

Adaptation preparedness scoreboard:

Country fiche for Slovenia

NOTE TO THE READER

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

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

¹ The first versions of the fiches, prepared in consultation with the Member States in 2014-15, were unpublished and used to fine-tune the scoreboard. The second drafts were published, after consulting the Member States, as background documents to the public consultation on this evaluation in December 2017. https://ec.europa.eu/clima/consultations/evaluation-eus-strategy-adaptation-climate-change_en The final Member State consultation on the draft fiches took place in June 2018.

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

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

The assessments in the country fiches (yes/no/in progress) need to be read in conjunction with the narrative that accompanies them. They assess the state of play within each EU Member State. While all effort has been made to ensure the coherence across fiches in the assessment of the same indicator, it should not be directly compared across the Member States. Two countries with a "yes" on the same indicator could have a different national situation leading to that assessment. Not all indicators have the "in progress" status, some can only be "yes" or "no".

Table of contents

List of abbreviations	4
POLICY FRAMEWORK.....	5
Adaptation strategies.....	5
A1. National adaptation strategy.....	5
A2. Adaptation strategies adopted at subnational levels	5
Adaptation action plans	6
B1. National adaptation plan.....	6
B2. Adaptation plans adopted at sub-national level.....	6
B3. Sectoral adaptation plans.....	7
SCOREBOARD.....	8
Step A: Preparing the ground for adaptation	8
1. Coordination structure	8
2. Stakeholders' involvement in policy development.....	9
Step B: Assessing risks and vulnerabilities to climate change	11
3. Current and projected climate change.....	11
4. Knowledge gaps.....	13
5. Knowledge transfer	14
Step C: Identifying adaptation options	15
6. Adaptation options' identification	15
7. Funding resources identified and allocated.....	16
Step D: Implementing adaptation action	17
8. Mainstreaming adaptation in planning processes	17
9. Implementing adaptation	19
Step E: Monitoring and evaluation of adaptation activities.....	21
10. Monitoring and reporting.....	21
11. Evaluation	22
SUMMARY TABLE	24

List of abbreviations

ARSO	Slovenian Environment Agency
CLISP	‘Climate Change Adaptation by Spatial Planning in the Alpine Space‘ project
DMCSEE	Disaster Management Centre for South-eastern Europe
EEA	European Economic Area
EIA	Environmental impact assessment
EU	European Union
EUSAIR	EU Strategy for Adriatic-Ionian Region
EUSALP	EU Strategy for Alpine Region
EUSDR	EU Strategy for Danube Region
ICPDR	International Commission for the Protection of the Danube River
ISRBC	International Sava River Basin Commission
MESP	Ministry of Environment and Spatial Planning of the Republic of Slovenia
MFAF	Ministry of Forestry, Agriculture and Food of the Republic of Slovenia
NAP	National Action Plan for adaptation
NDRA	National Disaster Risk Assessment
RCP	Representative Concentration Pathways
RDP	Rural Development Programme
SEA	Strategic environmental assessment
TRP	Target Research Programme

POLICY FRAMEWORK

Adaptation strategies

A1. National adaptation strategy

Slovenia has a Strategic Framework for Climate Change Adaptation. The Ministry of Environment and Spatial Planning (MESP) developed the Strategic Framework³, which was approved at the end of 2016. It provides a long-term vision and strategic guidelines for adaptation-related activities. The ambition is for Slovenia to be fully adapted to climate impacts by 2050 and to develop into a climate resilient and sustainable society with a high quality of life. The Strategic Framework includes four separate annexes:

1. A guide to Terminology⁴;
2. Assessment plan for analysing climate impacts until the end of the 21st century⁵;
3. Comparisons of good adaptation processes in other European Union (EU) member states⁶;
4. Methodology for determining current and future vulnerability levels for Slovenian regions⁷.

The Framework Programme for Transition to a Green Economy⁸, adopted in October 2015 together with Plan of Governmental Activities for 2015-2016, refers to the need for integration in sectoral strategies. It links climate adaptation particularly with the objectives of biodiversity conservation, green jobs creation, sustainable urban development, and green agricultural practices.

A2. Adaptation strategies adopted at subnational levels

In Slovenia, municipalities are the only level of self-government; they have an extensive role regarding spatial and urban planning, housing, water management, economic development, tourism and environmental protection.

Climate adaptation initiatives at the local and/or regional levels are so far mostly based on one-off participation in various projects (e.g. pilot research, transnational cooperation,

3 MESP; 2016; Strategic Framework for Climate Change Adaptation; http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/podnebne_spremembe/SOzP_ang.pdf

4 MESP; 2016; Annex 1 to Strategic Framework;

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/podnebne_spremembe/SOzP_priloga1.pdf

5 MESP; 2016; Annex 2 to Strategic Framework;

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/podnebne_spremembe/SOzP_priloga2.pdf

6 MESP; 2016; Annex 3 to Strategic Framework;

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/podnebne_spremembe/SOzP_priloga3.pdf

7 MESP; 2016; Annex 4 to Strategic Framework;

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/podnebne_spremembe/SOzP_priloga4.pdf

8 MESP, 2015, Okvirni program za prehod v zeleno gospodarstvo – OPZG z Akcijskim načrtom izvajanja OPZG (ANi OPZG) in Načrtom aktivnosti ministrstev in vladnih služb (NAMVS) 2015–2016; URL:

http://www.vlada.si/fileadmin/dokumenti/si/projekti/2016/zeleno/opzg_akcijski_nacrt_in_nacrt_aktivnosti.pdf

LIFE)⁹. Some of the frontrunners include the municipality of Ajdovščina, which developed its local draft adaptation strategy¹⁰ on the basis of the regional ‘Strategy of agriculture sector adaptation to climate change in the Vipava Valley 2017-2021’. The latter is one of the key documents in the framework of the LIFE project ViVaCCAdapt¹¹ developed by the Ajdovščina Development Agency.

In the new Spatial Planning Law¹², which comes into effect on 1 June 2018, climate adaptation considerations are expected to form an integral part of development processes at the local and the regional level.

Adaptation action plans

B1. National adaptation plan

Slovenia's Strategic Framework is intended to be followed up by National Adaptation Plan (NAP), which will take account of the national risk assessments and a comprehensive national climate vulnerability assessment¹³. The NAP drafting process has not yet started, as vulnerability assessments for the sectors and municipalities are still ongoing¹⁴.

B2. Adaptation plans adopted at sub-national level

The Strategic Framework encourages the mainstreaming of adaptation at all regional and local levels¹⁵. According to the new umbrella Spatial Planning Law¹⁶ (see Section A2 above), the regions are required by 2023 to develop regional development plans and regional spatial plans that should include climate vulnerability assessments. Climate adaptation considerations, including green infrastructure, should now form an integral part of spatial, urban and land-use planning processes at all levels. This is in line with a new strategic approach under development¹⁷ that would integrate development planning and spatial planning at regional level, instead of relying only on municipal-level spatial planning.

9 MESP; 2016; Strategic Framework for Climate Change Adaptation; URL:

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/podnebne_spremembe/SOzP_ang.pdf

10 Ajdovščina municipality; 2017; Predlog strategije prilagajanja kmetijstva občine Ajdovščina na podnebne spremembe v Vipavski dolini za obdobje 2018-2021; URL: <https://www.ajdovscina.si/mma/strategija-kmetijstvo.pdf/2017121813180177/?m=1513599475>

11 Project web VivaCCAdapt; URL: <http://www.life-vivaccadapt.si/en/>; accessed 15.05.2018

12 Government of the Republic of Slovenia, 2018, Zakon o urejanju prostora, URL:

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/zakonodaja/prostorsko_nacrtovanje/ZUREP.pdf

13 MESP climate adaptation activities; URL:

http://www.mop.gov.si/si/delovna_podrocja/podnebne_spremembe/prilagajanje_podnebnim_spremembam/; accessed 03.05.2018

14 Personal communication with MS contact

15 MESP; 2016; Strategic Framework for Climate Change Adaptation; URL:

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/podnebne_spremembe/SOzP_ang.pdf

16 Government of the Republic of Slovenia, 2018, Zakon o urejanju prostora, URL:

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/zakonodaja/prostorsko_nacrtovanje/ZUREP.pdf

17 dr. Janez Nared et al.; 2018; Projekt V6-1652: Model povezovanja prostorskega in razvojnega načrtovanja na regionalni ravni v okviru ciljnega raziskovalnega programa »CRP 2016« v letu 2016; URL:

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/ragionalno_prostorsko_nacrtovanje/model_povezovanja_prostorsega_nacrtovanja.pdf

In practice, consideration of climate impacts is dependent upon the availability of studies and impact assessments, so the extent and depth of consideration varies¹⁸ (e.g. floods and landslides are often included in local spatial plans; regional development programmes 2014-2020 include climate adaptation goals and measures in line with the overarching national cohesion policy¹⁹).

B3. Sectoral adaptation plans

There are sectoral plans that include adaptation. In 2008, the Government of the Republic of Slovenia adopted the Strategy for the Adaptation of Slovenian Agriculture and Forestry to Climate Change²⁰. The Strategy was followed by an action plan for 2010 and 2011²¹, which the Government adopted in October 2010 and amended in March 2011. The plan was not updated in 2012 due to lack of funding. However, many adaptation measures are implemented in the framework of the Common Agricultural Policy's Pillar 1 and 2. For example, the Rural Development Programme (RDP)²² encourages adaptation measures (e.g. in relation to hops and maize production on light soils²³), supported by a number of applied research projects.

The River Basin Management Plans for the Danube²⁴ and Adriatic Sea Basins for the 2016–2021²⁵ period define a range of measures that can contribute to climate adaptation. A specific

18 Personal communication with MS contact

19 Slovenian cohesion policy web portal, URL: <http://www.eu-skladi.si/>; accessed 30.05.2018

20 MFAF, 2008, Strategija prilagajanja slovenskega kmetijstva in gozdarstva podnebnim spremembam, URL: <http://agromet.mkgp.gov.si/Publikacije/STRATEGIJA%20prilagajanja.pdf><http://agromet.mkgp.gov.si/Publikacije/STRATEGIJA%20prilagajanja.pdf>, accessed on 04.05.2018.

21 MFAF, 2010, Akcijski načrt strategije prilagajanja slovenskega kmetijstva in gozdarstva podnebnim spremembam za leti 2010 in 2011 – prečiščeno besedilo, URL: http://www.mko.gov.si/fileadmin/mko.gov.si/pageuploads/podrocja/Kmetijstvo/Naravne_nesrece/Akcijnski_nacrt__precisceno_besedilo__.pdfhttp://www.mko.gov.si/fileadmin/mko.gov.si/pageuploads/podrocja/Kmetijstvo/Naravne_nesrece/Akcijnski_nacrt__precisceno_besedilo__.pdfhttp://www.mko.gov.si/fileadmin/mko.gov.si/pageuploads/podrocja/Kmetijstvo/Naravne_nesrece/Akcijnski_nacrt__precisceno_besedilo__.pdf,

22 European Environment Agency, National adaptation policy processes in European countries — 2014, URL: <http://www.eea.europa.eu/publications/national-adaptation-policy-processes><http://www.eea.europa.eu/publications/national-adaptation-policy-processes>, European Climate Adaptation Platform – self-assessment Slovenia, URL: <http://climate-adapt.eea.europa.eu/countries-regions/countries/slovenia><http://climate-adapt.eea.europa.eu/countries-regions/countries/slovenia>, accessed on 03.05.2018, and Program razvoja podeželja – Okvirni terminski načrt objave javnih razpisov za ukrepe PRP 2014.2020 do konca leta 2017., 2017, URL:

http://www.mkgp.gov.si/fileadmin/mkgp.gov.si/pageuploads/Medijsko_sredisce/2017/06_junij/13_PRP/S2J-SP-KMC417061315311.pdfhttp://www.mkgp.gov.si/fileadmin/mkgp.gov.si/pageuploads/Medijsko_sredisce/2017/06_junij/13_PRP/S2J-SP-KMC417061315311.pdf

23 Barbara Čeh, 2011, Zaključno poročilo o rezultatih opravljenega raziskovalnega dela na projektu v okviru ciljnega raziskovalnega programa (CRP) »Konkurenčnost Slovenije 2006 – 2013«, URL: <http://www.dlib.si/stream/URN:NBN:SI:DOC-IG27NYOZ/78fc0a7b-76ef-458c-b85c-869db7f009a9/PDF>, accessed on

24 Vlada Republike Slovenije, 2016, Načrt upravljanja voda na vodnem območju Donave za obdobje 2016–2021, URL:

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/voda/nuv_II/NUV_VOD.pdfhttp://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/voda/nuv_II/NUV_VOD.pdf

25 Vlada Republike Slovenije, 2016, Načrt upravljanja voda na vodnem območju Jadranskega morja za obdobje 2016–2021, URL:

fundamental measure included in the programme of measures²⁶ under the climate change heading is the preparation of a set of indicators of drought. However, all measures related to improving water status and management could be considered as contributing to climate adaptation.

The Flood Risk Mitigation Plan 2017-2021²⁷ defines a wide range of flood protection measures, such as regular hydrological and meteorological monitoring, as well as adaptation measures for energy and transport infrastructure. However, the plan is not based on a flood risk assessment that considers climate impacts and projections. The flood risk assessment expected at the end of 2018 will take these into account.

The new Spatial Planning Law has been adopted and enters into force on 1 June 2018. It provides for land use, regional spatial plans, urban and maritime spatial plans. In the process of environmental impact assessment (EIA), climate impacts are also considered.

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 Slovenia, the MESP is responsible for adaptation policy-making. Technical support for the MESP's work is provided by several public agencies, such as the Environmental Agency, Inspectorate of the Republic of Slovenia for the Environment and Spatial Planning, Slovenian Water Agency, Slovenian Nuclear Safety Administration and Surveying and Mapping Authority of the Republic of Slovenia. The MESP, supported by the Slovenian Environment Agency (ARSO), also serves also as the technical coordination unit of the Inter-Ministerial Working Group on Climate Change Adaptation.

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

Yes / In progress / No

The Inter-Ministerial Working Group on Climate Change Adaptation, with members from all concerned ministries, agencies and government offices, held informal meetings during 2014.

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/voda/nuv_II/NUV_VOJM.pdf

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/voda/nuv_II/NUV_VOJM.pdf

26 MESP; Načrt upravljanja voda, URL:

http://www.mop.gov.si/si/delovna_podrocja/voda/nacrt_upravljanja_voda/#c18222, accessed on 04.05.2018.

27 Vlada Republike Slovenije, 2017, Načrt zmanjševanja poplavne ogroženosti 2017–2021, URL:

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/voda/nzpo_2017_2021.pdf

It was officially nominated by the Government in September 2016²⁸ to coordinate inter-sectoral adaptation-related activities in Slovenia. The Group serves as a main reference point during the process of adaptation policy development, led by the MESP with the help of external experts and the ARSO. The Group provides horizontal and vertical coordination of adaptation policy-making. The Group participated in drafting and implementing the Strategic Framework and implementation documents (including the NAP), inter- and intra-sectoral harmonisation of specific content, contributing to involving the public, providing support in international, regional and local adaptation processes, identifying needs for additional funding to support expert research required for implementation, and evaluation of adaptation measures.

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**

There is no active vertical coordination mechanism specifically for adaptation policy-making, however, there are mechanisms in place that provide vertical coordination between local, regional and national level in development, spatial planning and strategic environmental assessment (SEA) procedures, as well as in standard legislation and policy making structures.

The Strategic Framework indicates that municipalities will be supported in the future by relevant groundwork, guidelines and funds for developing adaptation plans. A national contact point needs to be established to coordinate and promote implementation of measures at the local level.

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

A dedicated process to facilitate stakeholders' involvement formed an integral part of developing the national Climate Change Risk Assessment (CCRA)²⁹. In cooperation with external experts: a plan was prepared on how to involve stakeholders; a public event was organised with more than 100 participants to prepare the risk assessment; and sectoral associations and experts were consulted separately.

28 Vlada Republike Slovenije, 2016, SKLEP o ustanovitvi Medresorske delovne skupine za prilaganje podnebnim spremembam, URL: http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/podnebne_spremembe/medresorska_delovna_skupina_sklep.pdf

29 Biotechnical Faculty, 2014, "The expert groundwork for preparing the assessment of the risks and opportunities that climate change presents for Slovenia", final report, URL: http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/podnebne_spremembe/prizrpodl_prip_ocene_tveganj.pdf

A standard public consultation process was used for the Strategic Framework document preparation³⁰. The document was drafted by the MESP, the ARSO and external experts, based on consultations within the Inter-Ministerial Climate Change Adaptation Working Group. Public consultation on the draft document took one month, and included: a presentation of the document in a session of the national Council for Sustainable Development and Environmental Protection; a public hearing; a conference-workshop with 25 representatives of NGOs, sectoral associations, research and public sector institutions; and an invitation to provide written comments directly to the MESP.

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

Yes / No

Transboundary cooperation to address common challenges with relevant countries exists but is limited. It does not yet result in specific adaptation on the ground. In the Strategic Framework, the ambition for better transboundary cooperation is mentioned³¹. Some cooperation has been conducted bilaterally in cross-border cooperation programmes based on an assessment of common priority sectors and risks, such as floods³². Recent natural disasters (e.g. floods, hailstorms and sleet) have drawn more attention to transboundary issues in terms of preventive and relief actions. The 2014 floods in Croatia, Bosnia and Herzegovina, and Serbia intensified cooperation in the region on adaptation, and sharing of information and best practice (e.g. on flood prevention measures, flood control).

Slovenia participates in the work of two international river commissions: the International Sava River Basin Commission (ISRBC) and the International Commission for the Protection of the Danube River (ICPDR). The ISRBC developed the Water and Climate Adaptation Plan for the Sava River Basin³³ (covering five countries) in 2015, as a guidance document to governments for climate adaptation measures in navigation, hydropower, agriculture, flood protection and economic evaluation of climate impacts. The Plan includes hydrological modelling, and suggests a methodology to examine climate impacts on water-related sectors. However, the integrated effects of other types of changes (demography, land use etc.) have not been considered due to lack of data. Furthermore, in 2018 an outline of the Climate Adaptation Strategy and basin-wide priority measures for the Sava River Basin was published.³⁴ ICPDR developed a climate adaptation strategy³⁵ in 2012, as one of the first

30 MESP - Climate adaptation activities, URL:

http://www.mop.gov.si/si/delovna_podrocja/podnebne_spremembe/prilagajanje_podnebnim_spremembam/, accessed on 04.05.2018.

31 MESP; 2016; Strategic Framework for Climate Change Adaptation, 2016, URL:

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/podnebne_spremembe/SOzP_ang.pdf

32 ICPDR website; URL: <http://www.icpdr.org/main/danube-basin>; accessed on 15.05.2018

33 Project “Water and Climate Adaptation Plan for the Sava River Basin”; URL:

https://www.savacommission.org/project_detail/18/1; accessed on 04.05.2018

34 See at:

http://www.savacommission.org/dms/docs/dokumenti/peg_rbm/ad.3.1_wm_issues_doc_8_outline_of_the_climate_adaptation_strategy_for_the_sava_rb.pdf

35 ICPDR Climate adaptation, URL: <https://www.icpdr.org/main/activities-projects/climate-change-adaptation>, accessed on 11.05.2018.

major transboundary river basin strategies worldwide, based on a scientific study on climate change in the basin.

Slovenia also takes part in the implementation of the three EU-level macro-regional strategies: the EU Strategy for the Alpine Region (EUSALP)³⁶, the EU Strategy for the Adriatic-Ionian Region (EUSAIR)³⁷ and the EU Strategy for the Danube Region (EUSDR)³⁸. It does so by participating in regional cooperation projects that address various climate-related challenges shared in the region through research, knowledge transfer, capacity building and awareness-raising activities. Slovenia also participates in the work of the Alpine Convention, which adopted the action plan on climate change in the Alps in 2009. The action plan aims to make the Alps an exemplary territory for climate adaptation with regard to water resources and biodiversity, mountain forests and farming, tourism, settlements and infrastructure. ‘Mitigation and adaptation to climate change in the Alpine space’³⁹ and the ‘Alpine strategy for adaptation to climate change in the field of natural hazards’⁴⁰ are among the guidance documents produced. Recently, a new Climate Board has been established and tasked with preparing a new system of targets.

Furthermore, sub-national research and activities focused on the Alpine region have been carried out as part of EU-funded projects CLISP⁴¹ and C3-Alps⁴². These address climate adaptation by spatial planning, and by capitalising on climate change knowledge from previous EU projects to integrate adaptation into sectoral and regional policies, respectively.

Slovenia is also involved in climate adaptation activities with regard to transport in the context of the international United Nations Economic Commission for Europe⁴³. International collaboration is one of the guiding principles to stimulate climate adaptation in Slovenia.

36 EU-Strategy for the Alpine Region, URL: <https://www.alpine-region.eu/>, accessed on 15.05.2018

37 EU-Strategy for the Adriatic-Ionian Region, URL: <http://www.adriatic-ionian.eu/>, accessed on 15.05.2018

38 EU-Strategy for the Danube Region, URL: <http://www.danube-region.eu/>, accessed on 15.05.2018

39 Permanent Secretariat of the Alpine Convention, Alpine signals 5: Mitigation and adaptation to climate change in the Alpine space, 2007, URL:

http://www.alpconv.org/en/publications/alpine/Documents/Alpsig5_en.pdf

40 Platform on Natural Hazards of the Alpine Convention, Alpine strategy for adaptation to climate change in the field of natural hazards, 2012, URL:

http://www.planat.ch/fileadmin/PLANALP/planalp_pdf/2012_PLANALP_Alpine_Strategy.pdf

41 CLISP project website, URL: [http://www.alpine-space.org/2007-](http://www.alpine-space.org/2007-2013/projects/projects/detail/CLISP/show/index.html)

[2013/projects/projects/detail/CLISP/show/index.html](http://www.alpine-space.org/2007-2013/projects/projects/detail/CLISP/show/index.html), accessed on 04.15.2018

42 C3-Alps project website, URL: [http://www.alpine-space.org/2007-2013/projects/projects/detail/C3-](http://www.alpine-space.org/2007-2013/projects/projects/detail/C3-Alps/show/index.html)

[Alps/show/index.html](http://www.alpine-space.org/2007-2013/projects/projects/detail/C3-Alps/show/index.html), accessed on 04.05.2018

43 Group of Experts on Climate Change impacts and adaptation for transport networks and nodes (WP.5/GE.3), URL: <https://www.unece.org/trans/areas-of-work/trends-and-economics/activities/group-of-experts-on-climate-change-impacts-and-adaptation-for-transport-networks-and-nodes-wp5ge3.html>, accessed on 15.05.2018

Step B: Assessing risks and vulnerabilities to climate change

3. Current and projected climate change

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

Yes / **In progress** / No

The meteorological portal of the ARSO provides scientific data and information on current climate change, extreme climate events and their impacts⁴⁴. These indicators include air temperature, precipitation, snow, wind, solar radiation, phenology and heating. Environmental indicators also provide data on extreme weather events and glaciers. Data on extreme weather events and their impacts (including damage to infrastructure and property) are collected and made available to the public by the Administration for Civil Protection and Disaster Relief. A specific indicator on the climate vulnerability of Slovenia is currently being developed.

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

In 2016 and 2017, a project ‘Assessments of Climate Change Impacts in the 21st Century’ was carried out at the ARSO⁴⁵. Based on the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5) Representative Concentration Pathways (RCP) emissions scenarios, ensembles of six models from EURO-CORDEX for RCP4.5 and RCP8.5 were used to assess the long-term changes in climate variables for Slovenia (average climate conditions and extreme weather events until 2100). Impact assessments were carried out (including for agricultural drought, heat waves, frost, and soil conditions) using these scenarios.

Tailored climate services⁴⁶ are in high demand from different users. Climate services are currently used for upgrades of risk assessments, vulnerability assessments of major projects and other activities, such as long-term planning in different areas. For example, in preparing the National Disaster Risk Assessment (NDRA) and Report, climate scenarios were used to evaluate the impact and probability of future risks.⁴⁷ Based on three emissions scenarios (RCP2.6, RCP4.5, and RCP8.5), projections of the following climate variables were prepared: air temperature, soil temperature, surface water temperature, temperature of the sea,

44 Meteorological portal of ARSO, URL: <http://meteo.arso.gov.si/met/en/climate/> and http://kazalci.arso.gov.si/?data=group&group_id=8, accessed 15.05.2018

45 Project "Assessments of Climate Change Impacts in the 21st Century", URL: <http://meteo.arso.gov.si/met/sl/climate/pss-project/>, accessed 15.05.2018

46 Slovenian Environment Agency, URL: <http://www.arso.gov.si/>, accessed 15.05.2018

47 National Coordination Body for Disaster Risk Assessment, 2016, Report on disaster risk assessment in the Republic of Slovenia for the period 2014–2016, URL:

http://www.sos112.si/slo/tdocs/porocilo_izdelava_ocen_ang.pdf

groundwater temperature, water content in the soil, amount of precipitation, the quantitative status of watercourses, water supply of aquifers, and phenological development of selected plant species. On the basis of the knowledge of past trends, changes in the frequency of occurrence, duration and severity were also estimated for heatwaves, agricultural droughts, surface water droughts, groundwater droughts, high-water conditions and frost. All this information will be used in drafting the NAP.

Extensive databases have been prepared to assess the impacts mentioned above, which will be useful for further research into climate impacts.

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

Yes / In progress / No

To support adaptation policy and decision making, a comprehensive national CCRA together with a wide public and inter-ministerial consultation process was carried out in 2014. It included all sectors, while indirect and transboundary risks were taken into account to some extent. It formed a basis for further work in this area.

The agriculture and forestry sectors analysed climate vulnerabilities in 2004⁴⁸, resulting in an adaptation strategy for the agriculture and forestry sectors, which was adopted in 2008. These strategies have not since been reviewed.

The water sector also carried out preliminary risk assessments in the framework of river basin management planning and flood risk management.

Slovenia adopted the first NDRA⁴⁹ in 2015. Selected separate risk assessments for climate-related disasters (particularly floods, drought and forest fires), as well as the NDRA, were updated with available climate impact assessments in 2016⁵⁰. Certain individual disaster risk assessments already incorporated available climate risk data in their assessments. The Ministry of Health, for example, prepared a 'Risk Assessment for the Dangers of Biological, Chemical, Environmental and Unknown Origin to Human Health' and complemented it with consideration of climate impacts on the occurrence of infectious diseases⁵¹. At the regional level, a research project funded by the Target Research Programme (TRP) 'Adaptation to

48 ARSO, 2004, Ranljivost slovenskega kmetijstva in gozdarstva na podnebno spremenljivost in ocena predvidenega vpliva, URL:

<http://meteo.arso.gov.si/uploads/probase/www/agromet/product/document/sl/ranljivost.pdf>,

49 Directorate for Protection and Rescue - Disaster Risk Assessment documents, URL:

<http://www.sos112.si/slo/page.php?src=os17.htm>, accessed on 15.05.2018

50 Directorate for Protection and Rescue - Current protection and rescue plans, URL:

<http://www.sos112.si/slo/page.php?src=os12.htm>, accessed on 15.05.2018

51 MESP, 2018, 7th National Communication & 3rd Biennial Report from Slovenia under the United Nations Framework Convention on Climate Change, URL:

http://unfccc.int/files/national_reports/biennial_reports_and_iar/submitted_biennial_reports/application/pdf/453201_slovenia-br3-nc7-1-7nc3br-en_v0b_f.pdf, accessed on 15.05.2018

Climate Change with Spatial Planning Tools⁵² was carried out as a continuation of the EU project CLISP and provided a first vulnerability assessment for the Gorenjska region.

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

Yes / **In progress** / No

Neither the vulnerability assessment nor the Strategic Framework identify any transboundary risks.

Major projects and sectoral strategic documents are subject to environmental impact assessment (EIA) or to SEA. All EIAs and SEAs take transboundary risks into account, so these risks have been, for example, assessed in the SEA during preparation of the Flood Protection Plan.

The Water and Climate Adaptation Plan for the Sava River Basin⁵³ made in the frame of ISRBC, acts as a guidance document to governments for climate adaptation measures in navigation, hydropower, agriculture, flood protection and economic evaluation of climate impacts. It contains hydrological modelling, and suggests a methodology to examine climate impacts on water-related sectors.

4. Knowledge gaps

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

Yes / In progress / No

Knowledge gaps are identified and work is ongoing to address them. The Strategic Framework⁵⁴ clearly emphasises the importance of knowledge and knowledge transfer in order to be able to adapt. The objectives are to further develop and provide user-friendly climate services, upgrade and link databases and processes in support of decision making and establish regular cooperation between researchers and decision-makers.

Annexes 2 and 4 to the Strategic Framework define future steps for scientific data collection, modelling and establishing vulnerability indicators to be used as a baseline for preparing the NAP. The majority of scientific analyses for this purpose have already been finalised by ARSO. Historical climate data (temperature, precipitation, hydrology, climate impacts on forestry and agriculture) and some future climate scenarios until the end of the 21st Century

52 Project 'Adaptation to Climate Change with Spatial Planning Tools', URL: <http://www2.uirs.si/sl/Raziskovanje/Projekti/CRPKonkuren%C4%8DnostSlovenije20062013.aspx>, accessed on 11.05.2018

53 Water and Climate Adaptation Plan for the Sava River Basin, URL: https://www.savacommission.org/project_detail/18/1; accessed on 27.04.2018

54 Strategic Framework for Climate Change Adaptation; http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/podnebne_spremembe/SOzP_ang.pdf

are also publicly available at the ARSO meteorological portal⁵⁵. Several specific assessments are planned to consider the needs of individual sectors (e.g. solar energy potential, biodiversity, human health, sea and coast, avalanches, occurrence of torrential floods, fire hazards).⁵⁶

There is, however, still limited research on climate adaptation is available. National funding for applied research to be used for policy-making by specific ministries is provided through the TRP⁵⁷. Sectors decide independently on funding priorities for research in their respective departments. Adaptation-related research through the TRP has, thus, mainly been carried out by the Ministry of Forestry, Agriculture and Food (MFAF), which is responsible for the sectors assessed as most vulnerable. However, some adaptation-related research gaps are also addressed through the dedicated Climate Change Fund.

The ARSO hosts the Drought Management Centre for South-Eastern Europe – DMCSEE⁵⁸. The Centre monitors and assesses drought and risks and vulnerability connected to drought for the South-East Europe region, also partly through EU-funded projects (currently within the DriDanube project⁵⁹).

5. Knowledge transfer

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

Yes / **In progress** / No

The ARSO has an information website dedicated to climate change information⁶⁰. The MESP⁶¹ and MFAF⁶² provide some information and material on adaptation-related issues. By September 2018, the MESP plans to publish all summaries and layman reports on available climate impact assessments carried out since 2016. Information on relevant national activities are provided by the EU portal ClimateADAPT⁶³. Slovenia has not yet established a dedicated portal with information on climate adaptation.

55 Meteorological portal of ARSO, URL: <http://meteo.arso.gov.si/met/sl/climate/change/>, accessed on 15.05.2018

56 MESP, 2018, 7th National Communication & 3rd Biennial Report from Slovenia under the United Nations Framework Convention on Climate Change, URL:

http://unfccc.int/files/national_reports/biennial_reports_and_iar/submitted_biennial_reports/application/pdf/453201_slovenia-br3-nc7-1-7nc3br-en_v0b_f.pdf, accessed 15.05.2018

57 Slovenian Research Agency- Target research programmes, URL: <http://www.arrs.gov.si/en/progproj/crp/>, accessed 15.05.2018

58 DMCSEE website, URL: <http://www.dmcsee.org/>, accessed 15.05.2018

59 DriDanube project website, URL: <http://www.interreg-danube.eu/approved-projects/dridanube>, accessed on 15.05.2018

60 Project "Assessments of Climate Change Impacts in the 21st Century", URL:

<http://meteo.arso.gov.si/met/sl/climate/pss-project>, accessed 15.05.2018

61 MESP climate adaptation activities, URL:

http://www.mop.gov.si/si/delovna_podrocja/podnebne_spremembe/prilagajanje_podnebnim_spremembam/, accessed 04.05.2018

62 MFAF, URL: <http://www.mkgp.gov.si/en/>, accessed on 15.05.2018

63 ClimateADAPT. URL: <http://climate-adapt.eea.europa.eu/>

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

Yes / **In progress** / No

There are few capacity-building activities and education and training materials on climate adaptation. Promotional and educational material is made available and disseminated through participation in European projects, such as C3-Alps⁶⁴. The ARSO and the National Public Health Institute regularly organise events on hazardous climate and hydrological consequences to provide instructions to citizens. The ARSO also regularly publishes climate change information and newsletters with information on climate monitoring. The project ‘Slovenia reduces CO²’⁶⁵ shares examples of good adaptation practices. These mainly concern flood protection infrastructure, and the regional ‘Strategy for adapting agriculture to climate change for Vipava Valley’⁶⁶ (see Section A2). Slovenia plans to develop a capacity-building and communication programme funded by the Climate Fund in the future.

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**

Slovenia is yet to start working on a NAP. Many sectors are in the initial stages of exploring and integrating climate adaptation. However, in sectoral policy plans, some adaptation options have already been identified; for instance, in the strategy and the action plan for the Adaptation of Slovenian Agriculture and Forestry to Climate Change (2008). The River Basin Management Plans for the Danube⁶⁷ and Adriatic Sea Basins for 2016–2021⁶⁸ contain measures for climate adaptation, which are based on a vulnerability assessment.

It can be concluded that adaptation options for the agriculture, forestry and water management sectors are consistent with sectoral risk assessments, and with measures and good practices identified in similar contexts.

64 C3-Alps project, URL: [http://www.alpine-space.org/2007-2013/projects/projects/index4ec0.html?tx_t-runningprojects_pi1\[uid\]=39&tx_t-runningprojects_pi1\[view\]=singleView](http://www.alpine-space.org/2007-2013/projects/projects/index4ec0.html?tx_t-runningprojects_pi1[uid]=39&tx_t-runningprojects_pi1[view]=singleView), accessed on 15.05.2018

65 Project “Slovenija znižuje CO²”, URL: <http://www.slovenija-co2.si/index.php/dobre-prakse/prilagajanje-na-podnebne-spremembe>; accessed on 16.05.2018.

66 Project website VivaCCadapt, URL: <http://www.life-vivaccadapt.si/en/>, accessed on 15.05.2018

67 Vlada Republike Slovenije, 2016, Načrt upravljanja voda na vodnem območju Donave za obdobje 2016–2021, URL: http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/voda/nuv_II/NUV_VOD.pdf

68 Vlada Republike Slovenije, 2016, Načrt upravljanja voda na vodnem območju Jadranskega morja za obdobje 2016–2021, URL:

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/voda/nuv_II/NUV_VOJM.pdf

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

As mentioned in relation to Indicator 6a, Slovenia has yet to start working on a NAP and it is, therefore, too early to indicate whether the selection of priority adaptation options is based on robust methods.

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

In August 2014, the Slovenian government adopted the Decree Implementing the Decision on a Union Civil Protection Mechanism (Official Gazette of the Republic of Slovenia, no. 62/14), which determined a list of risk assessments to be carried out, as well as responsible ministries, deadlines, procedures and requirements for such assessments, together with procedures and requirements for the NDRA⁶⁹. These were first prepared in 2015. In 2016, selected risk assessments and the NDRA were updated to include climate impacts.

The Administration for Civil Protection and Disaster Relief under the Ministry of Defence is the national coordination body for risk assessment processes. The Administration provides links with adaptation-related policies through an Inter-Ministerial Working Group on Disaster Risk Assessments and is also responsible for national emergency response plans in cooperation with other ministries. The NDRA presents the national risk assessment of disasters and is a first step towards comprehensive risk management.

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

Funds for cross-cutting climate adaptation action are available within the Climate Change Fund, but specific allocations are not clearly defined in advance by sector. Since 2015, funds have been allocated mainly to sustainable transport and energy infrastructure, renewable energy, and general awareness and education activities. However, in some sectors, such as agriculture and water management, reliable multiannual funds can be mobilised once an action plan of adaptation measures is identified. Specific funds available within the water and agriculture sectors include the National Water Fund and EU Rural Development Programmes (RDPs).

⁶⁹ Directorate for Protection and Rescue - Disaster Risk Assessment documents, URL: <http://www.sos112.si/slo/page.php?src=os17.htm>, accessed on 15.05.2018

The Strategic Framework lays down the main principles for mobilising funds. The focus is on using national and local budgets, as co-finance, to attract additional international funding. The Strategic Framework also seeks to foster investments from the private sector.

The preparation of a vulnerability index for municipalities, outlined in Annex 4 of the Strategic Framework, will be the basis for classifying municipalities according to their climate vulnerability. This classification will guide the preparation of a call for co-financing adaptation strategies for municipalities and regions. In addition to development of local and regional adaptation strategies, it is planned to use the Climate Funds for supporting adaptation training, awareness, research, and development of an integrated information system on environment, as an aid to policy-making. Local and regional adaptation strategies will aim to review the climate resilience of existing development and spatial planning documents, processes and contents, and identify disparities and priority areas for adaptation measures at local and regional levels.

Under the European Economic Area and Norway grants mechanisms for the period 2014-2021⁷⁰, a total of EUR 14,500,000 has been allocated to climate mitigation and adaptation (plus national co-funding of EUR 2,558,823). The focus is on increasing public awareness, improved planning and management competencies among key stakeholders in Slovenia, and pilot and demonstration activities (in sectors which will be defined in the specific calls).

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 new EIA Directive has been transposed in the ‘Regulation on the scope and preparation of EIA reports’⁷¹. Developers are expected to assess the climate impacts and vulnerabilities of each project. Although the national SEA regulations do not yet require consideration of climate change, EU guidance on integrating climate change and biodiversity into EIA and SEA⁷², as well as guidance on the preparation of the EIA Report⁷³, are available on the MESP website and recommended to developers.

70 European Economic Area grants website article; URL: <https://eeagrants.org/News/2018/Education-and-climate-change-in-the-spotlight-in-Slovenia>; accessed on 30.05.2018

71 Uredba o vsebini poročila o vplivih nameravanega posega na okolje in načinu njegove priprave; (Uradni list RS, 36/09, 40/17); URL: <http://www.pisrs.si/Pis.web/pregledPredpisa?id=PRAV8124>; accessed on 15.05.2018

72 MESP – SEA regulations; URL: http://www.mop.gov.si/si/delovna_podrocja/presoje_vplivov_na_okolje/celovita_presoja_vplivov_na_okolje/; accessed on 15.05.2018

73 MESP – EIA regulations; URL: http://www.mop.gov.si/si/delovna_podrocja/presoje_vplivov_na_okolje/presoja_vplivov_na_okolje/; accessed on 15.05.2018

The Catalogue of Expert Knowledge⁷⁴ is guidance for environmental assessment experts on the content required of environmental assessment reports. The Catalogue includes legislation, assessment methodologies and studies from all fields of environment and nature protection, resources and heritage conservation, to enable better quality environmental assessments.

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

Yes / **No**

In the new disaster risk assessment, prepared in 2016, impacts of climate change have been taken into account. The Administration for Civil Protection and Disaster Relief under Ministry of Defence is the national coordination body for risk assessment. It provides links with adaptation-related policies through an inter-ministerial working group on disaster risk assessments and is also responsible for national emergency response plans (disaster risk management plans) in co-operation with other ministries. The national risk management plans date back to 2010 and do not specifically mention climate impacts, although plans exist for floods, fires, epidemics, and other relevant issues; regional plans also take account of landslide events. New national disaster risk management plans are currently being prepared based on the NDRA of 2016.

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

Yes / No

Spatial planning legislation has been recently changed in Slovenia. The new Spatial Planning Law⁷⁵ that comes into effect on 1 June 2018 fully transposes the EU's EIA, SEA, Habitat and Maritime Spatial Planning directives and covers land use, spatial, urban and maritime spatial planning. Regional land-use plans and urban plans are to be developed and harmonised under this umbrella law by 2023. According to this new legislation, climate adaptation, including green infrastructure, now forms an integral part of spatial, urban and land-use planning considerations at all levels. However, in practice, the extent to which climate impacts can be taken into account in planning decisions will be dependent upon the availability of studies and impact assessments⁷⁶. Climate impacts (e.g. floods, landslides) can be better factored into risk assessments at the local and regional levels.

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

74 ARSO EIA regulations; URL:

http://www.arso.gov.si/varstvo%20okolja/presoja%20vplivov%20na%20okolje/Katalog%20strokovnih%20znanj/KATALOG_KON%20C4%208CNA%20OBLIKA_14jun2013.pdf; accessed on 15.05.2018

75 Government of the Republic of Slovenia, 2018, Zakon o urejanju prostora, URL:

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/zakonodaja/prostorsko_nacrtovanje/ZUREP.pdf

76 Personal communication with MS contact

Currently, adaptation considerations are included only in water management (floods and droughts), forestry and agricultural sectors. Forestry and agriculture, as the most vulnerable sectors to climate change, were forerunners of this process, triggered in the framework of a multi-annual sectoral research programme “Securing food for tomorrow”. The programme enabled research and collection of historical climate data relevant for these sectors, as well as development of benchmarks, scenarios and an action plan with adaptation measures for several upcoming years. Currently, adaptation actions are implemented under the Common Agricultural Policy (Pillars I and II), and are integrated in the Rural Development Programme 2014-2020.

The water sector developed its adaptation actions for periodical flood protection, water management and spatial planning in the context of national legislation and obligations under the EU Water Framework and Floods Directives, simultaneously participating in the work of international river commissions, such as ICPDR and ISRBC.

The Strategic Framework was not the driver behind the existing sectoral strategies and action plans mentioned above, as they preceded it. However, it provides some guidelines on how climate adaptation can be mainstreamed in sectoral policies in the future in two steps:

- Effective coordination of the contents and processes of development and spatial planning, including consideration of capabilities for disaster risk management
- Strengthening the use of environmental impact assessment instruments.

These steps are currently used to foster mainstreaming of adaptation in sectoral policies and actions⁷⁷.

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

Yes / **No**

Currently, adaptation is not being mainstreamed in insurance policies or alternative policy instruments. However, there are incentives in place at the Ministry for Agriculture for investments in risk prevention, and co-financing is available for insurance against losses associated with agricultural and fisheries production and hail storms⁷⁸.

77 MESP; Strategic Framework for Climate Change Adaptation – main text; 2016; URL:

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/podnebne_spremembe/SOzP_ang.pdf

78 Government of the Republic of Slovenia, 2014, Decree on co-financing of insurance premiums of agricultural production and fishery, URL: <http://www.pisrs.si/Pis.web/pregledPredpisa?id=URED5345> and Agency for Agricultural market and rural development, URL:

http://www.arsktrp.gov.si/storitve_ukrepi/trzni_ukrepi/ukrepi_pomoci/sofinanciranje_zavarovalnih_premij/, accessed 15.05.2018

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

Adaptation actions are being carried out in the agricultural, forestry and water management sectors, in line with the existing national-level sectoral action plans:

- Strategy for the Adaptation of Slovenian Agriculture and Forestry to Climate Change (2008)⁷⁹ and its action plans of 2010 and 2011⁸⁰. The plan was not updated in 2012 due to lack of funding, however, many adaptation measures are still implemented under the 1st and 2nd pillar of the RDP⁸¹, supported by a number of applied research projects related mainly to new technologies and cultivation of more climate-resilient crops
- River Basin Management Plans for the Danube⁸² and Adriatic Sea Basins for the 2016–2021⁸³ define a range of measures also contributing to climate adaptation, including preparation of a set of indicators for drought, and measures related to improving water status and management
- Flood Risk Mitigation Plan 2017-2021⁸⁴ defines a large set of flood protection projects, which include measures to adapt land-use change, energy and transport infrastructure, and undertake regular hydrological and meteorological monitoring.

These actions are carried out by the respective national governmental departments, within available financial resources. Implementation of all three action plans in the water sector started just recently and there are no available progress reports as yet. Adaptation-related actions in agriculture and forestry have been implemented since 2010 and progress is

79 MFAF; 2008; Strategija prilagajanja slovenskega kmetijstva in gozdarstva podnebnim spremembam; <http://agromet.mkgp.gov.si/Publikacije/STRATEGIJA%20prilagajanja.pdf>

80 MFAF; 2011; Akcijski načrt strategije prilagajanja slovenskega kmetijstva in gozdarstva podnebnim spremembam za leti 2010 in 2011 - prečiščeno besedilo;

http://www.mko.gov.si/fileadmin/mko.gov.si/pageuploads/podrocja/Kmetijstvo/Naravne_nesrece/Akcijski_nacrt_precisceno_besedilo_.pdf

81 EEA; 2014; National adaptation policy processes in European countries — 2014;

<http://www.eea.europa.eu/publications/national-adaptation-policy-processes>, <http://climate-adapt.eea.europa.eu/countries-regions/countries/slovenia>; and

MFAF; 2017; Program razvoja podeželja: Okvirni terminski načrt objave javnih razpisov za ukrepe PRP 2014-2020 do konca leta 2017; URL:

http://www.mkgp.gov.si/fileadmin/mkgp.gov.si/pageuploads/Medijsko_sredisce/2017/06_junij/13_PRP/S2J-SP-KMC417061315311.pdf

82 Vlada Republike Slovenije, 2016, Načrt upravljanja voda na vodnem območju Donave za obdobje 2016–2021, URL: http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/voda/nuv_II/NUV_VOD.pdf

83 Vlada Republike Slovenije, 2016, Načrt upravljanja voda na vodnem območju Jadranskega morja za obdobje 2016–2021, URL:

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/voda/nuv_II/NUV_VOJM.pdf

84 Vlada Republike Slovenije, 2017, Načrt zmanjševanja poplavne ogroženosti 2017–2021, URL:

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/voda/nzpo_2017_2021.pdf

reported annually, as part of agricultural development monitoring reports⁸⁵ issued by the Agricultural Institute of Slovenia. Measures in all action plans are primarily sectoral, and not horizontal in nature.

In the Vipava Valley region, Ajdovščina Development Agency autonomously implements the LIFE ViVaCCAdapt project⁸⁶ with MESP's financial help (20%) from the Climate Fund. A Strategy for adapting agriculture to climate change for the period 2017-2021⁸⁷ has been prepared, as the first regional strategy of its kind. Implementation started recently and pilot actions are currently being taken that support the decision-making process for irrigation and planting of green windbreaks.

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

Yes / **No**

The Strategic Framework describes the guiding principle of cooperation that should underpin climate adaptation. Municipalities will be supported in their implementation by laying down of expert groundwork, and through guidelines and funding. The specific mechanisms of providing these support tools will be detailed in the NAP. Furthermore, the plan is to establish a national contact point for the coordination and promotion of the implementation of measures at local and regional level. Existing inter-sectoral and inter-institutional networks, such as the Association of Municipalities and the Council for Sustainable Development and Environmental Protection, will also help to address the challenges of climate adaptation and encourage collaboration.

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

The Strategic Framework indicates that mainstreaming climate adaptation is one of its main objectives. Guidelines are in place to integrate adaptation in spatial planning policies, prepared through a transboundary project⁸⁸. There are sectoral development planning documents that outline guidelines for integrating adaptation. As noted in relation to Indicator 8a, there are also guidelines on how to include climate adaptation in the SEA process⁸⁹,

85 Agriculture institute of Slovenia – reports on state of agriculture; URL:

http://www.kis.si/Porocila_o_stanju_v_kmetijstvu_OEK; accessed on 15.05.2018

86 Project VivaCCadapt website; URL: <http://www.life-vivaccadapt.si/en/>; accessed on 15.05.2018

87 Development Agency ROD Ajdovščina; 2017; Climate Change Adaptation Strategy for Agriculture in the Vipava Valley for the period 2017-2021; URL:

http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=home.showFile&rep=file&fil=ViVaCCAdapt_Strategy-2017-2021.pdf

88 CLISP project website; URL: http://www.clisp.eu/content/sites/default/files/guidance_slovenian.pdf; accessed 30.04.2018

89 EEA; 2014; National adaptation policy processes in European countries — 2014; URL:

<http://www.eea.europa.eu/publications/national-adaptation-policy-processes>

which have been applied, for example, in the assessment of the Transport Development Strategy in 2014⁹⁰.

Several local-level guidance documents have been developed under the Alpine Convention, e.g. Guidelines for climate adaptation at the local level in the Alps⁹¹, also available in Slovenian⁹².

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

Yes / **No**

As the national adaptation policy implementation process is in its early phases, there do not seem to be many opportunities for stakeholder involvement in the implementation of adaptation policies and measures. However, processes for stakeholder involvement in policymaking are laid down in general laws regulating public policy development, and are systematically implemented.

The Strategic Framework generally acknowledges the importance of awareness raising and stakeholder participation⁹³. Implementation actions will include: communication campaigns and media work to support adaptation objectives and measures; inform target audiences about climate impacts; as well as developing a permanent cooperation mechanism with non-governmental and private sectors to strengthen and improve information provision and exchange.

Step E: Monitoring and evaluation of adaptation activities

10. Monitoring and reporting

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

Yes / **No**

The Strategic Framework has been only adopted very recently and implementation is not yet monitored.

90 Ministry of Infrastructure; 2014; Environmental report on a strategic environmental assessment for the Transport Development Strategy in the Republic of Slovenia; URL:

http://www.mzi.gov.si/fileadmin/mzi.gov.si/pageuploads/DMZ/OP_strategija_prirocnik_julij_CPVO_ang.pdf

91 Permanent Secretariat of the Alpine Convention; 2014; Guidelines for Climate Change Adaptation at the local level in the Alps; URL:

http://www.alpconv.org/en/publications/alpine/Documents/guidelines_for_climate_change_EN.pdf

92 Permanent Secretariat of the Alpine Convention; Smernice za prilagajanje podnebnim spremembam na lokalni ravni v Alpah, URL:

http://www.alpconv.org/sl/publications/alpine/Documents/guidelines_for_climate_change_SL.pdf?AspxAutoDetectCookieSupport=1, accessed on 15.05.2018

93 MESP; 2016; Strategic Framework for Climate Change Adaptation – main text; URL:

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/podnebne_spremembe/SOzP_ang.pdf

Slovenia will qualitatively and quantitatively monitor the implementation of the Strategic Framework through use of a vulnerability index. The Strategic Framework outlines a set of indicators that will form the vulnerability index. The aim is to monitor a range of variables relating to sensitivity, adaptive capacity, exposure, and key climate impacts, risks and opportunities. Variables to monitor the implementation of measures will be selected when adaptation plans and actions are developed. Monitoring will be conducted and reported by the Inter-Ministerial Climate Change Adaptation Working Group.

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

Yes / No

Regular monitoring of plans takes place in the water sector⁹⁴, for example, in relation to the Danube River Basin Water Management Plan. This monitoring includes monitoring of climate adaptation measures.

Adaptation is monitored and reported as part of national annual agricultural development reports.

No other sectors so far show any progress with monitoring integration of climate adaptation. A system for periodic review of adaptation action of all relevant sectoral policies will be developed in relation to the future NAP, which will provide indicators for each of the sectors.

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

Yes / No

Regional, sub-national or local plans that are explicitly focused on climate adaptation have not yet been developed.

A system for periodic review of adaptation action at sectoral and local level, and the allocation of reporting responsibilities, will be developed in relation to the future NAP. The NAP should establish the type of framework to be used to monitor progress via a set of indicators that assess preparedness.

11. Evaluation

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

Yes / No

Although monitoring and evaluation are activities that are developed in the Strategic Framework, both in qualitative and in quantitative terms (see Indicator 10a), a timetable for periodic review of the Strategic Framework is not yet available.

⁹⁴ ICPDR projects on river basin management; URL: <https://www.icpdr.org/main/activities-projects/river-basin-management>; accessed on 16.05.2018

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

Yes / No

Through the Inter-Ministerial Climate Change Adaptation Working Group, involvement of stakeholders is assured in the future development and implementation of adaptation policy. This body will ensure that: sectors make concerted efforts to develop and implement strategic documents; themes are coordinated among and within sectors; and that the general public and experts are involved. However, involvement in monitoring, evaluation and review seems to be less clearly enshrined in the Strategic Framework.

SUMMARY TABLE

Adaptation Preparedness Scoreboard		
No.	Indicator	Met?
Step A: Preparing the ground for adaptation		
1 <i>Coordination structure</i>		
1a	A central administration body officially in charge of adaptation policy making	<u>Yes</u> / No
1b	Horizontal (i.e. sectoral) coordination mechanisms exist within the governance system, with division of responsibilities	<u>Yes</u> / In progress / No
1c	Vertical (i.e. across levels of administration) coordination mechanisms exist within the governance system, enabling lower levels of administration to influence policy making.	Yes / In progress / <u>No</u>
2 <i>Stakeholders' involvement in policy development</i>		
2a	A dedicated process is in place to facilitate stakeholders' involvement in the preparation of adaptation policies	<u>Yes</u> / No
2b	Transboundary cooperation is planned to address common challenges with relevant countries	<u>Yes</u> / No
Step B: Assessing risks and vulnerabilities to climate change		
3 <i>Current and projected climate change</i>		
3a	Observation systems are in place to monitor climate	Yes / <u>In</u>

Adaptation Preparedness Scoreboard		
No.	Indicator	Met?
	change, extreme climate events and their impacts	<u>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	<u>Yes</u> / In progress / No
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	Yes / <u>No</u>
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 / <u>No</u>
6c	Mechanisms are in place to coordinate disaster risk management and climate change adaptation and to ensure coherence between the two policies	<u>Yes</u> / In Progress / No

Adaptation Preparedness Scoreboard		
No.	Indicator	Met?
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	Yes / <u>In Progress</u> / 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	<u>Yes</u> / No
8b	Prevention/preparedness strategies in place under national disaster risk management plans take into account climate change impacts and projections	Yes / <u>No</u>
8c	Key land use, spatial planning, urban planning and maritime spatial planning policies take into account the impacts of climate change	<u>Yes</u> / No
8d	National policy instruments promote adaptation at sectoral level, in line with national priorities and in areas where adaptation is mainstreamed in EU policies	Yes / <u>In Progress</u> / No
8e	Adaptation is mainstreamed in insurance or alternative policy instruments, where relevant, to provide incentives for investments in risk prevention	Yes / <u>No</u>
9	<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	<u>Yes</u> / No
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		

Adaptation Preparedness Scoreboard		
No.	Indicator	Met?
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	<u>Yes</u> / No
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>