

Adaptation policies

Addressing climate change adaptation in transnational regions in Europe



Europe's border regions and maritime areas, like its Arctic and the Mediterranean regions, are facing negative impacts due to climate change. Countries responsible for these transnational areas are already taking action to adapt to changes in weather and climate extreme events (e.g. increased heat waves or heavy rainfalls). This briefing gives an up-to-date overview of how European countries are working together to adapt to climate change impacts in these shared regions, some of which are considered climate change 'hot spots' because they are most vulnerable to dramatic changes.

- The European transnational regions that are 'hot spots' in terms of climate change impacts are the Northern Periphery and Arctic, South West Europe and the Mediterranean (including large parts of the Adriatic-Ionian and Balkan-Mediterranean regions), as well as in the mountainous part of the Alpine Space.
- Transnational cooperation to support climate change adaptation includes the exchange of regionally specific adaptation knowledge, and the sharing of tools and good practices among countries in a transnational region.
- The North Sea, Atlantic Area and South West Europe have prioritised funding for climate change adaptation under the Interreg V B programme.
- There are good examples of cooperation between EU macro-regional strategies and international conventions in the Danube and Alpine Space, where there are joint cooperation agreements.
- Web-based adaptation platforms, knowledge centres and networks are active in the North Sea, Northern Periphery and Arctic, Baltic Sea, Danube, Alpine Space, Central Europe, Adriatic-Ionian, Balkan-Mediterranean and the Pyrenees area of South West Europe.
- Some transnational regions have developed common specific transnational adaptation strategies or action plans, but the level of implementation varies.

Climate change adaptation

Introduction

The EU strategy on adaptation to climate change was launched in 2013 and has encouraged all EU Member States to adopt comprehensive adaptation strategies, including addressing cross-border issues^[1]. The evaluation of the EU adaptation strategy undertaken by the European Commission showed that it has stimulated some actions on cross-border climate risks between Member States, in particular for river basins and alpine areas, but that further action is needed^[2].

The EU supports transnational cooperation mainly through the Interreg V B programme^[3], which is the transnational component of the current Interreg V programme for the period 2014-2020. It promotes better cooperation and regional development within the EU by cooperating to tackle common issues such as climate change adaptation. Interreg V B involves regions from several EU Member States, and some non-EU countries, forming bigger areas, i.e. the 'European transnational regions'. There are 15 transnational regions, as defined by the current Interreg V B programme, which have common geographic features and challenges.

This briefing builds upon a 2018 European Topic Centre on Climate Change Impacts, Vulnerability and Adaptation (ETC/CCA)^[4] technical paper, Adaptation policies and knowledge base in transnational regions in Europe^[5]. It provides an overview of the actions in the current transnational cooperation on supporting climate change adaptation (CCA) The briefing focuses on 12 of the 15 European transnational regions (see Figure 1):

- North Sea;
- North West Europe;
- Northern Periphery and Arctic;
- Baltic Sea;
- Danube;
- Atlantic Area;
- Alpine Space;
- Central Europe;
- Adriatic-Ionian;
- Balkan-Mediterranean;
- South West Europe;
- Mediterranean.

Climate change adaptation

The European transnational regions

Analysing the effect of cooperation initiatives on CCA in the context of the European transnational regions is particularly appropriate, as these regions form large functional geographic areas covering the whole EU (see Figure 1).

Table 1 provides a summary of the relevant observed and projected climate change and impacts for 12 European transnational regions based on the collection, review and analysis of relevant literature. It is consistent with the outcomes of the EEA report *Climate change, impacts and vulnerability in Europe 2016 —An indicator-based report*.

The European transnational regions are vulnerable to climate change across their wide range of economic sectors and natural ecosystems. Their exposure and sensitivity are increased by non-climatic drivers, such as changing land use patterns and population change. Some particularly vulnerable European regions already experience the impacts of climate change and are likely to be increasingly affected by future impacts. These 'hot spots' have been identified in the Northern Periphery and Arctic, South West Europe and Mediterranean areas (which include large parts of the Adriatic-Ionian and Balkan-Mediterranean areas), as well as in the mountainous part of the Alpine Space (see Table 1).

Interreg V B is the key EU transnational cooperation programme covering all transnational regions and aiming to promote better cooperation and regional development to tackle common challenges such as those posed by climate change. It is supported through the European Regional Development Fund (ERDF)^[6], with funding of EUR 2.1 billion for the period 2014-2020^[3].

Table 2 provides an overview of other initiatives relevant to CCA in the 12 transnational regions, which include EU macro-region strategies, international conventions and specific regional adaptation strategies and plans.

Some of the transnational regions partially or totally overlap with the four established **EU macro-regional strategies**^[7], all of which integrate CCA (see Table 2):

- EU strategy for the Baltic Sea region (EUSBSR)^[8] adopted in 2009;
- EU strategy for the Danube region (EUSDR)^[9] adopted in 2010;
- EU strategy for the Adriatic and Ionian region (EUSAIR)^[10] adopted in 2014;
- EU strategy for the Alpine region (EUSALP)^[11] adopted in 2015.

These EU macro-regional strategies are integrated frameworks endorsed by the European Council and are also supported by the Interreg V B programme to address common challenges faced by defined geographical areas involving EU Member States and non-EU countries.

Climate change adaptation

Furthermore, some transnational regions also overlap or coincide with the following **land or sea-based international conventions**:

- The Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention), which was established in 1992 and entered into force in 1998^[12] and is relevant for the North Sea, North West Europe, the Northern Periphery and Arctic, and the Atlantic.
- The **Helsinki** Convention on the Protection of the Marine Environment of the Baltic Sea (Helsinki Convention), which was established in 1992 and entered into force in 2000^[13] and is relevant mainly for the Baltic Sea but also the Northern Periphery and Arctic.
- The Convention on Cooperation for the Protection and Sustainable Use of the River Danube (Danube River Protection Convention), which was established in 1994 and entered into force in 1998^[14] and is relevant for the Danube.
- The Convention for the Protection of the Black Sea Against Pollution (Bucharest Convention), which was established in 1992 and entered into force in 1994^[15] and is relevant for the Danube.
- The Alpine Convention, which was established in 1991 and entered into force in 1995^[16] and is relevant for the Alpine Space.
- The Framework Convention on the Protection and Sustainable Development of the Carpathians (Carpathian Convention), which was established in 2003 and entered into force in 2006^[17] and is relevant for Central Europe and the Danube.
- The United Nations Environment Programme-Mediterranean Action Plan (UNEP-MAP) Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention), which was originally named the Convention for the Protection of the Mediterranean Sea Against Pollution. It was established in 1976 and entered into force in 1978. It was then amended and adopted in 1995, renamed the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, entering into force in 2004^[18] and is relevant for the Mediterranean.

These conventions have, in some cases, established a long history of transnational cooperation. In some areas, intense collaboration has also developed in the form of cross-border activities (as in the case of the Pyrenees or the Barents Sea) (see Table 2).

Climate change adaptation

Adaptation actions differ between transnational and macro-regions

Transnational cooperation has supported several CCA actions in European transnational regions. It plays a key role in developing and exchanging regionally specific adaptation knowledge, tools, good practices and related experiences in transnational regions. The North Sea, Atlantic Area and South West Europe have prioritised funding for CCA under the current Interreg programme. In other transnational regions, CCA is defined as a cross-cutting theme or as a mainstreaming goal alongside other topics, e.g. climate change mitigation.

CCA is addressed as a target, a thematic objective or an action to be pursued in all four existing EU macro-regional strategies:

- In EUSALP, CCA is bundled together with disaster risk management in one of nine actions.
- In both EUSAIR and the EUSBSR, CCA is currently defined as a horizontal principle, relevant to all thematic pillars of both strategies.
- In the EUSDR, CCA is addressed mostly as an environmental issue, prominently in the context of flood and water management.

The implementation of EU macro-regional strategies is expected to be strategically aligned with the respective Interreg V B programmes in the same region. There are mechanisms to ensure that co-funded projects are in line with the objectives set out in the action plans of the macro-regional strategies.

Knowledge creation and sharing in the transnational regions is 'project based'

The CCA-related projects in the transnational regions have addressed regionally specific climate change challenges or sectors (e.g. water management in the Danube region or natural hazard management in the Alpine Space), while cross-sector or integrated adaptation is considered less frequently. Border-crossing river basins, shared coastal regions and maritime areas are thus often at the centre of transnational CCA projects, as confirmed by the evaluation of the EU adaptation strategy^[2].

These projects focus on knowledge generation and dissemination, awareness-raising, capacity-building, networking and cross-country exchange, rather than on implementing actions on the ground. Difficulties in translating the knowledge generated into new adaptation planning and practice are left until the post-project phase. The knowledge gained is not always well exploited due to a lack of ownership, commitment and clear responsibilities for the use of the results. This is also affected by the ending of funding and the lack of a durable business and/or capitalisation model.

Climate change adaptation

Web-based adaptation platforms, knowledge centres and networks are active in some transnational regions

The European Climate Adaptation Platform (Climate-ADAPT)^[19] has a section that provides an overview of information about the policy frameworks and initiatives, including those related to knowledge creation and sharing, in the European transnational regions. It was put in place to enforce and strengthen cooperation on CCA at the transnational level.

Some of the transnational regions have developed **web-based adaptation platforms** for sharing knowledge on climate change impacts, vulnerability and adaptation within the region. These include:

- the Wadden Sea Climate Change Adaptation Information Platform^[20], which was developed as part of the trilateral cooperation on the Wadden Sea^[21] in the North Sea;
- the Climate Adaptation Platform for the Alps (CAPA)^[22], which was developed as part of the Interreg Alpine Space project C3-Alps^[23] in the Alpine Space;
- the Pyrenean Climate Change Observatory (OPCC)^[24], which was created in 2010 by the working community of the Pyrenees (CTP) in South West Europe.

Furthermore, some transnational regions have developed **knowledge centres and networks**, which differ from the web-based platforms in that the web-based knowledge-sharing interface is not their main component. They share data, information and services, aiming to directly support the development of CCA initiatives (strategies, plans, measures, etc.) at the transnational level. However, many of these initiatives, such as the Drought Management Centre for Southeastern Europe (DMCSEE)^[25] and the Integrated Drought Management Programme Central and Eastern Europe (IDMP CEE)^[26], focus on single thematic aspects. Only a few of the knowledge centres, such as the Environment and Climate Regional Accession Network (ECRAN)^[27], the Baltic Sea Region (BSR) Climate Dialogue Platform^[28] and the Arctic portal^[29], deal with the cross-sector dimension of CCA.

Climate change adaptation

International conventions have strengthened efforts in climate change adaptation in European transnational regions

The international conventions play an important role in addressing CCA in transnational regions, since in some cases they have established a long history of transnational cooperation (see Table 2). Relevant examples include:

- the OSPAR Convention, which addresses climate change as a cross-cutting issue;
- the Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea, which includes climate change within its environmental protection and sustainable development goals;
- the Danube River Protection Convention, which gave rise to the Danube Strategy on adaptation to climate change^[30];
- the Alpine Convention and the Carpathian Convention, which have acted as drivers for a number of projects and cooperation initiatives on CCA in the Alpine Space, Central Europe and the Danube;
- the Barcelona Convention, along with the protocol on integrated coastal zone management for the Mediterranean (ICZM protocol), which was established in 2008 and entered into force in 2011^[31], and the regional climate change adaptation framework for the Mediterranean marine and coastal areas, which was adopted in 2016^[32].

These institutionalised cooperation structures are important for policy at the transnational level and often act as facilitators of cooperation on adaptation. Good examples of cooperation between international conventions and EU macro-regional strategies are found in the Danube and the Alpine Space, where joint cooperation agreements have been created, formalising the cooperation between institutions to clarify roles, avoid overlaps and reinforce synergies.

Climate change adaptation

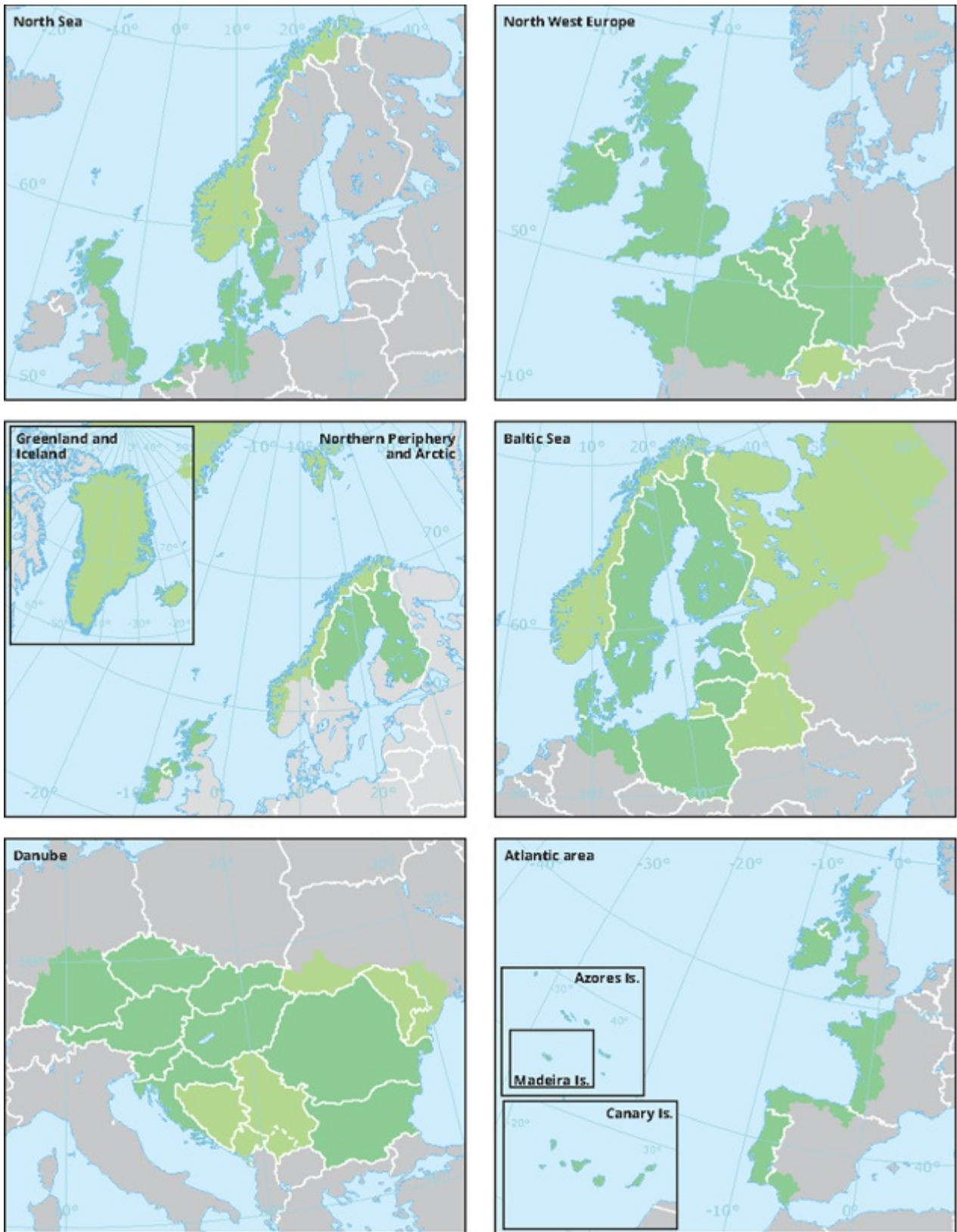
Transnational strategies or action plans on climate change adaptation have been developed in transnational regions

In some regions (North Sea, Northern Periphery and Arctic, Baltic Sea, Danube, Alpine Space and Mediterranean) other cooperation mechanisms such as **specific regional strategies and plans** are supporting CCA at the transnational level (see Table 2). Relevant examples include:

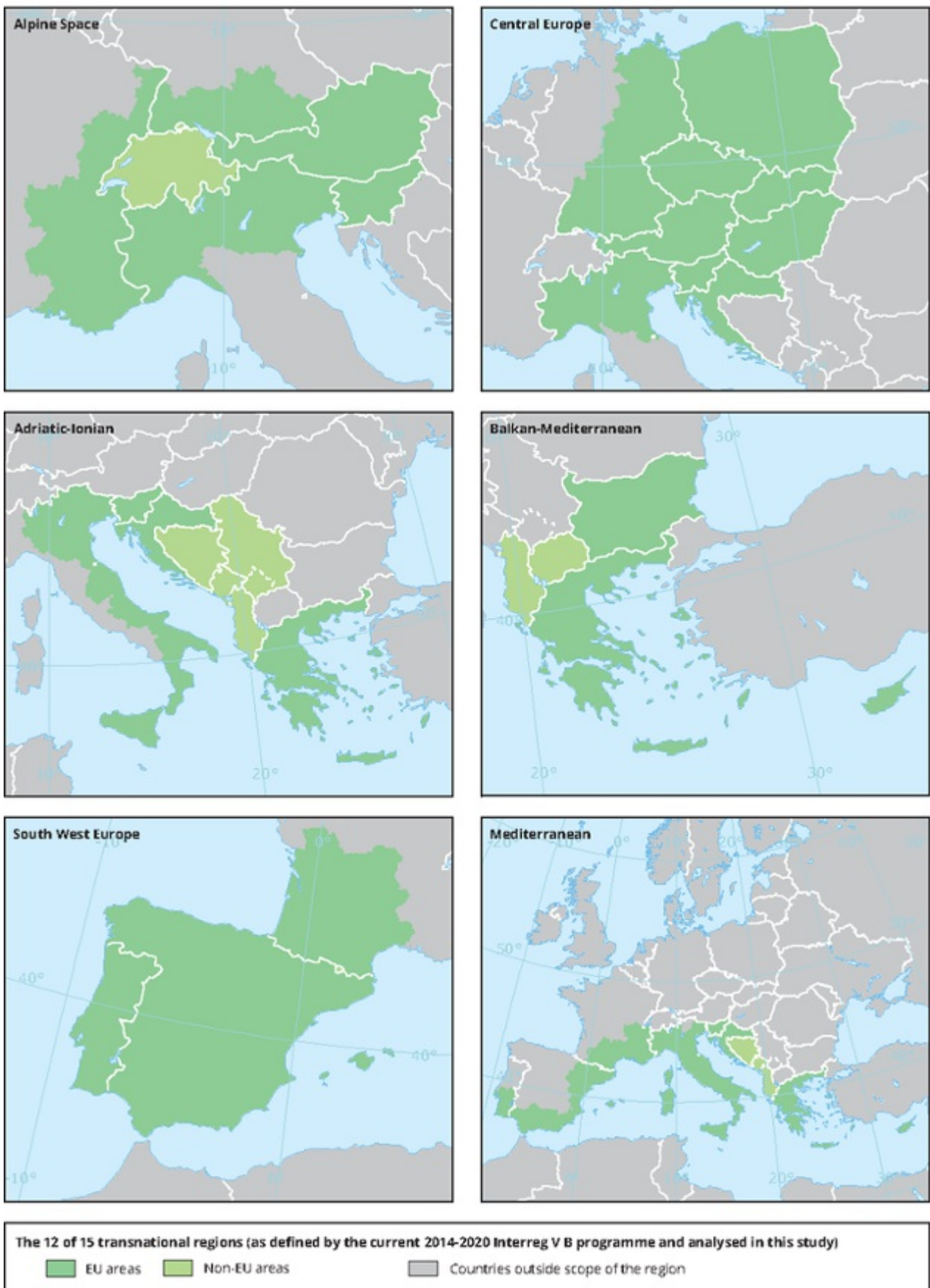
- the North Sea region 2020 strategy^[33] adopted by the North Sea Commission^[34] in 2011 and revised in 2016;
- the trilateral strategy for the resilience of the Wadden Sea^[35] adopted in 2014 as part of the trilateral cooperation on the Wadden Sea^[21];
- the action plan on climate change for the Barents co-operation adopted in 2013^[36] and revised in 2017^[37];
- the strategy for adaptation to climate change in the Baltic Sea region (Baltadapt strategy for adaptation to climate change in the Baltic Sea region)^[38], developed by the Interreg IV B project, Baltadapt^[39], which was integrated and implemented as part of the EU strategy for the Baltic Sea region (EUSBSR) and is accompanied by a non-binding action plan;
- the Danube strategy on adaptation to climate change^[30] of the International Commission for the Protection of the Danube River (ICPDR)^[40], which was adopted in 2012;
- the Carpathian Convention's strategic agenda on adaptation to climate change in the Carpathian region^[41], which was adopted in 2014;
- the Alpine Convention's action plan on climate change in the Alps^[42], which was adopted by the X Alpine Conference in 2009 but without legally binding status, and the Alpine strategy for adaptation to climate change in the field of natural hazards^[43], which was developed by the Platform on Natural Hazards of the Alpine Convention (Planalp)^[44] and released in 2013;
- the regional climate change adaptation framework for the Mediterranean marine and coastal areas^[32], adopted at a Conference of the Parties to the Barcelona Convention in 2016.

Climate change adaptation

Figure 1 Twelve European transnational regions, as defined by the current Interreg V B programme



Climate change adaptation



Climate change adaptation

Source: EEA, 2018 (ETC/CCA elaboration based on EuroGeographics, 2015^[45]).

Table 1. Overview of relevant observed and projected climate change and impacts for 12 European transnational regions

Transnational region	Relevant observed and projected climate change and impacts
North Sea	<ul style="list-style-type: none"> Increase in air temperature Increase in winter precipitation (in the northern part of the North Sea) and decrease in summer precipitation (in the southern part) Increase in heat extremes Decrease in cold extremes Increase in heavy precipitation events Increase in sea surface temperatures Sea level rise (in line with global averages) Increase in salt water intrusion into rivers Increase in harmful algal blooms Biodiversity regime shifts
North West Europe	<ul style="list-style-type: none"> Increase in summer air temperature Increase in winter precipitation Increase in winter storms Increase in coastal and river floods Increase in storm surges Biodiversity regime shifts
Northern Periphery and Arctic	<ul style="list-style-type: none"> Large increase in air temperatures (above global average — ‘Arctic amplification’) Decline in extent of Arctic sea ice Decline in the Greenland ice sheet Decrease in permafrost areas Loss of unique ecosystems
Baltic Sea	<ul style="list-style-type: none"> Increase in air temperature (mainly in winters) Increase in winter precipitation Increase in sea surface temperatures Decrease in Baltic Sea ice extent

Climate change adaptation

	<ul style="list-style-type: none"> Sea level rise Increase in oxygen-depleted zones (already now the largest dead zone in the world) Increase in sea water acidification Increase in harmful algal blooms Biodiversity regime shifts
Danube	<ul style="list-style-type: none"> Increase in air temperatures Decrease in precipitation Increase in heat extremes and heat waves Increase in extreme precipitation events in winter (for the middle Danube basin) Increase in risk of storm-related heavy precipitation events (for the upper Danube basin) Increase in risk of river floods Decrease in overall water availability Increase in frequency of droughts (especially in the southern parts) Biodiversity regime shifts
Atlantic Area	<ul style="list-style-type: none"> Increases in air temperatures Increase in precipitation Increase in autumn and winter storms Increase in storm surges (except in the northern Atlantic coast) Increase in sea surface temperatures Sea level rise (in line with global averages) Increase in sea water acidification Biodiversity regime shifts
Alpine Space	<ul style="list-style-type: none"> Increase in air temperatures (above global and European averages) Increase in precipitation (mainly in the northern Alpine rim) and decrease in precipitation (in the southern Alpine rim) Increase in frequency of small-scale extreme precipitation events Increase in frequency of summer droughts Decrease in glacier extent, snow pack and annual duration of snow pack Changes in river flow regimes Increase in permafrost thawing and increasing slope instability Biodiversity regime shifts
Central Europe	<ul style="list-style-type: none"> Increase in air temperatures

Climate change adaptation

	<p>Decrease in summer precipitation and increase in winter precipitation</p> <p>Increase in frequency and/or intensity of heat extremes and heat waves</p> <p>Increase in frequency and/or intensity of droughts</p> <p>Increase in frequency and/or intensity of severe storms</p> <p>Increase in frequency and/or intensity of river floods</p> <p>Decrease in snow and ice coverage</p>
Adriatic-Ionian	<p>Increase in air temperatures</p> <p>Decrease in summer precipitation in the northern Adriatic</p> <p>Increase in frequency and intensity of heat waves</p> <p>Increase in frequency and intensity of droughts</p> <p>Biodiversity regime shifts</p>
Balkan-Mediterranean	<p>Increase in air temperatures</p> <p>Decrease in precipitation</p> <p>Increase in frequency and intensity of heat waves</p> <p>Increase in frequency of river floods</p> <p>Increase in frequency and intensity of droughts</p> <p>Sea level rise in the Black Sea</p>
South West Europe	<p>Increase in air temperatures (above global average)</p> <p>Decrease in precipitation</p> <p>Increase in heat waves</p> <p>Increase in frequency and intensity of droughts</p> <p>Increase in risk of desertification (decrease in water availability and river flows)</p> <p>Increase in frequency of forest fires</p> <p>Biodiversity regime shifts</p>
Mediterranean	<p>Increase in air temperature (larger than global averages)</p> <p>Decrease in precipitation</p> <p>Increase in duration and intensity of heat waves</p> <p>Increase in frequency and intensity of droughts</p> <p>Decrease in water availability and river run-offs</p> <p>Increase in sea surface temperatures</p> <p>Increase in sea water acidification</p> <p>Sea level rise</p> <p>Loss of biodiversity in the marine ecosystems</p>

Climate change adaptation

Source: ETC/CCA compilation based on the collection, review and analysis of relevant literature (2018) and consistent with Map ES.1 Key observed and projected climate change and impacts for the main biogeographical regions in Europe in the EEA report Climate change, impacts and vulnerability in Europe 2016 — An indicator-based report .

Table 2. Overview of the initiatives (EU macro-region strategies, international conventions and adaptation strategies and plans) relevant for climate change adaptation in 12 European transnational regions

North Sea:
<p>EU macro-regional strategy: none</p>
<p>International conventions: OSPAR Convention (1992) ¹²</p>
<p>Specific regional strategies and plans relevant for CCA:</p> <ul style="list-style-type: none"> • North Sea region 2020 strategy (2016) ³³ • Trilateral strategy for the resilience of the Wadden Sea (2014) ³⁵
North West Europe:
<p>EU macro-regional strategy: none</p>
<p>International conventions: OSPAR Convention (1992) ¹²</p>
<p>Specific regional strategies and plans relevant for CCA: none</p>

Climate change adaptation

Northern Periphery and Arctic:

EU macro-regional strategy:

none

International conventions:

OSPAR Convention (1992) ¹²

Specific regional strategies and plans relevant for CCA:

Action Plan on Climate Change for the Barents Co-operation ³⁶

Baltic Sea:

EU macro-regional strategy:

EUSBSR (2012) ⁸

International conventions:

Helsinki Convention (1992) ¹³

Specific regional strategies and plans relevant for CCA:

Baltadapt strategy for adaptation to climate change in the Baltic Sea region ³⁸

Danube:

EU macro-regional strategy:

EUSDR (2010) ⁹

International conventions:

- Danube River Protection Convention (1994) ¹⁴
- Carpathian Convention (2003) ¹⁷
- Alpine Convention (1991) ¹⁶
- Barcelona Convention (1995) ¹⁸
with its ICZM protocol (2008) ³¹
- Bucharest Convention (1992) ¹⁵

Specific regional strategies and plans relevant for CCA:

- Danube strategy on adaptation to climate change (ICPDR, 2012) ³⁰
- Danube river basin district management plan (2009, 2015) ^{46, 47}
- Danube flood risk management plan (2015) ⁴⁸
- Strategic agenda on adaptation to climate change in the Carpathian region (Carpathian Convention, 2014) ⁴¹

Climate change adaptation

Atlantic Area:
EU macro-regional strategy: none
International conventions: OSPAR Convention (1992) ¹²
Specific regional strategies and plans relevant for CCA: none

Alpine Space:
EU macro-regional strategy: EUSALP (2015) ¹¹
International conventions: Alpine Convention (1991) ¹⁶
Specific regional strategies and plans relevant for CCA: <ul style="list-style-type: none">• Alpine strategy for adaptation to climate change in the field of natural hazards (Planalp, 2013) ⁴³• Action plan on climate change in the Alps (Alpine Convention, 2009) ⁴²

Central Europe:
EU macro-regional strategy: EUSDR (2010) ⁹ EUSALP (2015) ¹¹ EUSAIR (2014) ¹⁰
International conventions: <ul style="list-style-type: none">• Danube River Protection Convention (1994) ¹⁴• Carpathian Convention (2003) ¹⁷• Alpine Convention (1991) ¹⁶• Helsinki Convention (1992) ¹³• Barcelona Convention (1995) ¹⁸ with its ICZM protocol (2008) ³¹
Specific regional strategies and plans relevant for CCA: <ul style="list-style-type: none">• Danube strategy on adaptation to climate change (ICPDR, 2012) ³⁰• Danube river basin district management plan (2009, 2015) ^{46, 47}• Danube flood risk management plan (2015) ⁴⁶• Strategic agenda on adaptation to climate change in the Carpathian region (Carpathian Convention, 2014) ⁴¹

Climate change adaptation

Adriatic-Ionian:

EU macro-regional strategy:

EUSAIR (2014) ¹⁰

International conventions:

- Barcelona Convention (1995) ¹⁸ with its ICZM protocol (2008) ³¹
- Alpine Convention (1991) ¹⁶
- Danube River Protection Convention (1994) ¹⁴

Specific regional strategies and plans relevant for CCA:

Regional climate change adaptation framework for the Mediterranean marine and coastal areas (Barcelona Convention, 2016) ³¹

Balkan-Mediterranean:

EU macro-regional strategy:

EUSDR (2010) ⁹
EUSAIR (2014) ¹⁰

International conventions:

Barcelona Convention (1995) ¹⁸ with its ICZM protocol (2008) ³¹

Specific regional strategies and plans relevant for CCA:

Regional climate change adaptation framework for the Mediterranean marine and coastal areas (Barcelona Convention, 2016) ³¹

South West Europe:

EU macro-regional strategy:

none

International conventions:

- OSPAR Convention (1992) ¹²
- Barcelona Convention (1995) ¹⁸ with its ICZM protocol (2008) ³¹

Specific regional strategies and plans relevant for CCA:

- Atlantic maritime strategy action plan (2013) ⁴⁹
- Regional climate change adaptation framework for the Mediterranean marine and coastal areas (Barcelona Convention, 2016) ³²

Climate change adaptation

Mediterranean:

EU macro-regional strategy:

EUSAIR (2014) ¹⁰

International conventions:

- Barcelona Convention (1995) ¹⁸ with its ICZM protocol (2008) ³¹
- Alpine Convention (1991) ¹⁶

Specific regional strategies and plans relevant for CCA:

Regional climate change adaptation framework for the Mediterranean marine and coastal areas (Barcelona Convention, 2016) ³¹

Notes: The initiatives (EU macro-regional strategies, international conventions, and specific regional strategies and plans relevant for CCA) are shown with their dates of establishment or adoption.

Source: ETC/CCA elaboration based on the collection, review and analysis of relevant literature (2018).



References

1. EC, 2013, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions — An EU Strategy on adaptation to climate change (COM(2013) 216 final of 16 April 2013).
2. EC, 2018, Report from the Commission to the European Parliament and the Council on the implementation of the EU Strategy on adaptation to climate change (COM(2018) 738 final of 12 November 2018).
3. EC, 2018 'Interreg B — Transnational cooperation' (http://ec.europa.eu/regional_policy/en/policy/cooperation/european-territorial/trans-national/) accessed 30 October 2018.
4. Eionet, 2016, 'ETC on climate change impacts, vulnerability and adaptation' (<https://cca.eionet.europa.eu/>) accessed 30 October 2018.
5. Eionet, 2018, Adaptation policies and knowledge base in transnational regions in Europe (https://cca.eionet.europa.eu/reports/TP_4-2018) accessed 22 November 2018.
6. EU, 2013, Regulation (EU) No 1299/2013 of the European Parliament and of the Council of 17 December 2013 on specific provisions for the support from the European Regional Development Fund to the European territorial cooperation goal (OJ L 347, 20.12.2013, p. 259-280).

Climate change adaptation

7. EC, 2018, 'Macro-regional strategies' (http://ec.europa.eu/regional_policy/en/policy/cooperation/macro-regional-strategies/) accessed 9 November 2018.
8. EC, 2012, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions concerning the European Union Strategy for the Baltic Sea Region (COM(2012) 128 final of 23 March 2012).
9. EC, 2010, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions — European Union Strategy for the Danube region (COM (2010) 715 final of 8 December 2010).
10. EC, 2014, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions concerning the European Union Strategy for the Adriatic and Ionian region (COM(2014) 357 final of 17 June 2014).
11. EC, 2015, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions concerning a European Union Strategy for the Alpine region (COM (2015) 366 final of 28 July 2015).
12. OSPAR, 1992, Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) (https://www.ospar.org/site/assets/files/1290/ospar_convention_e_updated_text_in_2007_no_revs.pdf) accessed 26 November 2018.
13. Helcom, 1992, Convention on the Protection of the Marine Environment of the Baltic Sea Area, 1992 (Helsinki Convention), Helsinki Commission (http://www.helcom.fi/Documents/About%20us/Convention%20and%20commitments/Helsinki%20Convention/1992_Convention_1108.pdf) accessed 26 November 2018.
14. ICPDR, 1994, Convention on Cooperation for the Protection and Sustainable Use of the Danube River (Danube River Protection Convention), International Commission for the Protection of the Danube River (<https://www.icpdr.org/main/icpdr/danube-river-protection-convention>) accessed 26 November 2018.
15. Black Sea Commission, 2009, 'The Convention: The Convention on the Protection of the Black Sea Against Pollution (Bucharest Convention)' (http://www.blacksea-commission.org/_convention.asp) accessed: 9 November 2018.
16. Alpine Convention, undated, 'Alpine Convention' (<http://www.alpconv.org/en/convention/default.html>) accessed 9 November 2018.

Climate change adaptation

17. Carpathian Convention, 2003, Framework Convention on the Protection and Sustainable Development of the Carpathians
( http://www.carpathianconvention.org/tl_files/carpathiancon/Downloads/01%20The%20Convention/1.1.1.1_CarpathianConvention.pdf) accessed 26 November 2018.
18. UNEP-MAP, 2018, 'Legal framework' (<http://web.unep.org/uneppmap/who-we-are/legal-framework>) accessed 13 November.
19. Climate-ADAPT, 2018, 'European Climate Adaptation Platform' (<https://climate-adapt.eea.europa.eu>) accessed 9 November 2018.
20. Common Wadden Sea Secretariat, 2018, 'Wadden Sea Climate Change Adaptation Platform' (<http://www.waddensea-secretariat.org/tgc/documents>) accessed 30 October 2018.
21. Common Wadden Sea Secretariat, 2018, 'The trilateral cooperation on the protection of the Wadden Sea' (<http://www.waddensea-secretariat.org>) accessed 14 November 2018.
22. CAPA|Eusalp, 2018, 'Climate Adaptation Platform for the Alps' (<https://www.capa-eusalp.eu/home>) accessed 5 November 2018.
23. Alpine Space Programme, 2018, 'Projects' (<http://www.alpine-space.org/2007-2013/projects/projects/detail/C3-Alps/show/index.html>) accessed 30 October 2018.
24. OPCC-CTP, 2018, 'Pyrenean Climate Change Observatory' (<https://opcc-ctp.org/en>) accessed 30 October 2018.
25. DMCSEE, 2018, 'Drought Management Centre for Southeastern Europe' (<http://dmcsee.org>) accessed 30 October 2018.)
26. IDMP, 2018, 'Integrated Drought Management Programme' (http://www.droughtmanagement.info/idmp-activities/idmp_cee/) accessed 30 October 2018.
27. ECRAN, 2018, 'Environment and Climate Regional Accession Network' (<http://www.ecranetwork.org>) accessed 30 October 2018.
28. Council of the Baltic Sea States, 2018, EUSBSR horizontal action climate (<http://www.cbss.org/strategies/horizontal-action-climate/>) accessed 30 October 2018.
29. Arctic portal, 2018, 'The Arctic gateway' (<https://arcticportal.org/>) accessed 30 October 2018.
30. International Commission for the Protection of the Danube River (ICPDR), 2013, 'ICPDR strategy on adaptation to climate change' ( https://www.icpdr.org/main/sites/default/files/nodes/documents/icpdr_climate-adaptation-strategy.pdf) accessed 26 Nov 2018.

Climate change adaptation

31. EC, 2016, 'Coastal zone policy: Protocol to the Barcelona Convention on integrated coastal zone management' (<http://ec.europa.eu/environment/iczm/barcelona.htm>) accessed 15 November 2018.
32. United Nations Environment Programme, 2016, (DEPI)/MED IG.22/28, Decision IG.22/6 Regional climate change adaptation framework for the Mediterranean marine and coastal areas (<https://wedocs.unep.org/rest/bitstreams/8384/retrieve>) accessed 26 November 2018.
33. CPMR North Sea Commission, 2018, 'North Sea region strategy 2020' (<https://cpmr-northsea.org/policy-work/north-sea-region-strategy-2020/>) accessed 13 November 2018.
34. CPMR North Sea Commission, 2018, 'CPMR North Sea Commission' (<https://cpmr-northsea.org/>) accessed 15 November 2018.
35. Common Wadden Sea Secretariat, 2018, 'Climate change' (<http://www.waddensea-secretariat.org/management/climate-change>) accessed 12 November 2018.
36. Barents Euro-Arctic cooperation, 2013, Action plan on climate change for the Barents cooperation (https://www.barentsinfo.fi/beac/docs/Environment_Ministers_Meeting_4_5_Nov_2013_Inari_Action_Plan_Climate_Change_ENG.pdf) accessed 26 November 2018.
37. Barents Euro-Arctic cooperation, 2017, Second edition of the action plan on climate change for the Barents cooperation (https://www.barentsinfo.fi/beac/docs/Action_Plan_on_Climate_Change_Second_Edition_2017.pdf) accessed 26 November 2018.
38. Andersson, L., 2013, Baltadapt strategy for adaptation to climate change in the Baltic Sea region: A proposal preparing the ground for political endorsement throughout the Baltic Sea Region, Danish Meteorological Institute, Copenhagen, Denmark.
39. Baltadapt, 2018, 'Baltadapt' (<http://www.baltadapt.eu/>) accessed 9 November 2018.
40. ICPDR, 2018, 'International Commission for the Protection of the Danube River' (<http://www.icpdr.org/main/>) accessed 13 November 2018.
41. Climate-Adapt, 2014, 'Strategic agenda on adaptation to climate change in the Carpathian region' (<https://climate-adapt.eea.europa.eu/metadata/guidances/strategic-agenda-on-adaptation-to-climate-change-in-the-carpathian-region>) accessed 15 November 2018.
42. Alpine Convention, 2009, Action plan on climate change in the Alps (ACX/B6) (http://www.alpconv.org/en/ClimatePortal/actionplan/Documents/AC_X_B6_en_new_fin.pdf).
43. Platform on Natural Hazards of the Alpine Convention (Planalp), 2012 'Alpine strategy for adaptation to climate change in the field of natural hazards' (<http://www.planat.ch/en/marketing-materials-detail-view/datum/2013/01/03/alpine-strategy-for-adaptation-to-climate-change-in-the-field-of-natural-hazards/>) accessed 13 November 2018.

Climate change adaptation

44. Alpine Convention, 2018, 'Natural Hazards Platform (Planalp)' (<http://www.alpconv.org/en/organization/groups/WGHazards/default.html>) accessed 13 November 2018.
45. EuroGeographics, 2015, Nomenclature of Territorial Units for Statistics (NUTS) 2013 - Statistical Units - Data set, (<http://ec.europa.eu/eurostat/web/gisco/geodata/reference-data/administrative-units-statistical-units/nuts#nuts13>), European Commission, Eurostat (ESTAT), GISCO; EuroGeographics for the administrative boundaries.
46. International Commission for the Protection of the Danube River (ICPDR), 2009, 'The Danube river basin district management plan' (<http://www.icpdr.org/main/activities-projects/danube-river-basin-management-plan-2009>) accessed 26 November 2018.
47. International Commission for the Protection of the Danube River (ICPDR), 2015, 'The Danube river basin district management plan — Update 2015' (<https://www.icpdr.org/main/activities-projects/river-basin-management-plan-update-2015>) accessed 26 November 2018.
48. International Commission for the Protection of the Danube River (ICPDR), 2015, 'Flood risk management plan for the Danube river basin district' (<https://www.icpdr.org/main/sites/default/files/nodes/documents/1stdfrmp-final.pdf>) accessed 26 November 2018.
49. CPMR Atlantic Arc Commission, 2018, 'The Atlantic strategy' (<https://cpmr-atlantic.org/policy-work/atlantic-strategy-task-forces/atlantic-strategy-cooperation/>) accessed 12 November 2018.

Identifiers

Briefing no. 17/2018

Title: Addressing climate change adaptation in transnational regions in Europe

PDF TH-AM-18-020-EN-N - ISBN 978-92-9480-046-6 - ISSN 2467-3196 - doi:10.2800/432641

HTML TH-AM-18-020-EN-Q - ISBN 978-92-9480-045-9 - ISSN 2467-3196 - doi:10.2800/153621

Published on 11 Dec 2018