EUROPEAN COMMISSION
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CLIMATE ACTION
Directorate A - International, Mainstreaming & Policy Coordination
CLIMA.A.3 - Adaptation

Adaptation preparedness scoreboard:

Draft country fiche for Croatia

Disclaimer

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

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

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POLICY FRAMEWORK

Adaptation strategies

A1. National adaptation strategy

The National Adaptation Strategy (NAS) and the Adaptation plan is being developed within a project funded through the EU Transition facility[1]. The project started in May 2016 and it is expected that the Strategy will be developed by the end of 2017, with planned adoption in 2018. According to the Air Protection Act, this Strategy will cover the period until 2040 with a view to 2070. The NAS will focus on several sectors identified as most vulnerable to climate change impacts: hydrology, water and marine resources, agriculture, forestry, biodiversity and natural ecosystems, physical planning and coastal zone management, tourism, energy, fisheries, disaster risk management, and human health.

Until then, the 6th National Communication to the UNFCCC[2] (submitted in 2014) sets the overarching framework and preconditions for activities aiming at the adaptation to climate change effects, primarily related to the upgrading and completion of a climate

[1] http://www.mzoip.hr/en/ministry/news-and-announcements/activities-on-the-development-of-the-strategy-for-climate-change-adaptation.html
[2] https://unfccc.int/files/national_reports/annex_i_natcom_/application/pdf/hrv_nc6.pdf

change monitoring and forecasting system, strengthening of applied research for adaptation measures and building awareness and capacities.

Adaptation to climate change features as one of the general objectives in the country's ten-year Sustainable Development Strategy, which was adopted in 2009.

A2. Adaptation strategies adopted at subnational levels

For the time being, there are no adaptation strategies being developed at subnational level.

Adaptation action plans

B1. National adaptation plan

A national adaptation plan (NAP) will be developed for a five year period by the end of 2017 in parallel with the National Adaptation Strategy (NAS). The national legal framework (Air Protection Act[3]) foresees the adoption of a NAP.

B2. Adaptation plans adopted at sub-national level

The national legal framework (Air Protection Act[4]) requires that counties, the city of Zagreb and other cities adopt a programme for air and ozone layer protection and climate change mitigation and adaptation. In addition, the Environmental Protection Act[5] requires that counties, the city of Zagreb and other cities to adopt an environmental protection programme to implement the relevant measures from the national environmental protection plan. A number of adaptation projects have been carried out at local level in particular in the area of awareness-raising of local and regional stakeholders on adaptation and pilot vulnerability assessments for a coastal area.

Certain activities are underway at the city level:

- 11 cities and municipalities are signatories to the Covenant of Mayors for Climate and Energy with adaptation commitments.
- The City of Zagreb carried out an analysis of the anticipated climate change effects. A set of 47 measures was defined with the goal to improve Zagreb's resilience to climate change. They include measures for protection against heat waves (buildings and green infrastructure), water management, adaptation of transport infrastructure, improvement of energy infrastructure and landslides.

B3. Sectoral adaptation plans

The national legal framework requires that adaptation measures are implemented in the following vulnerable sectors: water resources, agriculture, land and marine biodiversity and ecosystems, coastal management, tourism and public health. However, there are very limited adaptation actions embedded in sectoral strategies and action plans (some actions are embedded in the energy and water sector).

The impact of climate change on the water regime change was considered qualitatively during the preparation of the 2016-2021 River Basin Management Plan. However, the methodology for assessing the impacts of climate change on water regime changes has not yet been adopted. The Flood Risk Management Plan is part of the River Basin

[3] http://mzoip.hr/hr/klima/propisi-i-medunarodni-ugovorixxxxxx.html
[4] http://mzoip.hr/hr/klima/propisi-i-medunarodni-ugovorixxxxxx.html
[5] http://narodne-novine.nn.hr/clanci/sluzbeni/2013_06_80_1659.html

Management Plan. River Basin Management Plan specifies that all planning documents in the water sector shall be aligned with the adaptation strategy.

The Flood Risk Management Plan for the 2016-2021 planning period contains a measure of the analysis of the impact of climate change on the concepts of protection from adverse effects of water and flood risk management with the revision of the program measures to include measures for climate change adaptation.

The national Strategy of Energy Development stipulates that at least 50% of revenue from the ETS is allocated to support actions for mitigation and climate change adaptation.

SCOREBOARD

Step A: preparing the ground for adaptation

1. Coordination structure

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

Yes / No

The responsibility for the climate change policy in Croatia falls within the competence of the Ministry of Environment and Energy (MEE). MEE is responsible for the development and implementation of the National strategy for adaptation to climate change.

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

Yes / In progress / No

The Government of Croatia established an inter-sectoral and inter-ministerial committee to coordinate adaptation policy in the autumn of 2014[6]. It is expected that this will improve the horizontal coordination between the state sectoral actors.

The coordination group, based on the opinions and proposals of a technical working group, makes recommendations on the overall policy and measures for mitigation and adaptation to climate change to the Croatian government, providing support in the implementation of policies and measures to mitigate and adapt to climate change.

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

Yes / In progress / **No**

Regional and local planning for adaptation is carried out by the respective county and city administrations. As the adaptation policy process is in early phases of formulation, there is formalized vertical coordination mechanism between national and regional stakeholders for adaptation policy.

[6] See: http://www.propisi.hr/print.php?id=13274

2. Stakeholders' involvement in policy development

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

Yes / No

Stakeholders' involvement will be ensured through the Committee for inter-sectoral coordination for policies and measures for mitigation and adaptation to climate change[7] that brings together national authorities, academia, business, industry and non-governmental organisations. The national legal framework (Air Protection Act[8]) requires that drafts of the national adaptation strategy and plan be put through public consultation.

Within the process of NAS development, a series of 10 workshops for experts in the sectors covered under the NAS (cf. A1) were carried out regarding climate modelling, applying the results of modelling and scenarios for impact and vulnerability assessment, assessing measures, etc. Another series of workshops was aimed for civil servants at national and local level and the public concerned (Gospić[9], Osijek, Rijeka[10], Zadar, Varaždin, Dubrovnik, Zagreb)[11]. The aim was to discuss and raise awareness of the impact of climate change, inform on the process of development of the NAS and engage stakeholders. The key topics included information on expected climate change, impacts, vulnerability and possible adaptation to climate change in key sectors for the geographical area of the workshops.

The working version of Climate Change Adaptation Strategy (Green paper) has been prepared and published on the project website in July 2017[12], with a call to stakeholders and interested public to give their opinion, suggestions and comments in order to improve and harmonize the document. In addition, meetings were organized with ministries and agencies from sectors covered by the strategy in order to present and discuss the Green paper. Comments were taken into account during preparation of the Draft Strategy (White paper).

White paper will also be published for consultations through the official web portal for public consultations "*e-Savjetovanja*" (e-Consultations).

Finally, the public will also have an opportunity for participation during the strategic environmental assessment procedure that will be carried out for the Strategy.

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

Yes / No

There is some evidence that transboundary cooperation is planned to address common challenges with neighbouring countries.

[7] http://www.propisi.hr/print.php?id=13274
[8] http://mzoip.hr/hr/klima/propisi-i-medunarodni-ugovorixxxxxx.html
[9] http://prilagodba-klimi.hr/2016/11/16/osijek-zupanijska-ulica-4-zupanijska-vijecnica-za-sluzbenike-na-nacionalnoj-i-lokalnoj-razini-te-za-zainteresiranu-javnost-odrzana-je-radionica-o-utjecaju-klimatskih-promjena-i-o-mjerama-p/
[10] http://prilagodba-klimi.hr/2017/02/16/rijeka-riva-boduli-1-za-sluzbenike-na-nacionalnoj-i-lokalnoj-razini-te-za-zainteresiranu-javnost-odrzana-je-radionica-o-utjecaju-klimatskih-promjena/
[11] http://prilagodba-klimi.hr/category/vijesti/
[12] http://prilagodba-klimi.hr/dokumenti/

The 2014 floods in the region have drawn more attention to transboundary challenges and the need for intensified transboundary cooperation. For example, Croatia is affected by flood response measures in Slovenia and Austria. The floods in Croatia, Bosnia and Herzegovina and Serbia in May and September 2014 have stimulated cooperation to address common challenges bilaterally and in the framework of the international bodies for the Danube and Sava river basins. As an example, a joint operational flood forecasting and early warning system for the riparian countries in the Sava River Basin[13] was launched in February 2017[14].

However, it is too early to know in which manner, transboundary cooperation will be reflected in the future national adaptation strategy.

Croatia takes part in the implementation of the two macro-regional strategies: EU Strategy for the Adriatic and Ionian Region (EUSAIR) and EU Strategy for the Danube Region (EUSDR).

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 Croatian Meteorological and Hydrological Service conducts meteorological observations to monitor the impacts of climate change for general climate indicators. There is still work needed to be done to expand the set of climate change indicators (e.g. to coastal, marine, biodiversity etc.). There is a need to modernise the existing climate observation and prediction system, namely improving the quality and availability of meteorological data (including climatological and hydrological data) and infrastructure that will allow a better understanding of climate change and as a result enable adequate adaptation policy measures. This modernisation started in 2015 and is planned to go on until 2022, and is being addressed by the Croatian Meteorological and Hydrological Service, the Croatian Environment Agency and other research and monitoring institutions through EU-funded and bilateral donor projects.

It is not clear whether extreme weather events are being kept, or if there are statistics on impacts.

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

Yes / In progress / No

Scenarios and projections have been done by the Croatian Meteorological and Hydrological Service using the regional climate model RegCM on the basis of the A2

[13] http://www.savacommission.org/dms/docs/dokumenti/events/workshop_on_flood_risk_management_measures_and_links_to_eu_wfd/presentations/11.pdf

[14] https://www.royalhaskoningdhv.com/en-gb/news-room/news/pre-release-of-flood-forecasting-and-warning-system-for-sava-river-basin/6956

scenario for the periods of 2011-2040 and 2041-2070[15]. For the 2011-2040 period, an increase of 0.6°C and 1°C is expected during the summer and winter periods respectively. For the 2041-2070 period, an increase of up to 2°C and 3°C is expected during the summer and winter periods respectively.

Within the project of the NAS development, additional climate modelling is being carried out. Climate simulations until the end of the century have been done on 50 km and 12.5 km horizontal resolution, using regional climate model (RegCM) and RCP4.5 and RCP8.5 scenarios[16]. A vulnerability assessment has been developed in May 2017[17] in the framework of the NAS development covering vulnerable sectors, including economic, social and environmental impacts, using the climate projections until 2040 and 2070.

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

Yes / In progress / No

A comprehensive assessment of climate change impacts and vulnerabilities has been carried out as part of the NAS development process in May 2017.

The Air Protection Act (OG 130/11[18], 47/14[19]) recognizes sectors exposed to climate change impacts and prescribes the obligation of undertaking adaptation measures in those sectors (hydrology and water resources, agriculture, forestry, biological diversity and natural inland ecosystems, biological diversity and marine ecosystems, coast and coastal area, tourism, and human health). Vulnerable sectors are also defined in the 6th National Communication to the UNFCCC (2014)[20].

The impacts on the abovementioned sectors have been described in the May 2017 vulnerability assessment.

The Risk Assessment for the Republic of Croatia was adopted in November 2015[21]. It will be followed by a Strategy for Disaster Risk Reduction. Three questions were addressed within the risk assessment: how climate change affects risks, what is the expected time-frame for the effects and what are the reference documents the analysis is based on. Eleven risks have been processed (earthquake, flood, plant diseases, animal diseases, soil salinization, drought, industrial accidents, open space fires, extreme temperatures, snow and ice, and epidemics and pandemics), nine of which are related to climate change. Climate change is treated as a driver for events such as drought, extreme temperatures, extreme precipitations, soil salinization and floods and is therefore an important factor in the risk analysis as it affects either the intensity or frequency of the event. In addition to an analysis of threats, calculation includes analysis of vulnerability of society to disasters.

A risk and vulnerability assessment was also conducted for the human health sector on heatwaves. Every year, the Protocol on procedure and recommendations for protection from heat is adopted (last in July 2017[22]), with the goal to reduce risk for individuals and institutions during the heat waves by implementing necessary preparedness and response procedures at the national and local level. A heat wave alert system is set for

[15] http://klima.hr/klima.php?id=klimatske_promjene
[16] http://prilagodba-klimi.hr/wp-content/uploads/docs/Klimatsko_modeliranje_P-2-2-1_31.03.2017.pdf
[17] http://prilagodba-klimi.hr/wp-content/uploads/docs/Procjena-ranjivosti-na-klimatske-promjene.pdf
[18] http://narodne-novine.nn.hr/clanci/sluzbeni/2011_11_130_2601.html
[19] http://narodne-novine.nn.hr/clanci/sluzbeni/2014_04_47_874.html
[20] http://unfccc.int/files/national_reports/annex_i_natcom_/application/pdf/hrv_nc6.pdf
[21] http://www.platforma.hr/images/dokumenti/Procjena_rizika_RH_svi_FINAL.pdf
[22] https://zdravlje.gov.hr/UserDocsImages/2017%20programi%20i%20projekti/PROTOKOL%20-%20VRUĆINA.pdf

the entire territory of the Republic of Croatia and it is active in the period from May to October. In that period Croatian Meteorological and Hydrological Service (DHMZ), constantly monitors the temperature and in the case of 70% chance that the temperature will exceed the threshold (about 35°C) it informs the Ministry of Health and the Croatian Institute for Public Health (CPHI) on the occurrence of a heat wave, which then forwards the alert.

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

Yes / **In progress** / No

Some information on transboundary risks is given for relevant sectors in the May 2017 vulnerability assessment including hydrology and water resources, forestry (forest fires), biodiversity and energy. It is too early to assess how the upcoming NAS will address these.

4. Knowledge gaps

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

Yes / In progress / No

As part of the NAS development, analysis of research activities was carried out and presented in the document *Overview of research on impacts of climate change and adaptation*[23]*.* This information is used to identify gaps in knowledge and information, and for identifying the topics for future research.

In 2016, the Programme for support to research and development in the field of climate change[24] was implemented through the Croatian Science Foundation. Funds for this programme have been secured by the EPEEF from the sale of emission allowances. The goal is to support research and development activities in the area of climate change mitigation and adaptation. Two (out of ten approved) projects[25] are dealing with the impacts of climate change and possible adaptation measures[26]. The following projects are supported:

AGRO-DROUGHT-ADAPT - adaptability assessment of maze and soybean cultivars of Croatia in the function of breeding for drought tolerance[27]

VITCLIC – Viticulture and climate change in Croatia[28]

The current project: "Capacity Building of the Ministry of Environment and Energy for climate change adaptation and preparation of the Draft Strategy for adaptation to

[23] http://prilagodba-klimi.hr/dokumenti/
[24] http://www.hrzz.hr/default.aspx?id=1172
[25] AGRO-DROUGHT-ADAPT - adaptability assessment of maze and soybean cultivars of Croatia in the function of breeding for drought tolerance" http://klima.hr/razno.php?id=projekti&param=agro_drought_adapt
and
VITCLIC – Viticulture and climate change in Croatia
https://www.pmf.unizg.hr/geof/en/research/climatology/vitclic/about
[26] http://www.hrzz.hr/default.aspx?id=78&pid=2975&rok=2016-06; and http://www.hrzz.hr/default.aspx?id=78&pid=8290&rok=2016-06
[27] http://klima.hr/razno.php?id=projekti&param=agro_drought_adapt

[28] https://www.pmf.unizg.hr/geof/en/research/climatology/vitclic/about

climate change"[29] is seeking to build capacity of professionals in the areas of modelling and scenarios and vulnerability assessments, which is due to end in November 2017.

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

Two specific webpages/portals are now live and are in the process of being further developed:

- NAS development – Project webpage[30]
- Ministry of Environment and Energy – Adaptation to Climate Change[31]

The NAS development website contains such resources as the report on climate modelling carried out as part of the NAS development, impact and vulnerability assessment reports and brochure and the working version of the NAS. Information provided on the Ministry of Environment and Energy's page on Adaptation to Climate Change is very general.

Climate data (historical data, climate projections, publications etc.) is available through the Meteorological and Hydrological Service[32].

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

Within the process of NAS development, a series of 10 workshops for experts in different sectors were carried out (regarding climate modelling, using the results of modelling and scenarios for impact and vulnerability assessment, assessing measures, etc.). Another series of workshops is aimed to civil servants at national and local level and the public.

There are ongoing actions on capacity building, but so far not in a coordinated manner in the absence of a NAS having been adopted.

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

[29] http://prilagodba-klimi.hr/
[30] http://prilagodba-klimi.hr/
[31] http://www.mzoip.hr/en/climate/climate-change-adaptation.html
[32] http://klima.hr/klima.php?id=k5

The working version of Climate Change Adaptation Strategy (Green paper) published in July 2017, proposes a set of adaptation measures and activities for ten sectors.

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

Options for vulnerable sectors were identified taking into account climate modelling and the impact and vulnerability assessment. Possible measures were discussed in workshops with sectoral experts, together with the criteria for selection of priority measures. Measures were prioritized using the multi-criteria analysis[33].

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

Yes / **In progress** /No

The National Platform for Disaster Risk Reduction is a country-level coordination mechanism for DRR. The Ministry of Environment and Energy is a permanent member in the National Platform Committee and an active member in the Risk Assessment Working Group. The development of the national risk assessment serves as an example of a process where all stakeholders were actively involved and will undertake risk reduction under their competence. The Platform has been now serves as more of an active strategy developing body.

It remains to be seen how the NAS will address disaster risk reduction measures.

7. Funding resources identified and allocated

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

Yes / **In progress** /No

The National Adaptation Strategy (NAS) with the adaptation plan is being developed within the project funded through the EU Transition facility.

Croatia uses financial resources from the sale of emission allowances through the Environmental Protection and Energy Efficiency Fund (EPEEF) for climate change adaptation, for research and development activities in the field of climate change adaptation (cf. 4a).

Activities to promote adaptation to climate change are defined within the framework of the Operational Programme - Competitiveness and Cohesion[34] for the EU financial period 2014 – 2020 (thematic objective Promoting climate change adaptation, risk prevention and management). The funds will be used in accordance with the objectives and priorities identified within the framework of the future NAS. Until the adoption of the NAS, framework and preconditions for the climate change adaptation activities are determined in accordance with the 6th National Communication to the UNFCCC. OPCC interventions under TO5 (Climate Change Adaptation & Risk Prevention) will thus focus on investments in:

[33] http://prilagodba-klimi.hr/wp-content/uploads/2017/07/Strategija-prilagodbe-k.p.-ZELENA-KNJIGA-03-07-2017.pdf
[34] https://razvoj.gov.hr/UserDocsImages/arhiva/Vijesti/Programme_2014HR16M1OP001_1_2_en.docx

- Improvement of the system for monitoring and evaluation of climate change
- Improvement of the disaster management system
- Addressing priority risks primarily related to flood management

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

Amendments to the regulation on environmental impact assessment were adopted to transpose the EIA Directive in January 2017. Climate change adaptation considerations have been included.

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

Yes / **No**

Croatia has has started to adapt risk assessment and intervention plans to account for current and projected climate extremes. On the national level, the impact of climate change to disaster risk has been taken into account while developing the national disaster risk assessment. Cases of heavy rains in short periods of time and severe dry periods have been taken into account[35] as most frequent climate extremes in Croatia. The risk assessment will still be taken into account when developing the national disaster risk reduction strategy.

Early warning systems are in place for all major hazards, with outreach to communities.

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

Yes / **No**

The July 2017 amendments to spatial planning legislation include provisions related to spatial plans covering marine areas where due attention must be paid to long-term changes caused by climate change and to increasing resilience to the impacts of climate change. It is unclear whether other land use or spatial/urban planning policies address climate impacts.

It is unclear whether other land use and spatial/urban planning policies take into account the impacts of climate change.

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

[35] http://www.preventionweb.net/english/policies/v.php?id=29329&cid=43

The Air Protection Act (OG[36]) recognizes sectors exposed to climate change impacts and prescribes the obligation of undertaking adaptation measures in those sectors. Vulnerable sectors are also defined in the 6th National Communication to the UNFCCC[37] (2014).

In April 2016, an 'Integrated coastal zone management plan'[38] for the Šibenik-Knin county was adopted, as the first plan of this kind in Croatia.

There is no indication of policy instruments being used to promote adaptation in all of the vulnerable sectors identified.

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

Yes **/ No**

No evidence could be found that adaptation is mainstreamed in insurance or alternative policy instruments to provide incentives for investments in risk prevention.

9. Implementing adaptation

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

Yes / In progress / **No**

In the absence of a NAS or a NAP, it can be concluded that coordinated implementation of the adaptation measures, as defined in action plans, has not yet started.

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

Yes / **No**

Systematic cooperation mechanisms for fostering adaptation at relevant scales do not seem to be yet in place.

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**

No evidence could be found that specific procedures or guidelines are available to assess the potential impact of climate change on the resilience of infrastructure.

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

Yes /**No**

[36] 130/11: http://narodne-novine.nn.hr/clanci/sluzbeni/2011_11_130_2601.html and 47/14: http://narodne-novine.nn.hr/clanci/sluzbeni/2014_04_47_874.html
[37] http://unfccc.int/files/national_reports/annex_i_natcom_/application/pdf/hrv_nc6.pdf
[38] http://sibensko-kninska-zupanija.hr/stranica/obalni-plan-ibensko-kninske-upanije/209

As the national adaptation policy formulation process is in its early phases, there is not yet evidence of stakeholders' involvement in the implementation of adaptation policies and measures.

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**

No reports on adaptation at the central level have been published since the NAS/NAP is yet to be adopted.

Nevertheless, central state administration bodies and other public authorities competent for activities related to meteorology, environmental protection, agriculture, fishery, forestry, water management, energy, physical planning, nature protection, sea, tourism and protection of human health have an obligation to submit reports to the Ministry responsible for environmental protection on their activities related to adaptation to climate change.

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

Yes / **No**

No reports on adaptation in vulnerable sectors have been published since the NAS/NAP is yet to be adopted.

However, a Committee for inter-sectoral coordination for policies and measures for mitigation and adaptation to climate change[39] has been tasked to monitor and evaluate implementation and planning of policies and measures for mitigation and adaptation to climate change, provide opinions on planning and strategic documents, etc.

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

Yes / **No**

The national legal framework provides for reporting between the various levels of government (national, counties and cities). Nevertheless, this is in the early stage of implementation in view of the ongoing national planning process for adaptation in Croatia.

11. Evaluation

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

Yes / **No**

A periodic review of adaptation action has not yet been planned.

[39] http://narodne-novine.nn.hr/clanci/sluzbeni/2014_09_114_2171.html

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

Yes / **No**

No evidence of stakeholders engagement in monitoring, evaluation or reviewing is available.

SUMMARY TABLE

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

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

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