and reporting on: NAS and/or NAP implementation; integration of climate adaptation in sectoral policies; or regional, sub-national and local actions (see Figure IX-9).

Figure IX-9. The focus of adaptation monitoring and reporting being undertaken by Member States



11. An evaluation framework is in place to assess whether adaptation policy objectives are met and a periodic review of the adaptation strategy is planned

While 24 Member States have planned a periodic review of their NAS and/or NAP, stakeholders are actively involved in the assessment, evaluation and review of national adaptation policy in only 13 Member States. Nevertheless, the EEA reports that most countries have focused primarily on monitoring and reporting while the evaluation of adaptation policies has started recently in a handful of countries³²⁸.

An overview of monitoring and evaluation frameworks and a selection of good practices is provided in Box 7.

Box 7. Monitoring and evaluation frameworks

Monitoring and reporting of implementation has taken place at sectoral and subnational levels in seven Member States (AT, DE, ES, FI, LT, SK and UK). In most countries, reporting of sectoral and sub-national level implementation is covered within the central report on the implementation of the NAS/NAP with dedicated chapters on the relevant actions. On the other hand, there are three Member States (HR, NL and SI) where, even though central monitoring and reporting on the implementation of the NAS is not in place, separate sectoral progress reports are published. For instance, in the Netherlands, a progress report on the Delta Programme, covering adaptation actions related to flooding and the water sector, is published annually.

The frequency of central reporting varies; for instance, in Austria a progress report is published every five years, in Spain every three years, while in Lithuania an implementation report on the NAP is published annually by the responsible ministry. The type of monitoring information can be qualitative and quantitative. For instance, in Austria monitoring is based on a stakeholder survey ('self-assessment approach'; based on the NAP and sent to the key actors mentioned therein) and a criteria-approach ('indicator-based approach' with qualitative and quantitative data collections).

In contrast to the dissemination of monitoring results, a periodic review of the NAS/NAP is in place or planned in 24 out of the 28 Member States and is either embedded in the national climate change legislation or the NAS/NAP itself.

Fundamental conceptual and methodological challenges remain for monitoring, reporting and evaluation activities owing to a still limited experience with the use of adaptation indicators. A forthcomingworking paper of the EEA, supported by the European Topic Centre on Climate Change Impacts, Vulnerability and Adaptation, analysed available national adaptation indicator sets. While several countries are working on adaptation indicators, and new information is expected

22

EEA, 2015, Overview of climate change adaptation platforms in Europe, European Environment Agency, EEA Technical Report 5/2015, ISSN 1725-2237 (https://www.eea.europa.eu/publications/overview-of-climate-change-adaptation)

to be available in the near future, there are currently only a few European countries with an operational set of indicators in place (AT, FI, DE, NL, UK). The countries use indicator sets instead of single indicators and combine quantitative information with descriptive expert knowledge. There is also a clear link between the sectors covered in the NAS/NAP and in the adaptation indicator sets. Several data underpinning the indicators are either recorded continuously (e.g. water parameters) or collected from different entities (for example in the case of subnational measures), making it necessary to report them in a structured format for evaluation. While not always one-to-one, the adaptation indicator sets available contain a large amount of information that is suitable for the reporting under the Sendai Framework on Disaster Risk Reduction and the Sustainable Development Goals (SDG) indicators globally and at the EU-level (for SDG13 on Climate Action and beyond). Monitoring, reporting and evaluation experiences in for example the thematic areas of biodiversity, adaptation and international development, and sustainability have transferable lessons learned that may improve climate change adaptation evaluation practices.

Regarding the active involvement of stakeholders in the monitoring and evaluation process, 13 Member States have put in place stakeholder engagement mechanisms, which include involvement within central and sectoral committees as well as holding stakeholder workshops or discussions. For instance, in Finland, a specific group was established to monitor NAP implementation and the group involves the central coordinating ministry, other relevant ministries, research institutes, and local, regional and other relevant actors and associations.

4. Conclusions

Overall, Member States have made good progress in developing a NAS and/or NAP, or are in the process of finalising them (three Member States are in the final stages of adopting a NAS). This progress suggests that there is a now a significantly higher baseline of preparedness and adaptation policy-making than in 2013, when the EU Adaptation Strategy was launched. It also suggests that the Strategy catalysed action in Member States and particularly in those that were in earlier stages of developing an adaptation policy. The EU's facilitative role through providing guidance, funding research and adaptation action under the Strategy can be traced throughout the five steps of the adaptation policy cycle.

The aggregated scoreboard for the 28 Member States is provided in Figure IX-10 (below). It indicates a difference in progress by Member States across the five steps of the adaptation policy cycle. While most Member States have made good progress with the first three steps (A. Preparing the ground for adaptation; B. Assessing risk and vulnerabilities; and C. Identifying adaptation options), many have yet to implement adaptation actions and undertake monitoring and reporting. Larger Member States and those that adopted a NAS earlier than others (see Table IX-1 above) have made more progress. Progress in relation to some indicators is also influenced by administrative culture and geography. For instance, not all Member States wish to coordinate sectoral adaptation actions under a single strategy and the need for detailed transboundary arrangements is less relevant for more isolated Member States.

Conclusions on each step of the adaptation policy cycle are provided below:

Step A: Preparing the ground for adaptation

All MS have a basic governance structure for adaptation policy-making. Although some degree of vertical coordination is in place in almost all Member States to enable subnational stakeholders to influence policy development and implementation, this does not seem to have a sectoral focus. Nevertheless, most country fiches indicate that a wide range of stakeholders have been consulted in the preparation of adaptation policies.

While the extent of transboundary cooperation, and whether it is driven by the NAS/NAP, varies between Member States, almost all are planning to address common challenges with relevant countries; invariably with regard to water. It is clear that international initiatives (e.g. the International Commission for the Protection of the Danube River, and the Alpine Convention), EU initiatives (e.g. the macro-regional strategies) and EU-funded projects are important in helping to prepare the ground for cooperation.

Step B: Assessing risks and vulnerabilities

Climate change scenarios and projections are widely available at national level. They are being used in most Member States to undertake sound, centrally-coordinated assessments of climate vulnerabilities, risks, and future economic, social and environmental impacts, with other Member States making progress in this respect.

While most Member States have included actions related to knowledge in their NAS and have identified adaptation knowledge gaps, there seems to be limited activity to address these gaps in almost half of the Member States.

Adaptation-related data (e.g. climate projections, vulnerability and risk assessments, adaptation tools) are available to at least some stakeholders in almost all Member States, and disseminated by a majority of them via a national web-based platform. However, coordination of associated capacity-building activities is less advanced and established in fewer than half of Member States.

Step C: Identifying adaptation options

Most Member States have used detailed vulnerability and/or risk assessments in combination with robust methods (e.g. multicriteria analyses and/or stakeholder consultations) to prioritise sectoral adaptation options. However, notably, less than half of Member States have mechanisms in place to coordinate disaster risk management and climate adaptation.

EU funds play an important role in enabling funding to be made available nationally for implementation of adaptation actions in at least a few sectors in almost all Member States. Nevertheless, there is a lack of reliable funding, with only half of Member States having budgets attached to their NAS or NAP.

Step D: Implementing adaptation action

Although most Member States have begun implementing their NAS and/or NAP, around half or more of Member States are yet to ensure that:

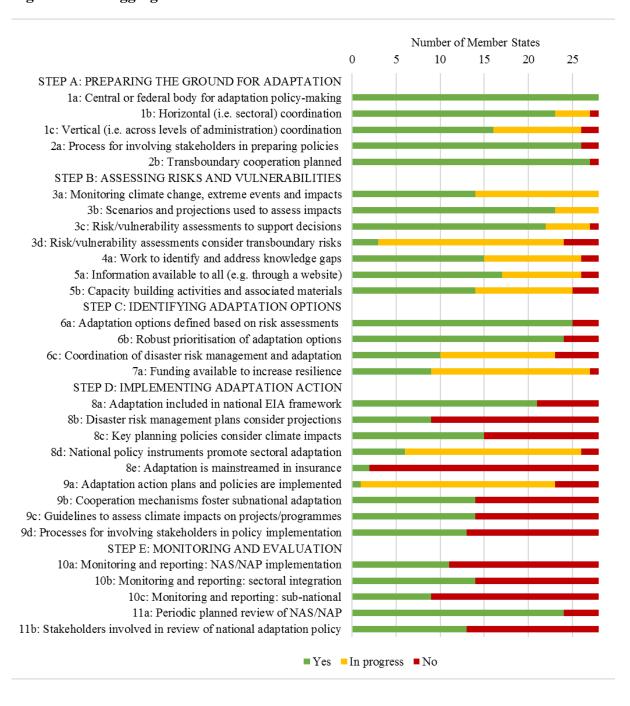
• Climate adaptation is considered in Strategic Environmental Assessments

- Synergies with disaster risk reduction are progressed
- Land use, spatial, urban and maritime planning policies encourage adaptation
- Adaptation is integrated into insurance policies
- Cooperation mechanisms are established to foster local and subnational action
- There is appropriate consideration of potential climate impacts on major projects or programmes and of alternative options, including green infrastructure
- Stakeholders are involved in implementing adaptation policies.

Step E: Monitoring and evaluation

While most Member States have planned a periodic review of their NAS and/or NAP, their monitoring and reporting is not yet robust and there is a need to develop stakeholder involvement (including of subnational levels) in their assessment, evaluation and review.

Figure IX-10. Aggregated scoreboard for the 28 EU Member States³²⁹



³²⁹ For a more detailed explanation of what each indicator means and how its value is determined, please refer to the scoreboard methodology in Annex X.

Annex X EU adaptation preparedness scoreboard indicator list and methodology

Policy framework

A	Adaptation strategies Adaptation action plans	A1	A NAS has been adopted	
		A2	Number and scope (% of population or territory covered) of adaptation strategies adopted at relevant subnational levels, in line with national multilevel governance arrangements	
В		B1	A national adaptation action plan has been adopted	
			В2	Number and scope of adaptation action plans adopted at local or relevant subnational levels
		В3	Adaptation action plans adopted at sectoral level, or embedded in sectoral strategies	

Scoreboard

Adaptation policy making process	Main area of performance	N°	Key domain of relevance	Criteria for positive and "In progress" replies, Categories of information sought, and Notes for better focus
Preparing the	1. A country-wide governance system is in place for adaptation policy making and	1a	A central administration body officially in charge of adaptation policy making	, ,

Adaptation policy making process	Main area of performance	N°	Key domain of relevance	Criteria for positive and "In progress" replies, Categories of information sought, and Notes for better focus
adaptation	adaptation vertical and horizontal coordination arrangements are in place between governmental bodies	1b	Horizontal (i.e. sectoral) coordination mechanisms exist within the governance system, with division of responsibilities	YES = evidence that systematic coordination is in place (depending on the implementation phase) - Country Fiches to present clearly what is the case (i.e. coordination only during drafting the NAS or continued during the implementation phase) IN PROGRESS: Some coordination activity between bodies responsible for relevant sectors, but with no clear division of responsibilities, or incomplete sectoral coverage.
		1c	Vertical (i.e. across levels of administration) coordination mechanisms exist within the governance system, enabling lower levels of administration to influence policy making.	- Additionally, Country Fiches to also present details if – cooperation only in certain sectors (e.g. water); specific delegation mechanisms are in place, e.g. for devolving power & responsibilities to regions.
	2. Stakeholders (e.g. interest groups, scientists and general public) are involved in the preparation of adaptation policies	2a	A dedicated process is in place to facilitate stakeholders' involvement in the preparation of adaptation policies	 Country Fiches to provide details on the processes used (e.g. public consultations, involvement in working groups etc.) Country Fiches to indicate what categories of stakeholders have been consulted (e.g. industry representatives, organised civil society, etc.) If at the time of preparation of the Country Fiches, the policy cycle is in a stage where stakeholder involvement is not relevant (e.g. just after the adoption of a strategy or a plan), the Country Fiches should seek evidence from the last stakeholder involvement period.
		2b	Transboundary cooperation is planned to address common challenges with	YES = stable cooperation mechanisms are in place (ideally described in or driven by the NAS) - Country Fiches to present details on the specific cooperation

Adaptation policy making process	Main area of performance	N°	Key domain of relevance	Criteria for positive and "In progress" replies, Categories of information sought, and Notes for better focus
			relevant countries	mechanisms (do not have to be formal governmental processes, e.g. macro-regional strategies count as well) - Country Fiches to present details re. the specific sectors / fields of cooperation (e.g. flood risk management) - Country Fiches to present details on identified transboundary projects and/or other common initiatives (although if this is the only cooperation identified would normally not qualify for a positive assessment).
Step 2: Assessing risks and vulnerabilities to climate change	3. Systems are in place to monitor and assess current and projected climate change, impacts and vulnerability	3a	Observation systems are in place to monitor climate change, extreme climate events and their impacts	YES = observation systems are in place, records on extreme events are being kept, and these records include figures on impacts (e.g. casualties, damages, financial losses etc.) - Country Fiches to present details on what observations systems are in place for monitoring climate events, as well as their impacts. - Country Fiches to present details on what kind of records regarding climate impacts are being identified. - Country Fiches to try identifying what and how the climate-related impacts are captured (e.g. loss & damage figures, surface/areas affected, no. of people affected etc.). IN PROGRESS: observation systems are in place only in some sectors.
		3b	Scenarios and projections are used to assess the economic, social and environmental impacts of climate change, taking into account geographical specificities and are based on latest best available science (e.g. in response to revised IPCC	YES = projections are available, and based on most recent science; and are being used for assessing impacts (even if only preliminary vulnerability screenings are being carried out) Note: Indicators 3b and 3c should be looked at together. 3b tends to have a geographical scope, while 3c has a sectoral one. Initial analysis will present a simple schema of the coverage of scenarios and projections. In due course, further detailed information could be added by desk officers or Member States on (i) the projections available

Adaptation policy making process	Main area of performance	N°	Key domain of relevance	Criteria for positive and "In progress" replies, Categories of information sought, and Notes for better focus
			assessments)	in the Member States: source (domestic research or international sources) and how are they maintained, singular or ensembles, RCM or downscaled GCM, available resolutions; (ii) whether an overall/aggregated risk & vulnerability assessment was carried out across several sectors or one of a national coverage was done; (iii) optionally, details on any existing sub-national/regional assessments are useful for complementing the sectoral perspective IN PROGRESS: not country specific enough, old scenarios, not based on recent science
		3c Sound climate risks/vulnerability assessments for priority vulnerable sectors are undertaken to support adaptation decision making. The selection of vulnerable sectors may be based on a lighter prescreening vulnerability assessment.	YES = comprehensive risk & vulnerability assessments are carried out in (a critical mass of the) priority sectors identified; - Country Fiches to present details on what sectors were analysed, the level of detail in the analyses, and information on the studies supporting these assessments - Country Fiches to seek details whether the analyses were coordinated at a central level, were sector-driven carried out independently, or were separate research projects carried out independently IN PROGRESS: some evidence of good quality risk and vulnerability assessments in some sectors; but sectoral coverage is partial	
		3d	Climate risks/vulnerability assessments take transboundary risks into account, when relevant	YES = transboundary risks are taken into account in a coordinated manner, ideally enshrined in NAS - Country Fiches to provide details on how and where transboundary risks were considered (i.e. for which sectors), and if this coordinated by the NAS or is sector-driven (e.g. in water management and flood risk), or project-driven IN PROGRESS: Transboundary risks are taken into account by some sectors, but gaps exist in relevant sectors.

Adaptation policy making process	Main area of performance	N°	Key domain of relevance	Criteria for positive and "In progress" replies, Categories of information sought, and Notes for better focus
	4. Knowledge gaps on climate change and climate change adaptation are tackled	4a	Work is being carried out to identify, prioritise and address the knowledge gaps	YES: gaps are identified and work is ongoing to address them (not checking if all relevant sectors are addressed) - Country Fiches to provide details on the processes employed for periodically tackling the knowledge gaps and mention if this is driven by NAS or other arrangements are in place; - Country Fiches to provide details on any preliminary identification of knowledge gaps being carried out (e.g. identified in NAS). - Country Fiches to provide details on the publicly-funded research programmes or mechanisms identified (e.g. proper prioritisation, specific research centres created); - Country Fiches to provide details on any sector-driven (e.g. water management, agriculture etc.) or project-driven (EU funds available) research for identifying knowledge gaps
	5. Knowledge transfer processes are in place to build adaptive capacity across sectors	5a	Adaptation relevant data and information is available to all stakeholders, including policy makers (e.g. through a dedicated website or other comparable means).	IN PROGRESS: gaps are only identified, no work to address them YES = highly visible sources of information on adaptation are available and contain: general climate data (e.g. climate projections), vulnerability and risk assessments, adaptation tools and examples, information on adaptation policy and related institutional and legal frameworks etc. A centralised (Climate-ADAPT type) platform is desirable, but a limited set of de-centralised sources complementing each other could also satisfy the need (provided that they are easily identifiable and well established in their specific sectors). - Country Fiches to provide details and links on the following categories: - adaptation general info - specific platforms or adaptation sections in the wider climate change platforms; - NAS/policy oriented adaptation pages; and climate projection repositories (e.g. from the met offices or research

Adaptation policy making process	Main area of performance	N°	Key domain of relevance	Criteria for positive and "In progress" replies, Categories of information sought, and Notes for better focus
		5b	Capacity building activities take place; education and training materials on climate change adaptation concepts and practices are available and disseminated	projects). - additionally, specific adaptation projects' web sites could be identified. - Country Fiches to provide details on the identified science-policy interfaces falling into one of the categories: - stable processes and/or organisations (e.g. research and/or expertise centre acting as a focal point, partnership structure between organisations, programme run by the central administration consisting of systematic meetings, workshops etc.). To mention if specific action in NAS/NAP supports this; - ad-hoc process (e.g. for drafting the NAS) IN PROGRESS: adaptation relevant data available to some stakeholders, but with significant groups not targeted. YES = systematic actions on capacity building, carried out in a coordinated way, usually driven by the NAS or NAP. - Country Fiches to provide details on the identified mechanisms falling into one of the categories: - systematic and coordinated activities, usually driven by the NAS or NAP (e.g. an established support service offering assistance to authorities, training programmes etc.). To mention if specific action in NAS/NAP supports this; - ad-hoc process carried out by various organisations, but not coordinated by a specific programme or action in the NAS. - Country Fiches should try to identify capacity building actions in: public administration, academia, business sector, and awareness-raising actions for the wider public. IN PROGRESS: systematic actions on capacity building but not in a coordinated manner.

Adaptation policy making process	Main area of performance	N°	Key domain of relevance	Criteria for positive and "In progress" replies, Categories of information sought, and Notes for better focus
Step 3: Identifying adaptation options	tep 3: 6. For priority sectors, a range of adaptation options is considered, consistent with the	6a	Adaptation options address sectoral risks identified in 3c, the geographical specificities identified in 3b and follow best practices as defined in similar contexts	YES = detailed/elaborated risk assessments used to identify adaptation options for (a majority of) the priority sectors. Note: The reply should be correlated with the ones for the indicators 3b and 3c. - Country Fiches to identify whether all or only some of the priority sectors have risk assessments and adaptation options identified. If latter, to mention which sectors have detailed risk assessments; - Country Fiches to mention whether indicative adaptation actions are identified based only on lighter processes (e.g. stakeholder consultations, expert judgement); - Country Fiches could analyse the 'horizontal' actions and seek information on how they were derived (e.g. based on good practices).
		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 = a prioritisation mechanism is clearly indicated and/or prioritisation tools/guidance/criteria are made available for being used during project selection. - Country Fiches to indicate how selection and prioritisation of adaptation options was made: - using processes (e.g. expert judgement, consultations among organisations or with stakeholders), and/or - using tools and methodologies (MCA, CBA, guidelines for prioritisation); - Country Fiches to specify whether the prioritisation was made at the sectoral level (i.e. choosing priority actions per sector), or across sectors (i.e. choosing priority sectors for kick-starting actions), or both; - Country Fiches to indicate whether specific prioritisation tools have been published (e.g. guidelines for selection, MCA etc. which would be

Adaptation policy making process	Main area of performance	N°	Key domain of relevance	Criteria for positive and "In progress" replies, Categories of information sought, and Notes for better focus
				used for all measures); - Country Fiches to identify further plans for carrying out specific prioritisation (e.g. to prioritise in the context of specific actions, sectors, geographical areas; to develop new tools (CBA, MCA) etc.
		6c	Mechanisms are in place to coordinate disaster risk management and climate change adaptation and to ensure coherence between the two policies.	YES = (at least) bi-lateral mainstreaming (i.e. DRR in NAS and climate change in DRR). Institutional arrangements supervising the exchange would be a plus, since this indicator focuses mainly on 'mechanisms' and needs to differentiate from the indicator 8b. - Country Fiches to bring details on:
			·	- how DRR planning is taking into account climate change impacts and projections;
				 how NAS/NAP includes DRR measures; any institutional frameworks and/or procedures entailed for coordination (e.g. special working groups, climate change specialists involved in DRR policy-making, or DRR practitioners involved in adaptation planning).
	7. Dedicated and adequate funding resources have been identified and made available to implement	7a	Funding is available to increase climate resilience in vulnerable sectors and for cross-cutting adaptation action	IN PROGRESS: at least one of the three is present but not all YES = actions in NAS or the relevant priority sectors receive consistent funding for implementation. Reliable multi-annual funding commitments (e.g. through ESIF) for some sectors could lead to a positive assessment, while a mere identification in NAS of indicative funding sources without clear evidence of funds disbursed should not.
	adaptation action			Country Fiches to provide details on which of the 2 cases above would apply – budgets attached to NAS/NAP or separate funding for priority sectors. If the latter, it should try to identify what are the sectors and where the funding comes from (e.g. national/regional, via line ministries, ESIF etc.). For the funding to be taken into account in the CF, adaptation

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				does not have to be the main objective of the intervention, but it should feature among the stated objectives. Country Fiches to identify whether the NAS provides for funding crosscutting adaptation action also (e.g. national scenarios and climate services, capacity building, website) IN PROGRESS: if adaptation is only financed in a few sectors or there is
Step 4: Implementing adaptation action	8. Climate change adaptation is mainstreamed into priority and key national planning and sectoral policymaking	8a	Consideration of climate change adaptation has been included in the national frameworks for EIAs	no funding for cross-cutting adaptation action - Country Fiches to provide details regarding both EIA and SEA national legislation
		8b	Prevention/preparedness strategies in place under national disaster risk management plans take into account climate change impacts and projections	YES = projected future climate extremes are factored in the DRM plans and associated risk analyses, while historical climate extremes should normally be covered by all risk analyses and DRM action plans. Note: Attention to be granted to correlating this answer with the one given for 6c. - Country Fiches to analyse DRM plans and the associated risk analyses.
		8c	Key land use, spatial planning, urban planning and maritime spatial/ urban planning policies take into account the impacts of climate change	YES = clear evidence that land use and spatial/urban policies at Member State level explicitly address climate impacts, and require or encourage adaptation; and evidence that the policies are followed in practice across the majority of the Member State. - Country Fiches should provide details regarding the type of mainstreaming:

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				- spatial planning, urban planning, maritime spatial planning; - geographical scope – national, regional or local.
		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 = evidence of mainstreaming in sectoral policies is identified. The mere mentioning of a sector in the NAS is not enough, unless is being backed by actual policy instruments identified in that sector that include adaptation. - Provide details regarding: - what sectors are currently including adaptation considerations; - what policy instruments are promoting adaptation in each sector; - was the NAS the driver for mainstreaming in these sectors or something else triggered an autonomous adaptation (e.g. EU acquis or policy)? IN PROGRESS: individual sectoral policies promote adaptation, but coverage is patchy, with significant gaps
		8e	Adaptation is mainstreamed in insurance or alternative policy instruments, where relevant, to provide incentives for investments in risk prevention	YES = evidence of insurance (or guarantee) schemes that are incentivising investments in enhanced resilience and risk prevention is identified in both the national framework (NAS/NAP) and as being active in the field. Insurance schemes available for current extremes are available in many places, but by themselves would not qualify for a positive assessment. Furthermore, schemes for ensuring the affordability of insurance (for e.g. flood risks) do not incentivise adaptation per se. - Country Fiches to mention what specific objectives or actions on

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				insurance are contained in the NAS.
				- Country Fiches to provide details on how the insurance schemes are incentivising adaptation.
		9a	Adaptation policies and measures are implemented, e.g. as defined in action plans or sectoral policy documents	YES = only if coordinated implementation of NAS/NAP is underway, and clear evidence of adaptation priorities identified being put into effect.
	9. Climate change adaptation policies and measures are implemented			Note: actions such as effective mainstreaming in sectors (confirmed by the indicator 8d) and further/detailed vulnerability and risk assessments should be seen as concrete implementation, provided they are required as such by the NAS/NAP
				- Country Fiches should mention if national / sectoral / regional action plans are drafted, or the NAS is the only programmatic document governing adaptation
				- Country Fiches should provide a brief account on what actions are being implemented (e.g. mostly horizontal, sectoral – if yes, in which sectors, etc.)
				- Country Fiches should mention in what stage is the implementation (recently started, several years past etc.), if progress reports have been issued.
				- Country Fiches could mention notable examples of autonomous adaptation action being implemented
				IN PROGRESS: evidence that the NAS/NAP is being implemented, but with gaps in key sectors or in some actions identified as priorities.
		9b	Cooperation mechanisms in place to foster and support adaptation at relevant scales (e.g. local,	during the implementation. From that point of view this indicator should

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			subnational)	implementation is underway the assessment should be negative. However, in this latter case a separate mention should be made in the CF. The same, if the NAS/NAP are calling for such a vertical cooperation. Note: This indicator should be seen as focused on the adaptation actions
				carried out at regional and local levels, supported by formalised collaborative frameworks. It differs from indicator 1c which shows rather how regional and local levels are feeding back into the national actions (NAS, NAP).
	9c	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 = only if guidelines and procedures refer specifically to projects and programmes. Spatial development could be assimilated, as it forms the basis of development programmes.
				- Country Fiches should specify who is promoting the guidelines (i.e. government bodies, other organisations, or they are results of projects) and if they are actually used in practice (as opposed to simply being made available).
				- Country Fiches should note if NAS/NAP include specific actions for publishing and applying such guidelines or procedures.
		9d There are processes for stakeholders' involvement in the implementation of adaptation policies and measures.		
			adaptation policies and measures.	Note: It is important to notice that this indicator refers to stakeholders actually implementing adaptation actions, not only participating in monitoring and evaluation (since the indicator 11b is specifically reserved for that)
				- Country Fiches should provide details on what categories of stakeholders are involved (e.g. academia, research, business sector, NGOs etc.) and how are they involved (e.g. implementation of specific actions, steering & consultations, selection of projects etc.).
				- Country Fiches should note if NAS/NAP provide specific

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				mechanisms/forums for involving the stakeholders.
Step 5: Monitoring and evaluation	10. Systems are in place to monitor and report on climate change adaptation, including adaptation-related expenditures, via relevant indicators	10a	Monitoring and reporting: Information on NAS/NAP implementation is monitored and the results of the monitoring are collected and disseminated.	YES = if reports on the implementation of NAS/NAP are being published. Note: This indicator should be seen as referring to national centralised reporting on the progress of adaptation action (i.e. implementation of NAS/NAP). - Country Fiches should provide details on the national reports: - year(s) of publication and periodicity, latest report number; - body that published the report; - type of reporting – quantitative (based on indicators), qualitative on the progress, or both; - availability of financial information on allocated budgets and the costs of actions; - sources of information – e.g. reports from sectors/stakeholders, own monitoring carried out by the central adaptation body etc.
		10b	Monitoring and reporting: The integration of climate change adaptation in sectoral policies is monitored and the results of the monitoring are disseminated.	YES = if reports on adaptation in certain sectors are being published, whether it is a centralised single report or different reports for each sector. In the latter case, the reports should cover enough sectors, as counted against the priority sectors identified in the NAS. Availability/development of indicators is a detail that should be added, but the lack of it should not result in a negative assessment. Note: This indicator should be seen as having a sectoral focus, looking at monitoring and reporting on progress. - Country Fiches should provide details on:

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		10c	Monitoring and reporting: Information on regional, sub-national or local action is monitored and the results of the monitoring are collected and disseminated	It should be looked at in correlation with indicator 1c on vertical
	11. An evaluation framework is in place to assess whether adaptation policy objectives are met and a periodic review	11a	A periodic review of the NAS and action plans is planned	YES = if clear mechanisms are in place for reviewing at least one of the NAP or NAS. Full reviews NAS and NAP constitute even stronger mechanisms. - This is an important indicator to understand a central part of the adaptation governance in the Member States. As such, the Country

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process	of the adaptation strategy is planned	11b	Stakeholders are involved in the assessment, evaluation and review of national adaptation policy	Fiches should aim to explain the following: - how is the evaluation planned and/or carried out – on NAP, on NAS, or both; - what is the frequency of the evaluations and when is the next one planned; - how is the revision planned and/or carried out – on NAP, on NAS, or both; - what is the frequency of the revisions and when is the next one planned; - how is the review timeline determined – i.e. provisions in the legislation on adaptation, in the NAS or NAP themselves, or ad-hoc revisions based on the findings of (planned) evaluations. YES = if structured involvement is identified in any of the 2 processes (monitoring and review). 'Involvement' should be understood as stakeholders actively participating in monitoring and/or review, as opposed to them only providing information (via e.g. public consultations or reporting).
				Note: In case reporting is identified, this should be linked to indicator 9d, as It relates to implementation. - Proposal: the term 'assessment' should be replaced by 'monitoring'. 'Evaluation' should be deleted, as is seen as an integral part of the 'review'. - Country Fiches should provide details on: - how stakeholders are involved (e.g. describe what coordination/review committees are they part of). Identify whether these are central committees overseeing national adaptation action, or sectoral

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				committees for priority sectors of action; - which processes are they involved in – monitoring, evaluation, revision of NAS/NAP.