

Climate-ADAPT profile

NOTE of INTEREST:

This document was published in 2018 reflecting the content and structure of the platform at that time. A slight reformulation of the structure, a complete updating of the web contents and a new layout of Climate-ADAPT was deployed in early 2019.

We are currently working in updating this document of the Climate-ADAPT profile; meanwhile the reader can find some of its content and snapshots out of date

Layout: EEA

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1 Climate-ADAPT in a nutshell

- Climate-ADAPT was launched in 2012 as a partnership between the European Commission (in particular DG CLIMA) and the EEA to overcome the lack of a consistent knowledge base on adaptation in Europe. The EU Adaptation Strategy recognised it as a key element for better-informed decision-making and emphasised its potential to act as the 'one-stop shop' for adaptation information in Europe (Action 5).
- Its intended target audience includes governmental decision-makers and the organisations supporting them in the development, implementation and evaluation of climate change adaptation strategies, plans and actions at EU, transnational, national and sub-national levels. Experts from EU-funded research projects and various governance levels acting on policy processes provide information to the platform.
- The main task of the platform is to inform its users about adaptation policy at EU level and provide an entry point to other sources of adaptation information in Europe.
- Climate-ADAPT is maintained by the EEA with the support of the European Topic Centre on Climate Change Impacts, Vulnerability and Adaptation (ETC/CCA).
- To ensure that it remains a trusted information source, it collaborates only with registered information providers and follows a quality assessment procedure based on clear eligibility criteria.
- The platform is promoted through a wide range of channels and supports capacity-building on adaptation, but also on maintaining adaptation platforms in Europe.

2 Introduction

The European Climate Adaptation Platform (Climate-ADAPT) ⁽¹⁾ is a partnership between the European Commission (the Directorate-General for Climate Action (DG CLIMA)), the Joint Research Centre (JRC) and other DGs and the European Environment Agency (EEA). Climate-ADAPT was launched in 2012 with the intention of helping a wide range of users access and share data and information in support of better-informed decision-making on adaptation. The European Union (EU) Adaptation Strategy recognised Climate-ADAPT as a key element for improving decision-making and emphasised its potential to act as the 'one-stop shop' for adaptation information in Europe (Action 5).

The purpose of this paper is to provide a thorough description of the Climate-ADAPT platform. After this short introduction (Chapter 1) and a brief presentation of the key characteristics of the platform (Chapter 2), the rest of this document is structured around two main aspects. Chapter 3 includes a succinct description of the Climate-ADAPT profile, providing information

on the mandate and the key objectives of the platform (Section 3.1); its structure and the way in which different types of information are published on it (Section 3.2); its intended target audience (Section 3.3); the way in which the platform is managed, those involved in this process and the roles they have (Section 3.4); and finally the key information providers (Section 3.5). Chapter 4 focuses on the presentation of the main content and functionalities of Climate-ADAPT and how these have evolved since the launch of the platform. This chapter is structured around the three main objectives that Climate-ADAPT aims to fulfil.

The information presented in this paper is expected to be of relevance and interest primarily to new users with limited experience of using Climate-ADAPT, platform managers and others working with knowledge platforms, and researchers and other stakeholders who wish to share information on Climate-ADAPT. However, its relevance and usefulness may extend beyond those groups.

⁽¹⁾ <http://climate-adapt.eea.europa.eu>

3 Climate-ADAPT profile

3.1 Mandate

Climate-ADAPT is a partnership between the European Commission, in particular DG CLIMA, and the EEA. It was launched in March 2012 with the aim of supporting Europe in adapting to climate change. More specifically, the objectives of Climate-ADAPT include:

- facilitating the collection, sharing and use of information on climate change impacts, vulnerability and adaptation (CCIVA), and building a consistent and updated knowledge base;
- encouraging the effective uptake of the relevant knowledge by decision-makers;
- contributing to a greater level of coordination among sectors and institutional levels (EEA, 2014).

In 2013, the European Commission adopted the EU Strategy on Climate Change Adaptation (EC, 2013), the development of which was supported by Climate-ADAPT. The Strategy sets out specific activities to encourage action by Member States to support better-informed decision-making and to promote adaptation in key vulnerable sectors in the EU. In this context, the Strategy acknowledges Climate-ADAPT as a key element for improving decision-making and emphasises its potential to act as the 'one-stop shop' for adaptation information in Europe (Action 5).

According to its mandate, however, Climate-ADAPT has to operate in a complementary way to other adaptation platforms (EEA, 2014). Its set-up and the development of weblinks to other governance levels (transnational regions, countries, cities), policy sectors (e.g. disaster risk reduction) and climate services (e.g. the Copernicus Climate Change Service (C3S)) were intended to ensure a complementary presentation of adaptation information, considering the mandates of all the

partners involved. The European Commission and the EEA collaborate continuously both to improve access to information and to establish weblinks between Climate-ADAPT and other relevant platforms.

3.2 Structure

Climate-ADAPT consists of two main components: (1) the web content and (2) the database. Both components were set up to support the development of a reliable knowledge base and to facilitate its uptake by users across Europe.

The first component, the web content, focuses primarily on providing information on adaptation in Europe. It contains mainly textual content organised under four main entry points (sections) in the main navigation bar (Figure 3.1 and Table 3.1). The 'EU policy' page covers the European perspective on adaptation, providing information relevant to the EU Adaptation Strategy, the different policy sectors, funding opportunities and the Covenant of Mayors for Climate and Energy including the EU urban adaptation initiative 'Mayors Adapt'. The 'Countries, regions and cities' page relates to the geographical dimension and provides information on adaptation at different governance levels (transnational, national, and cities and towns). The 'Knowledge' page provides information and tools relevant to the stages of the adaptation policy cycle. Finally, the 'Network' page aims to enhance cooperation by providing links to key partners at all governance levels (e.g. institutions, global platforms). Furthermore, the website includes 'About' and 'Help' pages, where users can find a brief introduction to Climate-ADAPT and guidance and support material (e.g. FAQs and tutorials) respectively. Information on adaptation 'Events', 'News' about the platform and the Climate-ADAPT newsletter archive can be accessed via a section of the main content column of the Climate-ADAPT home page.

Figure 3.1 Home page of the European Climate Adaptation Platform (Climate-ADAPT)

Climate-ADAPT - Sharing adaptation information across Europe

European Climate Adaptation Platform

Search:

Log in

About Database EU policy Countries, regions, cities Knowledge Network Help

Covenant of Mayors for Climate & Energy

Covenant of Mayors: Promoting local leadership in climate change adaptation and mitigation

The Covenant of Mayors Initiative has been set up by the European Commission to engage cities in taking action on climate change adaptation and mitigation. It provides a platform to support adaptation measures, networking and public awareness at the local level where the impacts of climate change will be felt most.

[Want to join the initiative?](#)

Adaptation support tool

New to adaptation? Use the Adaptation Support Tool

What are European countries doing?

Choose a country

Find case studies on adaptation in Europe

Share your information

News

- 16 May 2018, Global temperature rise of 2°C doubles the population exposed to multiple climate risks compared to a 1.5°C rise
- 24 Apr 2018, EEA report on adapting to climate change: European countries assess vulnerability and risks
- 19 Apr 2018, LIFE launches 2018 call for action grants

[» More news](#)

Events

- 05 Jul 2018, Putting the Basque Declaration into Practice: Supporting city climate adaptation with the RESIN tools
- 19 Oct 2018, SISC Sixth Annual Conference - Recent trends in climate sciences, adaptation and mitigation
- 07 Sep 2018, European Conference for Applied Meteorology and Climatology - Annual Meeting 2018

[» More Events](#)

Newsletter

Check the European Climate Adaptation Newsletter and register to receive it in your e-mail

Latest updates

Check the latest updates in the content of the Platform.

- Copernicus Climate Change Service
- Updated Country page of Bulgaria
- Urban Adaptation Support Tool

EU Sector Policies

EU Funding and Adaptation

Life Climate Action

ESI funds

H2020

EU Climate Policy

EC Climate Action

EEA Climate Change topic

Source: Climate-ADAPT (<http://climate-adapt.eea.europa.eu/>), accessed 25 May 2018.

Table 3.1 Climate-ADAPT web content: main entry points (sections) and sub-sections

Sections	Sub-sections
EU policy	i. Introduction ii. EU Adaptation Strategy iii. EU mainstreaming in sector policies iv. EU funding of adaptation v. Covenant of Mayors
Countries, regions and cities	i. Introduction ii. Transnational regions iii. Cities and towns iv. Country Information
Knowledge	i. Introduction ii. Adaptation information Introduction Observations and scenarios Copernicus Climate Change Services Vulnerabilities and risks Adaptation options Adaptation Strategies Research Projects iii. Tools Introduction Adaptation Support Tool Case Study search tool Uncertainty guidance Map Viewer Urban adaptation support tool Urban vulnerability Map book Guidelines for project managers Additional tools
Network	i. Introduction ii. Organisations iii. Global Platforms

Source: Adapted from Karali et al. (2016).

The second component, the 'Database', which is also available from the home page, aims to share information on adaptation in Europe by guiding users to the relevant external resources, but also to enable users to access information from these resources in relation to various policy contexts on the Climate-ADAPT pages. It contains information on adaptation from reliable, external information sources

in a structured way, broken down into ten types of knowledge resources. The database provides easy access to all relevant sources of information, offering tailored search criteria and allowing a quick overview by screening the metadata available for each information source.

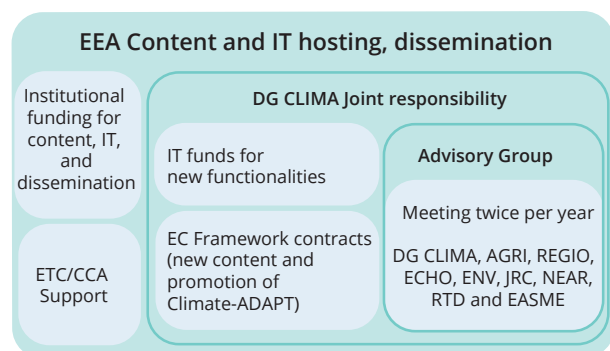
3.3 Intended target audience

Governmental decision-makers, as well as the organisations supporting them in the development, implementation and evaluation of climate change adaptation strategies, plans and actions at EU, transnational, national and sub-national levels, comprise the primary target audience for Climate-ADAPT. While in reality the platform has a wider spectrum of users, including businesses and non-governmental organisations, practitioners and other interested citizens, to mention just a few, to date decisions on the priority areas of the platform have been made considering the needs of the intended target audience described above. In terms of geographical scope, Climate-ADAPT initially covered the 33 EEA member countries: the 28 EU Member States and Iceland, Liechtenstein, Norway, Switzerland and Turkey (EEA, 2014). The group of countries considered intended target countries was later extended to include the EEA cooperating countries ^(?).

3.4 Management

The EEA and DG CLIMA have common ownership of Climate-ADAPT. Nevertheless, differences exist in terms of their roles and the tasks in which they are involved (Figure 3.2). DG CLIMA provides financial support for developing the functionalities of the platform as well as new content based on DG CLIMA-funded projects. The EEA provides human and financial resources to ensure the maintenance of and regular updates to the platform. ETC/CCA experts support the EEA in these tasks.

^(?) The EEA has six cooperating countries: Albania, Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia, Montenegro and Serbia, as well as Kosovo (under United Nations Security Council Resolution 1244/99) (<http://www.eionet.europa.eu/countries>).

Figure 3.2 The approach to governance of Climate-ADAPT

Note: DG CLIMA, Directorate-General for Climate Action; AGRI, Directorate-General for Agriculture and Rural Development; REGIO, Directorate-General for Regional and Urban Policy; ECHO, Directorate-General for European Civil Protection and Humanitarian Aid Operations; ENV, Directorate-General for Environment; NEAR, Directorate-General for European Neighbourhood Policy and Enlargement Negotiations; RTD, Directorate-General for Research and Innovation; EASME, Executive Agency for Small and Medium-sized Enterprises; EC, European Commission.

Source: EEA.

Moreover, Climate-ADAPT has a dedicated advisory group, which provides strategic direction regarding the development of the platform, including advice on the work plan and the definition of priority actions. Members of the advisory group meet two or three times a year. The roles of the individual members are described below.

- DG CLIMA chairs the advisory group, ensures the alignment of Climate-ADAPT with the EU Adaptation Strategy, coordinates contributions from the European Commission and exchanges information with the EU Member States through the Working Group on Adaptation under the EU Climate Change Committee.
- The EEA is in charge of the day-to-day management of the platform in terms of content, IT and dissemination. The EEA (supported by ETC/CCA) reports on progress made in terms of the regular management and maintenance of Climate-ADAPT, revises the work plan in collaboration with DG CLIMA when needed, and exchanges information with the European Environment

Information and Observation Network (Eionet) National Reference Centres (NRCs) on CCIVA.

- The JRC provides relevant published content and aims to achieve consistency and synergies between activities performed by the JRC and the platform.
- The Directorate-General for Environment (DG ENV) provides information on relevant projects funded by it and advises on considers appropriate links to the Biodiversity Information System for Europe and the Water Information System for Europe (both maintained by the EEA).
- The Directorate-General for Research and Innovation (DG RTD) provides information on relevant EU-funded (Horizon 2020) programmes and projects and aims to achieve consistency and synergies between the platform and its general activities.
- The Executive Agency for Small and Medium-sized Enterprises (EASME) provides information on relevant LIFE and Horizon 2020 programmes and projects and aims to achieve consistency and synergies with their general activities.

The Climate-ADAPT work plan forms part of the EEA's annual work programmes and its 2014-2018 multiannual work programme (EEA, 2013). A medium-term work plan for the platform development during 2013-2018 has been prepared jointly by the EEA and DG CLIMA (EEA, 2014), and the ETC/CCA annual action plans describe the specific tasks in which each ETC/CCA expert will be involved to support the EEA in maintaining, developing and promoting the platform.

3.5 Information providers

The EEA, supported by ETC/CCA experts, has the main responsibility for the preparation and updating of content published on Climate-ADAPT. To keep track of the increasing wealth of adaptation information and knowledge that continuously becomes available, a systematic process has been set up. It is characterised by strong involvement from external information providers in addition to EEA and ETC/CCA experts.

Specifically, the EEA has reached out to a pool of possible contributors, inviting them to support this process (see Figure 4.1). Currently, key information providers include:

- **Countries:** the EU Member States provide official governmental reporting on adaptation under Article 15 of the Monitoring Mechanism Regulation (MMR) (EU, 2013) (as agreed in the Working Group on Adaptation). The European Commission has developed specific guidelines to allow the use of this information for multiple purposes, including updating the 'Country information' pages of Climate-ADAPT ⁽³⁾. National ministries, through nominated reporters, manage the content of the MMR reports. EEA member countries may provide additional submissions on a voluntary basis.
- **Transnational organisations/conventions:** the EEA provides and updates a section 'Transnational regions', explaining the policy framework and actions under which adaptation activities are carried out in EU transnational regions, as set out in the EU Macroregional cooperation programme 2014-2020 (Directorate-General for Regional and Urban Policy (DG REGIO)) ⁽⁴⁾. Detailed information on adaptation is currently provided by two transnational-level organisations for the Baltic Sea Region ⁽⁵⁾ and the area of the Carpathian Convention ⁽⁶⁾.
- **Networks of cities and the Covenant of Mayors:** the EEA provides and updates a section presenting the policy framework and actions that support urban adaptation in Europe ⁽⁷⁾. Networks of cities at European level, such as ICLEI (Local Governments for Sustainability) ⁽⁸⁾, share their knowledge by submitting database items on urban adaptation. The EU Mayors Adapt initiative, merged with the Covenant of Mayors for Climate and Energy in 2015 ⁽⁹⁾, developed and updates the Urban Adaptation Support Tool ⁽¹⁰⁾. Profiles of signatory cities to the Mayors Adapt initiative ⁽¹¹⁾ were last submitted to Climate-ADAPT in 2016. A decision on future updates to these two features will be made in 2018.
- **Research community:** individual researchers, usually the coordinators of EU-funded research project consortia, share information by submitting database items on Research and knowledge projects and projects' outputs. Detailed descriptions of selected projects are provided on the 'Knowledge — Research projects' page ⁽¹²⁾. In addition, representatives of nationally funded projects have been asked to include their projects into the Climate-ADAPT database where their projects were considered highly relevant to Climate-ADAPT.
- **Directorate-Generals:** DG CLIMA and other DGs (e.g. DG REGIO, DG ENV and the Directorate-General for Enterprise and Industry (DG ENTR)) share information and the results of relevant projects that they fund through the submission of new database items. DGs play an important role in updating the content of the EU sectoral policy sections.
- **Joint Research Centre:** until 2016, the JRC was responsible for maintaining the data visualised by the 'Map Viewer' ⁽¹³⁾, available on the 'Knowledge — Tools' page of Climate-ADAPT.
- **Other stakeholders:** individual stakeholders, who register as providers by obtaining an Eionet account ⁽¹⁴⁾, can submit any type of database item (publications and reports, information portals, guidance documents, tools, research and knowledge projects, adaptation options, case studies, organisations) through the 'Share your information' page.

⁽³⁾ <http://climate-adapt.eea.europa.eu/countries-regions/countries>

⁽⁴⁾ <http://climate-adapt.eea.europa.eu/countries-regions/transnational-regions>

⁽⁵⁾ <http://climate-adapt.eea.europa.eu/countries-regions/transnational-regions/baltic-sea-region/adaptation/general>

⁽⁶⁾ http://climate-adapt.eea.europa.eu/countries-regions/transnational-regions/carpathian-mountains/general/index_html

⁽⁷⁾ <http://climate-adapt.eea.europa.eu/countries-regions/cities>

⁽⁸⁾ <http://www.iclei.org>

⁽⁹⁾ <https://www.covenantofmayors.eu/support/adaptation-resources.html>

⁽¹⁰⁾ <http://climate-adapt.eea.europa.eu/knowledge/tools/urban-ast/step-0-0>

⁽¹¹⁾ <http://climate-adapt.eea.europa.eu/eu-adaptation-policy/covenant-of-mayors>

⁽¹²⁾ <http://climate-adapt.eea.europa.eu/knowledge/adaptation-information/research-projects>

⁽¹³⁾ <http://climate-adapt.eea.europa.eu/knowledge/tools/map-viewer>

⁽¹⁴⁾ For more information on how to acquire an Eionet account, please see Section 4.1.2 of this report.

4 Climate-ADAPT content and functionalities

The overall design and maintenance system of Climate-ADAPT were set up and further developed to support the three main objectives of the platform (as outlined in Section 3.1). This chapter summarises the activities that have been performed to date to achieve each of these objectives.

4.1 Facilitate the collection, sharing and use of information on CCIVA, and build a consistent and updated knowledge base

4.1.1 Content of Climate-ADAPT

The first objective of Climate-ADAPT is to facilitate the collection, sharing and use of information on CCIVA, and build a consistent and up-to-date knowledge base. Information published on the platform relates to specific thematic areas, which include:

- observed and expected climate change impacts;
- vulnerabilities and risks of regions and sectors at present and in the future;
- national and transnational adaptation strategies;
- cities' adaptation initiatives;
- examples of adaptation implemented in practice (case studies) and potential adaptation options ⁽¹⁵⁾;
- tools supporting adaptation planning, implementation, monitoring and evaluation;
- overview of relevant EU policy frameworks and processes, including funding.

Rather than being solely a repository of data and information, Climate-ADAPT acts as an entry point to multiple sources of information, thus providing comprehensive information for the whole of Europe. As a result, a large part of the information published on the platform points to external knowledge sources and web pages (e.g., on the 'Research projects' pages ⁽¹⁶⁾). A considerably smaller proportion of the content has been produced by the platform owners (e.g. on the 'EU sector policies' pages ⁽¹⁷⁾, on the 'Tools' pages ⁽¹⁸⁾, and the 'Adaptation options' ⁽¹⁹⁾) or is under the direct ownership of the collaborating information providers (e.g. on the 'Country information' pages ⁽²⁰⁾ and the 'Transnational regions' pages with detailed content on adaptation for the Baltic Sea Region and the Carpathian Convention ⁽²¹⁾). For example, the results of key EU-funded research projects are systematically presented on the platform with input provided by representatives of the research community, while various actors have provided material for inspiring case studies, offering examples of implemented adaptation actions.

Finally, in line with its mandate, information provided on Climate-ADAPT has a European focus. Nevertheless, the usefulness and relevance of this information are not necessarily restricted to Europe. English is the official language in which information is presented on the platform. In some cases, however, and when a summary in English is available, weblinks to resources in other languages are included.

4.1.2 Provision of information and quality assurance

The EEA applies a systematic and practical approach to selecting the relevant information to be added to and shared through Climate-ADAPT from the continuously

⁽¹⁵⁾ The provision of benchmarks is beyond the scope of the platform (e.g. benchmarks for best-practice case studies, any scoring of research results or climate change maps).

⁽¹⁶⁾ <http://climate-adapt.eea.europa.eu/knowledge/adaptation-information/research-projects>

⁽¹⁷⁾ <http://climate-adapt.eea.europa.eu/eu-adaptation-policy/sector-policies/agriculture> (the agriculture policy is provided only as an example).

⁽¹⁸⁾ <http://climate-adapt.eea.europa.eu/knowledge/tools/adaptation-support-tool> (the Adaptation Support Tool is provided only as an example).

⁽¹⁹⁾ <http://climate-adapt.eea.europa.eu/knowledge/adaptation-information/adaptation-measures>

⁽²⁰⁾ <http://climate-adapt.eea.europa.eu/countries-regions/countries/austria> (Austria is provided only as an example).

⁽²¹⁾ <http://climate-adapt.eea.europa.eu/countries-regions/transnational-regions>

growing wealth of information available on adaptation in Europe.

In the case of the web content, which is based on information collected in the context of various policy processes (e.g. the submission of country information under the MMR), quality assurance is carried out according to the specific circumstances of the individual processes. The frequency with which updates take place varies across the sections, ranging from ad hoc updates based on the availability of new knowledge (e.g. for most of the knowledge sections) to regular annual updates (e.g. for the 'Country information' pages).

The Climate-ADAPT 'Database' is systematically updated on a monthly basis, using information submitted by various providers (see Section 3.5 of this report) and through various processes. Information is selected following a set of predetermined and agreed criteria (Box 4.1) to ensure both the suitability of items and the quality of their metadata.

Box 4.1 Selection criteria for the inclusion of items in the Climate-ADAPT database

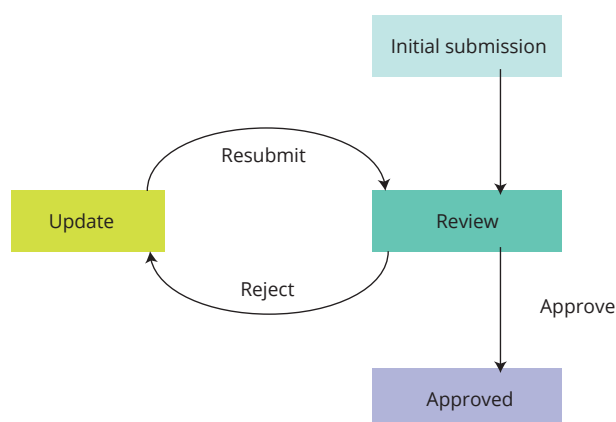
- Direct relevance to CCIVA.
- Relevance to the European level.
- Free online accessibility to all users in Europe.
- Information available in English or including a summary in English if the main material is available only in another language.
- Language of the resource understandable to the Climate-ADAPT target audience.

EEA and ETC/CCA experts review all content submitted for publication to verify its relevance to the platform, following a transparent criteria-based process (Figure 4.1). The Climate-ADAPT team checks whether

or not the criteria for the selection of content, as well as the procedures and criteria for metadata submission, have been followed. Nevertheless, as the quality of the items submitted remains the responsibility of the organisation producing the original material, information providers are expected to follow their own quality assurance processes (e.g. peer review procedures) before they submit an item for review.

In addition, EEA and ETC/CCA experts collaborate regularly with information providers to ensure the reliability, relevance and coverage of the information under the eligibility criteria for Climate-ADAPT. The preparation of specific content (e.g. country profiles, case studies, key research projects) often requires frequent interaction among all the experts involved until the desired outcome is achieved. Finally, to ensure that Climate-ADAPT remains a trusted source of information, the EEA and the ETC/CCA work only with registered information providers who have an Eionet account ⁽²²⁾.

Figure 4.1 Schematic representation of the submission process for Climate-ADAPT database items



Note: The figure shows the process for submitted items prior to their publication in the Climate-ADAPT database in a simplified way. The technical details of the approval procedure have been omitted.

Source: EEA.

⁽²²⁾ Through Eionet, the EEA coordinates the delivery of timely, nationally validated, high-quality environmental data from individual countries. This forms the basis of integrated environmental assessments and knowledge that are disseminated through the EEA (<http://www.eionet.europa.eu/about>) accessed 15 October 2017.

4.2 Encourage the effective uptake of the relevant knowledge by decision-makers

The technical set-up of Climate-ADAPT (Table 4.1) was guided by the need to encourage the effective uptake of the relevant knowledge by decision-makers. Decisions on the IT architecture of the platform at the time of its launch, as well as its further development during the implementation of the EU Adaptation Strategy (EC, 2013), were based on recommendations made by key stakeholders.

Table 4.1 Characteristics of the IT architecture of Climate-ADAPT

Content Management System	<ul style="list-style-type: none"> • Liferay 6.2 (until May 2016) • Plone 4.3.7 (from June 2016)
Database	<ul style="list-style-type: none"> • Zope Object Database (ZODB 2.13)
Maps	<ul style="list-style-type: none"> • Hosted on ArcGIS and shown on the site through iframes • Data back end is managed and stored via feature manipulation engine (FME) server (from safe.com) and ArcGIS server
Information provider registration	<ul style="list-style-type: none"> • Via Eionet applying a user identification directory • EEA Lightweight Directory Access Protocol (LDAP)

The choice of the content management system (CMS) and the design of the functionalities are intended to create a user-friendly structure and layout that can be managed and maintained within the Climate-ADAPT budget. Because of the unique purpose of Climate-ADAPT, to share knowledge across Europe through links to other sources of information, the platform was launched using a stand-alone technical solution applying the Liferay 6.2 CMS. To overcome the technical limitations of this system and allow the use of additional functionalities (e.g. faceted search) and to benefit from the IT work carried out for all EEA websites, in mid-2016 Climate-ADAPT was migrated to the Plone 4.3.7 CMS. A set of specific features was used to encourage the uptake of the information on Climate-ADAPT, determined by users' needs and capabilities (Box 4.2).

Box 4.2 From information to knowledge — means of visualising information on Climate-ADAPT

- Descriptive information (articles) mainly on policies and knowledge, including links to the most important information sources (e.g. the 'EU sector policies' pages and 'Transnational regions' pages with detailed information on adaptation).
- A searchable 'Database', structured by metadata categories, and organised in metadata sheets describing external sources of adaptation information.
- Fact sheets with information based on official reporting for the EEA member countries, including links to sources available in national languages (i.e., individual 'Country information' pages).
- Interactive tools that can be used for the co-creation of knowledge (e.g. the 'Urban Vulnerability Map Book').
- 'Newsletter'; i.e., archive of the information sent out by email on a bimonthly basis to subscribed users (European Climate Adaptation Newsletter).

Source: EEA.

The main Climate-ADAPT features (Figure 4.2) are available on most pages of the website, in particular on all the pages related to factual information on adaptation knowledge, policies and the main 'Adaptation Support Tool'. They are:

- descriptive text, shown in the main content column (centre of the page);
- links to the most relevant information sources available on various websites in Europe, including the EEA website (e.g. indicators, resources and multimedia), retrieved from the Climate-ADAPT database and shown in portlets at the bottom of the main content column;
- a complete list of all database items related to the content of the page, shown in the green box in 'Search results' panel on the right-hand side of the page.

Figure 4.2 Most common features of Climate-ADAPT content

Source: EEA.

To meet their individual needs, which often evolve over time, users and information providers have made specific requests to improve existing functionalities on the platform or introduce new ones. The EEA and DG CLIMA have responded to this feedback by implementing some of the recommendations collected, taking into account existing priorities and available resources for Climate-ADAPT maintenance and further development. Examples of such functionalities are listed in Box 4.3.

4.3 Contribute to more coordination across governance scales and among sectors

The importance of promoting collaboration across governance scales and among sectors through Climate-ADAPT and of establishing links between them was underlined both in the EEA report on adaptation platforms (EEA, 2015) and in the 2016 EEA expert workshop on climate change adaptation platforms (EEA, 2016). Establishing linkages between adaptation platforms will facilitate the complementary

Box 4.3 Climate-ADAPT functionalities improved or developed in response to user feedback

- Database search functions using filter criteria and keywords; search results downloadable as PDF files.
- Interactive map-based search functions for quick access to various features, e.g., to 'Case studies' and country, city and transnational adaptation policy information.
- Interactive 'Map Viewer' for spatial climate change information, generated through EU funded research and available from external platforms.
- Use of time series of the spatial distribution of climate variables ('Time Series Tool').
- Co-creation of knowledge (creation of user-specific maps using the 'Urban Vulnerability Map Book').
- Linked data (RDF) to allow the visualisation of data from related websites (export of data as PDF files).

presentation of adaptation knowledge and the exchange of experiences, offering mutual benefits to the platforms involved. The nature of such linkages can at first involve simple web links that redirect users to other portals and platforms of interest and relevance. Collaboration can be further enhanced, however, by making stronger institutional connections, providing clear incentives, identifying priority areas that could be of common interest and ensuring the regular and timely communication of information on these areas to potentially interested partners (EEA, 2015; Karali et al., 2016).

To achieve this objective, the following activities have been set up:

- **Weblinks to other platforms relevant for adaptation in Europe**

In its current version, the Climate-ADAPT database includes 144 items directing users to the information portals of key stakeholders working on adaptation (as of 16 February 2018). Many of the items refer to the national adaptation platforms of European countries and platforms referring to transnational regions. Furthermore, in the 'Network' section of the Climate-ADAPT website, users can find weblinks to a number of global-level platforms (e.g. weAdapt, the World Bank Climate Change Knowledge Portal, the Programme of Research on Climate Change Vulnerability, Impacts and Adaptation (PROVIA), the PREVIEW Global Risk Data Platform (United Nations Environment Programme) and AfricaAdapt). In addition, weblinks have been set up to organisations providing knowledge on the steps in the adaptation policy cycle, for example to C3S⁽²³⁾, offering access to climate data. Furthermore, web links to key actors in the EU policy fields are provided on the 'EU sector policies' pages, for example to the Directorate-General for Maritime Affairs and Fisheries' page on marine spatial planning from the 'Coastal areas' page⁽²⁴⁾. Web links to the most relevant providers of research results are provided in a systematic way on the 'Research projects' pages⁽²⁵⁾.

- **Weblinks to key resources relevant for adaptation in Europe**

Cooperation across scales and sectors is also supported by providing direct access to resources presented on

other platforms at all governance levels in Europe through the Climate-ADAPT 'Database'. The database enables the user to search these sources using filters and keywords, and allows screening of the information sources through the provision of metadata.

- **Regular promotion of Climate-ADAPT**

Climate-ADAPT has been promoted through a variety of initiatives, some of which were aimed specifically at fostering collaboration across transnational, national and municipal levels, or at developing synergies across relevant sectors (e.g. disaster risk reduction, water management, marine and fisheries, etc.), including the evolving climate services (C3S). To assist the better uptake of the information presented on Climate-ADAPT, various types of communications have been set up and developed by the EEA and ETC/CCA, including a regular newsletter, printed material such as flyers and business cards, and material developed through DG CLIMA service contracts (e.g. fact sheets and tutorial videos). Furthermore, online presentations on the use of the platform from various perspectives (national, transnational and sectoral) are available on the home page. Several background papers and an EEA technical report highlight various aspects of Climate-ADAPT. Furthermore, DG CLIMA has funded service contracts to promote Climate-ADAPT and improve the uptake of information by countries and sectors, through projects on science policy forums (2014) and communities of practice (2016). The following paragraphs provide a brief description of the aforementioned activities; readers can find additional information in the works cited and on the relevant web pages.

- **Bimonthly newsletter**

Since January 2015, the EEA has been publishing the bimonthly European Climate Adaptation Newsletter. The newsletter provides new information on EU policies and EEA activities, research and assessments, and transnational, national and local activities, as well as providing an overview of adaptation-related events. Furthermore, it has a dedicated section presenting new developments in relation to Climate-ADAPT. Currently, about 4 000 people subscribe to the newsletter (as of March 2018). In addition to being sent to subscribers, the newsletter can also be found in the 'Newsletter' section on the platform⁽²⁶⁾ (Figure 4.3).

⁽²³⁾ <http://climate-adapt.eea.europa.eu/knowledge/adaptation-information/climate-services>

⁽²⁴⁾ <http://climate-adapt.eea.europa.eu/eu-adaptation-policy/sector-policies/coastal-areas>

⁽²⁵⁾ <http://climate-adapt.eea.europa.eu/knowledge/adaptation-information/research-projects>

⁽²⁶⁾ Newsletters can be found online on the 'Newsletter' page (<http://climate-adapt.eea.europa.eu/newsletter>). This is also where people can sign up to receive the newsletter.

Figure 4.3 Screenshot of the Climate-ADAPT bimonthly newsletter



Source: EEA.

• Annual Eionet workshops on CCIVA

The Eionet workshops aim to provide an annual update on the ongoing and planned work carried out by the EEA, the European Commission, European organisations — e.g., the World Health Organization Europe, the European Centre for Disease Prevention and Control, the European Centre for Medium-Range Weather Forecasts, the European Investment Bank and the Organisation for Economic Co-operation and Development (OECD) and the Programme of Research on Climate Change Vulnerability, Impacts and Adaptation (PROVIA), by international organisations, e.g., the United Nations Office for Disaster Risk Reduction — and EEA member countries (represented by their NRCs) in the field of CCIVA and to encourage discussion among the participants on key topics of interest. Progress on the development of Climate-ADAPT and priorities for its future development are presented and discussed in this context. Reports summarising the highlights of the workshops are publicly available ⁽²⁷⁾.

• Adaptation platforms expert workshops

During 2013-2016, the EEA (co-)organised four expert workshops on adaptation platforms, involving numerous experts from various countries and transnational regions, sectors (e.g. disaster risk reduction) and knowledge areas (e.g. climate service provision). Workshops had different but linked focuses and provided participants with a unique opportunity to exchange knowledge and experiences and take part in learning, problem-solving and networking. Moreover, the workshops helped the EEA assess if Climate-ADAPT is complementary to other platforms and how it could be made more so. A brief description of the aims of each of the four expert workshops follows.

1. The national adaptation platforms experts' meeting ⁽²⁸⁾ (19 June 2013, Copenhagen) aimed to enable an exchange of experiences and lessons learned about the management of existing national web-based platforms on climate change adaptation and to facilitate a discussion on future developments and possible ways of increasing the complementarity of Climate-ADAPT.
2. Adaptation Platforms in Europe: Addressing Challenges and Sharing Lessons ⁽²⁹⁾ (7-8 November 2013, Vienna) was intended to provide an opportunity for platform managers and developers to explore progress achieved, and share experiences and challenges associated with the development and delivery of adaptation platforms at all governance levels.
3. The expert workshop on climate change adaptation platforms ⁽³⁰⁾ of 23 June 2014, held in Copenhagen, aimed to continue the sharing of experiences relevant to the development and implementation of adaptation platforms and the establishment of links to Climate-ADAPT. Breakout discussions focused on (1) funding climate change adaptation platforms; (2) links between platforms on climate change adaptation, disaster risk reduction and climate services; and (3) links between national climate change adaptation platforms and Climate-ADAPT. The workshop also explored links with knowledge base systems on disaster risk reduction and climate change services.

⁽²⁷⁾ <https://forum.eionet.europa.eu/nrc-climate-change-adaptation/library/workshops-meetings>

⁽²⁸⁾ <https://forum.eionet.europa.eu/nrc-climate-change-adaptation/library/workshops-meetings/eionet-workshop-climate-change-impacts-vulnerability-and-adaptation/agendas/expert-meeting-19-june>

⁽²⁹⁾ [http://www.circle-era.eu/np4/%7B\\$clientServletPath%7D/?newId=388&fileName=REPORT_Adaptation_Platforms_in_Europe_re.pdf](http://www.circle-era.eu/np4/%7B$clientServletPath%7D/?newId=388&fileName=REPORT_Adaptation_Platforms_in_Europe_re.pdf)

⁽³⁰⁾ <https://forum.eionet.europa.eu/nrc-climate-change-adaptation/library/workshops-meetings/expert-workshop-climate-change-adaptation-platforms>

4. The expert workshop on climate change adaptation platforms ⁽³¹⁾ of 16 June 2016, held in Copenhagen, aimed to offer an opportunity to share experiences about the development and operation of adaptation platforms in Europe and to explore the interaction between Climate-ADAPT and transnational and national platforms, as well as possible improvements in terms of their quality and relevance for their intended users. Breakout discussions focused on (1) understanding, communicating with and engaging with users; (2) selecting and presenting knowledge; and (3) monitoring and evaluating platforms' quality and relevance. Participants also discussed progress, developments and possible future steps in relation to key challenges and opportunities for adaptation platforms.

• Webinars

In response to the recognised need for more regular and direct exchange of views and information on Climate-ADAPT, the EEA, in collaboration with DG CLIMA, has organised webinars to engage with the European climate change adaptation research community, NRCs, experts from the European Commission, international organisations, and representatives of transnational initiatives and networks of cities working on adaptation. The webinars are intended to increase transparency of the platform's development and collect feedback on the current functioning and content of and plans for Climate-ADAPT from a range of users and providers.

To date, three webinars have been organised ⁽³²⁾. The first took place in April 2015 and was focused on the status of Climate-ADAPT, the plans for its further development and the ways in which countries could develop case studies ⁽³³⁾. The second webinar, held in December 2015, focused on how best to involve information providers, including EU-funded research projects, other EU projects (such as LIFE+ and Interreg), and international organisations. The last webinar was held in January 2017. It focused on the existing monitoring, reporting and evaluation activities undertaken in relation to Climate-ADAPT, and explored how these activities might fit with the comprehensive evaluation of Climate-ADAPT planned for 2017 ⁽³⁴⁾.

• Publications

In response to the wider acknowledgement of web-based adaptation platforms as an effective means of collecting and sharing experiences and knowledge among interested stakeholders, in 2015, the EEA published a technical report on adaptation platforms, Overview of climate change adaptation platforms in Europe. This report presents the state of play with regard to adaptation platforms in Europe, including 14 national, three transnational adaptation platforms, and Climate-ADAPT. Moreover, the report identifies and explores the main challenges, reflections and lessons learned related to seven thematic categories: (1) funding and platform maintenance; (2) understanding, communicating and engaging with users; (3) identifying and maintaining relevant information; (4) presenting relevant knowledge and information; (5) selecting the design, technical and structural elements of a platform; (6) establishing links across sectors, scales and platforms; and (7) monitoring, evaluating and improving platforms.

• Conferences

Climate-ADAPT is promoted through European and international conferences on adaptation to showcase recent developments on the platform, to facilitate the exchange of knowledge and learning, and to collect users' feedback on its content and functionalities. To date, Climate-ADAPT has been promoted at:

- the Second European Climate Change Adaptation Conference ⁽³⁵⁾ (12-14 May 2015, Copenhagen), with a workshop on users' feedback on climate change adaptation platforms;
- Adaptation Futures 2016 ⁽³⁶⁾ (10-13 May 2016, Rotterdam), with a session entitled 'Climate adaptation platforms in action and networks' and a tool shed event entitled 'Sharing knowledge on adaptation in Europe — Climate-ADAPT';
- the 16th European Meteorological Society Annual Meeting and the 11th European Conference on Applied Climatology ⁽³⁷⁾

⁽³¹⁾ <https://forum.eionet.europa.eu/nrc-climate-change-adaptation/library/workshops-meetings/2016-eionet-workshop-climate-change-impacts-vulnerability-and-adaptation-14-15/meeting-documents/expert-workshop-climate-change-adaptation-platforms-16-june-2016>

⁽³²⁾ <https://forum.eionet.europa.eu/nrc-climate-change-adaptation/library/workshops-meetings/climate-adapt-development-webinars>

⁽³³⁾ <http://forum.eionet.europa.eu/nrc-climate-change-adaptation/library/workshops-meetings/climate-adapt-development-webinars/first-webinar-27-april-2015/webinar-documents/background-paper-climate-adapt-case-studies>

⁽³⁴⁾ <https://forum.eionet.europa.eu/nrc-climate-change-adaptation/library/workshops-meetings/climate-adapt-development-webinars/third-climate-adapt-webinar>

⁽³⁵⁾ <http://www.ecca2015.eu>

⁽³⁶⁾ <http://www.adaptationfutures2016.org>

⁽³⁷⁾ <https://www.ems2016.eu>

(12-16 September 2016, Trieste), with a presentation at the Media and Communication session entitled 'Communicating climate change adaptation through web-based platforms — the status quo in Europe, the main challenges and relevant lessons learned', and a follow-up publication (Karali and Mattern, 2017);

- the Third European Climate Change Adaptation Conference ⁽³⁸⁾ (5-9 June 2017, Glasgow), with a session entitled 'Capturing and sharing knowledge on adaptation across Europe'.

Climate-ADAPT has also been promoted at smaller international conferences attended by, among others, experts from the adaptation community, such as EnviroInfo 2015 ⁽³⁹⁾ (6-9 September 2016, Copenhagen) and EnviroInfo 2016 ⁽⁴⁰⁾ (14-16 September, Berlin). This was done in an attempt to learn from the environmental information experts' experiences in presenting and updating complex information and to reach out to a new audience, gaining new users from other environmental fields beyond the adaptation knowledge community.

• Service/framework contracts

Two framework contracts were launched by DG CLIMA, focusing on, among other things, the targeted promotion of Climate-ADAPT and the collection of feedback on the platform. In 2014, the platform content and functionalities were promoted through science policy workshops in eight EU Member States that were lagging behind in the adaptation policy process (Climate-ADAPT Science/Policy Forums: Workshops for the Dissemination and Exchange of Adaptation-related Knowledge to Policymakers) ⁽⁴¹⁾. In 2016, Climate-ADAPT was specifically promoted among experts working on adaptation topics at EU level in the agriculture, forestry and water management sector (Dissemination and Capacity-building Supporting Adaptation in the Framework of the EU Adaptation

Strategy) ⁽⁴²⁾. Both projects were heavily supported by the EEA. Improvements in Climate-ADAPT functionalities through DG CLIMA service contracts were based on the feedback collected during these interactions with Climate-ADAPT users and providers.

Furthermore, efforts were made to enable greater involvement on the part of EEA collaborating countries in sharing and using Climate-ADAPT content. For example, an EEA-ETC/CCA service contract ⁽⁴³⁾ was carried out in 2013 to increase the capacity of Western Balkan countries to share their information and case studies on the Climate-ADAPT 'Country information' pages, as well as to increase uptake of knowledge on tools and best practices for climate change impact and vulnerability assessments and related adaptation strategies and measures. The work included a desk study and two workshops (Belgrade, Serbia, 22-23 April and 8 October 2013) tailored for these countries.

Another relevant example is the Environment and Climate Regional Accession Network (ECRAN) project, funded by the EU and managed by the European Commission. ECRAN aimed to assist beneficiaries from Western Balkan countries and Turkey in the transposition and implementation of the EU environmental and climate policies and instruments (a key precondition for EU accession). Within this project ⁽⁴⁴⁾, a series of workshops were carried out between 2014 and 2016 involving experts from the national organisations in charge of adaptation. The ultimate aim was to provide support for the development and implementation of national and sectoral adaptation strategies and plans. In informing the experts involved in this process with the knowledge and tools available on Climate-ADAPT, the EEA, together with DG CLIMA and other experts, familiarised them with the platform, and in particular with the 'Adaptation Support Tool', and encouraged them to submit relevant information to Climate-ADAPT when it became available.

⁽³⁸⁾ <http://ecca2017.eu>

⁽³⁹⁾ <http://enviroinfo2015.org>

⁽⁴⁰⁾ <http://enviroinfo2016.org>

⁽⁴¹⁾ Service contract number 071303/2013/663059/SER/CLIMA.C.3

⁽⁴²⁾ Contract number 340202/2015/718400/SER/CLIMA.C.3

⁽⁴³⁾ 'Support for work on climate change impacts, vulnerability and adaptation (linked to the European Climate Adaptation platform) in West Balkan Countries', service contract between the EEA and ETC/CCA, as part of the EEA's cooperation with Western Balkan countries under the Instrument for Pre-accession Assistance project for 2011-2013 (https://forum.eionet.europa.eu/etc-cca-consortium/library/west-balkan-service-contract/index_html).

⁽⁴⁴⁾ <http://www.ecranetwork.org/Climate/Adaptation>

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