

Sharing adaptation information across Europe

ISSN 1977-8449



Sharing adaptation information across Europe

Cover design: EEA
Cover photo: © Andreia Gonçalves de Sousa.
Featured artwork 'Support' by Lorenzo Quinn. Reproduced with permission.

Legal notice

The contents of this publication do not necessarily reflect the official opinions of the European Commission or other institutions of the European Union. Neither the European Environment Agency nor any person or company acting on behalf of the Agency is responsible for the use that may be made of the information contained in this report.

Copyright notice

© European Environment Agency, 2018
Reproduction is authorised provided the source is acknowledged.

More information on the European Union is available on the Internet (<http://europa.eu>).

Luxembourg: Publications Office of the European Union, 2018

ISBN 978-92-9213-945-2
ISSN 1977-8449
doi:10.2800/933024

European Environment Agency
Kongens Nytorv 6
1050 Copenhagen K
Denmark

Tel.: +45 33 36 71 00
Web: eea.europa.eu
Enquiries: eea.europa.eu/enquiries

Contents

Acknowledgements	5
Abbreviations	6
Executive summary	7
1 Introduction	10
1.1 The policy evaluation perspective	10
1.2 Perspectives of platform developers and information users and providers.....	13
2 Background	14
2.1 Evaluating Climate-ADAPT in the context of knowledge platforms in Europe	14
2.2 Climate-ADAPT profile	18
3 Evolution of stakeholder demands for adaptation information and of adaptation knowledge in Europe	21
3.1 Development of user needs and stakeholder demands.....	21
3.2 Evolution of adaptation knowledge in Europe	23
4 Evaluation methodology	25
4.1 Focus on the actual achievement of the specific objectives of Climate-ADAPT	26
4.2 Evaluation perspective	29
4.3 Evaluation period	30
4.4 Multi-method approach — combination of external feedback tools with internal assessment.....	30
4.5 Using data from existing Climate-ADAPT monitoring and reporting procedures and a limited number of new tools.....	30
4.6 Using a tiered three-level approach for the assessment of external feedback	31
4.7 Expert-judgement-based link to the evaluation of the EU adaptation strategy	33
4.8 Informing learning and development in a wider setting.....	33
5 Evaluation	34
5.1 Understanding the users of Climate-ADAPT.....	34
5.1.1 B1) Who is using Climate-ADAPT?.....	35
5.2 Meeting the objective A: sharing the knowledge to build a consistent and updated knowledge base.....	39
5.3 Meeting the objective B: assisting the effective uptake of knowledge to inform decision-making.....	46

5.4 Meeting the objective C: to contribute to a greater level of coordination among sectors and institutional levels.....	53
5.5 Lessons learnt to the management of the platform.....	56
5.5 Informing the evaluation of the EU adaptation strategy.....	58
6 Outlook.....	61
6.1 Implementation of the evaluation outcomes.....	61
6.2 Stakeholder demands.....	61
6.3 Developments in adaptation knowledge	63
6.4 Principles of further developing Climate-ADAPT	64
References	65

Acknowledgements

This report was prepared by the European Environment Agency (EEA) with contributions from the European Topic Centre on Climate Change Impacts, Vulnerability and Adaptation (ETC/CCA).

Coordination

Kati Mattern (EEA) with the support of André Jol (EEA).

Authors

EEA: Kati Mattern; ETC/CCA: Valentina Giannini (CMCC), Clare Downing (UKCIP), Ana Gomes (FC.ID), Emiliano Ramieri (Thetis), Fokke de Jong (Alterra), Ingrid Coninx (Alterra), Eleni Karali (CMCC), Tiago Capela (FC.ID), Silvia Medri (CMCC), Serena Marras (CMCC), Linda Romanovska (Fresh Thoughts), Andreia Sousa (FC.ID), Stephanie Fergusson (UKCIP), Thomas Dworak (Fresh Thoughts), Angel Aparicio (University of Madrid) and Markus Leitner (UBA Austria).

EEA contributors

Aleksandra Kazmierczak, Blaz Kurnik, Wouter Vanneuville, José Ramón Picatoste, Christian Xavier Prosperini, Marisa Turanzas, Marie Jaegly, François Dejean and Mihai Tomescu.

Other contributors

The EEA wishes to thank the following contributors to Climate-ADAPT use cases, included in the report: Nicolas Faivre (European Commission, Directorate-General for Research and Innovation), Eleonora Musco (Secretariat of the Carpathian Convention), Magnus Andresen (Secretariat of the Carpathian Convention), Maria Todorova (Ministry of Environment and Water, Bulgaria), Francesca Giordano (ISPRA — the Italian National Institute for Environmental Protection and Research), Marcin Grądzki (Ministry of Environment, Poland), Anna Pons (Biodiversity Foundation, Spanish Ministry of Agriculture and Fisheries, Food and Environment), Şule Erdal and Diren Ertekin (Ministry of Environment and Urbanisation, Turkey), Spyridoula Ntemiri (Greek LIFE Task Force), Nadia Renata Carfagno (Lombardy Region), Alessandro Portoghese (Sardinia Region), Carme Melcion Fontbernat (Province of Barcelona), Chiara Caranti (City of Bologna), Joao Dinis (Cascais Municipality), Andrea Vallebona (City of Sorradile), Mita Lapi (Lombardy Foundation for the Environment — FLA), Jerome Baddley and Simon Briggs (Sustainable Development Unit, NHS England), and Bend Eggen (UK Met Office).

The EEA also wishes to thank Jelena Milos (European Commission) and National Reference Centres for Climate Change Impacts, Vulnerability and Adaptation from many EEA member countries, for providing comments throughout the development of this report via the European Environment Observation and Information Network (Eionet).

Abbreviations

Abbreviation	Name	Reference
BISE	Biodiversity Information System for Europe	https://biodiversity.europa.eu
C3S	Copernicus Climate Change Service	https://climate.copernicus.eu
C40	C40 Cities Climate Leadership Group	http://www.c40.org
CCIVA	Climate change impacts, vulnerability and adaptation	
Climate-ADAPT	European Climate Adaptation Platform	http://climate-adapt.eea.europa.eu
DG CLIMA	Directorate-General for Climate Action	https://ec.europa.eu/clima/index_en
DG Regio	Directorate-General for Regional and Urban Policy	http://ec.europa.eu/dgs/regional_policy/index_en.htm
DG RTD	Directorate General for Research and Innovation	https://ec.europa.eu/info/departments/research-and-innovation_en
DRMKC	Disaster Risk Reduction Management Knowledge Centre	http://drmkc.jrc.ec.europa.eu
DRR	Disaster risk reduction	
ECCA	European Climate Change Adaptation Conference	
EDC	Environmental data centre	https://www.eea.europa.eu/data-and-maps/european-data-centres
EEA	European Environment Agency	www.eea.europa.eu
EKC	Environmental Knowledge Community	
EU	European Union	https://europa.eu/european-union/index_en
ETC/CCA	European Topic Centre on Climate Change Impacts, Vulnerability and Adaptation	http://cca.eionet.europa.eu/
FP7	EU's Seventh Framework Programme for Research (2007-2013)	https://ec.europa.eu/research/fp7/index_en.cfm
GI	Green infrastructure	
GIS	Geographic information system	
H2020	Horizon2020 (EU Framework Programme for Research 2013-2020)	http://ec.europa.eu/programmes/horizon2020/en/what-horizon-2020
ICLEI	Local Governments for Sustainability	http://www.iclei.org/
LIFE	EU's financial instrument supporting environmental, nature conservation and climate action projects	http://ec.europa.eu/environment/life
IT	Information technology	
JPI	Joint Programming Initiative	http://www.jpi-climate.eu/home
JRC	Joint Research Centre	https://ec.europa.eu/jrc/en
M&R	Monitoring and reporting	
MMR	Monitoring Mechanism Regulation	
MRE	Monitoring, reporting and evaluation	
NRC	National Reference Centre	
NWRM	Natural water retention measures	http://nwrn.eu
UNFCCC	United Nations Framework Convention on Climate Change	http://unfccc.int
WISE	Water Information System for Europe	https://water.europa.eu
WISE Marine	Marine Information System for Europe	https://water.europa.eu/marine

Executive summary

The European Commission and the European Environment Agency (EEA) launched the European Climate Adaptation Platform (Climate-ADAPT) ⁽¹⁾ in 2012. Its aim is to provide a common European knowledge base to support the target audience of governmental organisations and those supporting them in developing and implementing climate change adaptation strategies and actions, complementary to adaptation platforms at other levels of governance. The need for such a platform was recognised in the 2013 EU strategy on adaptation to climate change or adaptation strategy, which is being evaluated by the European Commission in 2017-2018, as a key element of better informed decision-making that should be developed further.

The objectives of Climate-ADAPT are (1) to facilitate the collection, sharing and use of information on climate change impacts, vulnerability and adaptation, and build a consistent and updated knowledge base; (2) to assist the effective uptake of the relevant knowledge by decision-makers; and (3) to contribute to a greater level of coordination among sectors and institutional levels.

Climate-ADAPT is facing a twofold challenge. Firstly, stakeholder demands vary at each governance level related to the specific tasks of decision-makers and have evolved over time. For example, mainstreaming of adaptation into various sector policies — in other words, making it an integral part of those sector policies — is needed at EU and national levels. At the national level, the stage in the adaptation policy cycle that a country has reached determines the type of information that it needs. Increasingly, countries have moved from developing adaptation strategies towards implementing action plans with other requirements for information. Secondly, the wide range of EU and nationally funded projects, as well as practical experience of adaptation, have significantly enhanced the amount and diversity of adaptation knowledge in Europe to be shared. Furthermore, many other relevant European knowledge platforms have emerged, including those on climate services, biodiversity and ecosystem services, and disaster risk reduction.

This report provides an evaluation of the fulfilment of the Climate-ADAPT objectives. The evaluation was carried out by the EEA as a process evaluation with a focus on learning. It focuses on the three objectives of the platform mentioned above. A multi-method approach was used that combined internal assessment and external feedback tools, including a user/provider survey, analysis of web statistics and collection of 'use cases', i.e., examples of the use of Climate-ADAPT.

The lessons learned from the Climate-ADAPT evaluation may also be of use for other thematic platforms maintained by the EEA, such as those on biodiversity and water, and for climate change adaptation platforms at national and transnational levels.

Meeting the Climate-ADAPT objectives

Understanding the users: according to the evaluation, Climate-ADAPT succeeds in reaching its intended target audience, mentioned above, across all governance levels in Europe. For example, according to web statistics analysis, the number of users increased fivefold from 2013 to 2017 to about 14 000 monthly users. The number of subscribers to the newsletter has increased significantly since its launch in 2015 to about 4 000. However, some specific user groups have not yet been sufficiently reached, in particular sectoral users, users from eastern and central European countries and users with less experience of adaptation. To address this, a Climate-ADAPT dissemination strategy could be developed by the EEA working with the European Commission. Such a strategy would aim to broaden the outreach of the platform towards these specific groups.

Meeting the objective of collecting, sharing and building a knowledge base: according to the evaluation, Climate-ADAPT has successfully involved many information providers who have shared their knowledge with the adaptation community in Europe. However, there is scope to engage more providers to share information. Climate-ADAPT provides

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

relevant content, shown in its use by the intended target audience and by the fact that the growth of knowledge related to CCIVA, generated in Europe, is reflected in the Climate-ADAPT database in terms of quantity and diversity. Multi-level policy information, tools and guidance, as well as access to the relevant information sources through the database, were substantially improved. The five most used content features — 'Country information', 'EU policy', 'Database (e.g. reports, tools, guidance)', 'Adaptation Support Tool' and 'Case studies' are regarded as Climate-ADAPT's 'core content'. They should remain the first priority of the further development of the platform. Improved access to the Copernicus Climate Change Service (C3S) and to the outcomes of a range of EU-funded projects should be the focus of further content development. Including synthesis information on various topics should also be a priority.

Meeting the objective of uptake of the relevant knowledge by decision-makers: according to the evaluation, Climate-ADAPT has assisted the uptake of knowledge to inform decision-making. Information, presented in its policy context on Climate-ADAPT, has greater outreach and users understand this better than if it were presented only on individual project websites. The evaluation identified examples of the use of Climate-ADAPT to support decision-making on adaptation at all governance levels and at all stages of the adaptation policy cycle across Europe. Climate-ADAPT is used for a variety of processes supporting decision-making, including for developing evidence documents and assessments. It is used as the reference to identify the 'state of the art' of adaptation in Europe and as a starting point to extend searches and to develop tailor-made products for various policy processes. The branding of the platform could be adjusted from being the 'one-stop shop' to being the 'first-stop shop' for adaptation information in Europe.

The user-friendliness of the platform could be further improved to assist the uptake of the information, e.g. by additional entry points for various user groups. Additional services to promote action could be explored, but this would require active collaboration with key partners from all governance levels including the European Commission. This could include training on the use of Climate-ADAPT and preparation and dissemination of promotional materials jointly with key

partners. More active engagement of sectoral users could be promoted through 'communities of practice'.

Meeting the objective of contributing to a greater level of coordination among sectors and institutional levels: according to the evaluation, Climate-ADAPT has supported coordination among governance levels by being a source of EU-level information and by guiding users to the right content, meaning complementary sources of information across Europe. This 'guiding' function could, however, be better explained and promoted on the platform. This could be improved, e.g. by referring to information increasingly available within city networks and sources of information on adaptation in EU sector policies. Further actions could include support across regions with similar characteristics and the improvement of information flows among governance levels.

Other relevant outcomes of the evaluation

Improving the management of Climate-ADAPT: a monitoring, reporting and evaluation (MRE) scheme for Climate-ADAPT could be set up. This would include collecting data more systematically for future evaluations and a 'light' regular informal reporting of the development of the platform to Climate-ADAPT stakeholders. Such an approach should provide data to cover all three platform objectives evenly.

Informing the evaluation of the EU adaptation strategy: the Climate-ADAPT evaluation informs the evaluation of the EU adaptation strategy, which is being carried out by the European Commission and will be finalised in autumn 2018. The outcomes of the EEA evaluation of Climate-ADAPT can be summarised using the same criteria as those used for the European Commission's evaluation. The EEA evaluation has shown that Climate-ADAPT is still relevant, is effective through its support of various climate change adaptation policy processes across Europe, can be regarded as cost-efficient (taking into account the available resources) and helps to support EU policy coherence, e.g. through its regular stakeholder consultations. Climate-ADAPT also provides added value — being used by experts from a variety of countries — with and without a national adaptation knowledge platform, thus supporting better informed decision-making

on adaptation policies and actions across European countries.

Further developing Climate-ADAPT

The Climate-ADAPT evaluation provides a good basis on which to further develop Climate-ADAPT in a step-wise approach. Using the initial evaluation outcomes and the abovementioned potential improvements, the European Commission and the EEA, supported by the European Topic Centre on Climate Change Impacts, Vulnerability and Adaptation (ETC/CCA), in 2017 started improving the Climate-ADAPT structure and layout, and developing and revising content. Together with the European Commission, the EEA will prepare a Climate-ADAPT work plan for the period 2019 to 2021, including a Climate-ADAPT dissemination strategy and an MRE scheme. The EEA will present the outcomes of the evaluation to the Climate-ADAPT user and provider community. Many of the proposed actions require prioritisation and increased consultation with and involvement of key partners, including in particular the EEA member countries, e.g. by means of the annual Eionet meetings on climate change impacts, vulnerability and adaptation.

In addition to the above-mentioned plans for improvements to Climate-ADAPT, the following key developments should also be taken into account.

Existing and new information demands from policymakers and experts developing and implementing adaptation policies and actions need to be considered. At the global level, the United Nations Framework Convention on Climate Change Paris Agreement is enhancing adaptation action, while at the EU level the EU adaptation strategy is being implemented and the evaluation outcomes (due end of 2018) need to be taken into account in the further development of Climate-ADAPT. Links to relevant indicators to be reported under the Sendai Framework on Disaster Risk Reduction and the Sustainable Development Goals could also be included.

With an increasing number of countries implementing adaptation action plans, the need for information will shift towards monitoring adaptation actions

and developing and using appropriate indicators. Climate-ADAPT could address this, e.g. by improving the Adaptation Support Tool and by including more information on adaptation indicators at the national level. Adaptation information to be reported by countries under the EU climate change monitoring mechanism should be included in the Country information pages.

Adaptation action at city level is supported by the EU-funded Covenant of Mayors on Climate and Energy initiative, which also promotes climate change mitigation, and other city networks. The EU Urban Agenda also includes action on climate change adaptation. The knowledge base on urban adaptation will be further developed by cities, these various networking activities and research projects. Climate-ADAPT should further update and improve the Urban Adaptation Support Tool in collaboration with these organisations and projects.

Weblinks should be improved to relevant EU knowledge platforms that can help to support the mainstreaming of adaptation into various EU sector policies, such as the Joint Research Centre (JRC), the Disaster Risk Reduction Management Knowledge Centre (DRMKC) and the EEA Biodiversity Information System for Europe (BISE). The interoperability of these EU knowledge platforms could also be improved. There is also a need to provide better access to data from the C3S to improve climate change impacts, vulnerability and risk assessments at various governance scales. Options for improving the interoperability of Climate-ADAPT with national-level adaptation platforms should also be explored.

Adaptation knowledge is becoming more diversified, which might require new forms of presenting and sharing it through adaptation knowledge platforms. New emerging concepts of co-creation and co-design of knowledge could also be explored. Examples of these are interactive geographic information systems, more interactive tools such as games, and sketches and drawings as tools for awareness raising and the selection of adaptation options at the local level. The EEA could explore the inclusion of such new knowledge formats in Climate-ADAPT, where possible, taking into account resources and capacities.

1 Introduction

1.1 The policy evaluation perspective

This report provides an evaluation on how the growing knowledge on adaptation in Europe has been captured and how it is presented on the web-based European Climate Adaptation Platform (Climate-ADAPT) and shared across Europe. It shows how Climate-ADAPT facilitated the uptake of that knowledge and how it was used in adaptation policy and planning and to what extent the platform contributed to more coordination across governance levels and among sectors. In addition, the report reflects on the need to further develop Climate-ADAPT to the changing needs of its users and information providers, taking the mid-term perspective.

In particular, the European Commission and the European Environment Agency (EEA) intend to make use of the outcomes of the Climate-ADAPT evaluation to prioritise future developments regarding the content, functionalities and promotion of the platform. In addition, the report aims to inform the European Commission's evaluation of the EU adaptation strategy, taking place in 2017-2018. The EU strategy includes an objective relating to the further development of Climate-ADAPT.

1.1.1 Intended target audiences of the report and related documents

The intended target audiences of the report and the various related documents (an ETC/CCA Technical paper and ETC/CCA Working papers) are threefold considering the respective roles of users and providers of information to be included in Climate-ADAPT:

Audience level 1: decision-makers, i.e. high-level governmental decision-makers working on adaptation in Europe at EU, transnational, national, sub-national and local/city levels and on adaptation-related topics in sector policies.

Audience level 2: decision supporters, i.e. experts in governmental organisations and boundary organisations, supporting decision-makers on adaptation.

Audience level 3: experts in Europe working with the management and evaluation of web-based knowledge platforms on adaptation or adaptation-related topics.

1.1.2 Structure of the report

The very comprehensive set of evidence provided through the application of the evaluation tools and the need to present the evaluation outcomes in a tailor-made format required the information to be structured in three layers. The structure of the report, illustrated in Figure 1.1, aims to follow the interests of the above-mentioned three intended target audiences according to their roles on adaptation in Europe.

Information layer 1

This EEA report on the Climate-ADAPT evaluation was developed for audience level 1 and it consists of three main blocks.

Introduction: Chapter 2 frames the evaluation of Climate-ADAPT within the context of adaptation policy at the EU level. Chapter 3 describes the challenges

of developing the platform in terms of evolving stakeholder demands, and the growing amount and diversification of adaptation knowledge and evidence in Europe. Chapter 4 provides an overview of the methodology used for the evaluation including the strengths and weaknesses of the approach.

Description: Section 2.2 explains the current design and dissemination of the platform, the governance procedures and the complementary work with partners.

Evaluation and outlook: Chapter 5 summarises the outcomes of the achievements of the platform in terms of the specific objectives of Climate-ADAPT, i.e. (1) to share adaptation knowledge, (2) to assist users in its effective uptake, and (3) to support coordination among sectors and across governance levels. It also summarises the results of the evaluation in terms of the evaluation criteria to inform the evaluation of the EU adaptation strategy. Chapter 6 includes reflections on the future work on Climate-ADAPT, taking a mid-term perspective.

Information layer 2

An ETC Technical paper showing the **key evidence** is provided for the level 2 audience. It supports the evaluation and consists of two blocks.

Description: the full Climate-ADAPT profile ^(?) provides detailed information about the current set-up of the platform in terms of its current management structure, content, functionalities and dissemination.

Stock-taking: the **key evidence** that supports the evaluation is included in the five annexes of the [ETC Technical paper](#) ^(?):

1. a comprehensive description of the evolution of stakeholder demands and the growth in adaptation knowledge (Annex 1);
2. the detailed methodologies of the evaluation tools (Annex 2);

3. the outcomes of the internal assessment of capturing content and improving functionalities of Climate-ADAPT as well as the assessment of external feedback to the platform ('key evidence') (Annex 3);
4. the outcomes of the Climate-ADAPT user/information provider survey, which was one of the new approaches that was explicitly developed for the purpose of this evaluation (Annex 4).
5. the Climate-ADAPT use cases, or examples of its use in practice, which were also deliberately collected for the first time, include a set of 17 evaluation case studies providing insights into how Climate-ADAPT was used ^(?). An analysis of the lessons learned from the Climate-ADAPT use cases is included in Annex 5.

Information layer 3

This is the detailed evidence that was provided for the level 3 audience for further reading. It belongs in the third block.

Stock-taking: it consists of three ETC Working papers that are available on request via Climate-ADAPT (climate.adapt@eea.europa.eu).

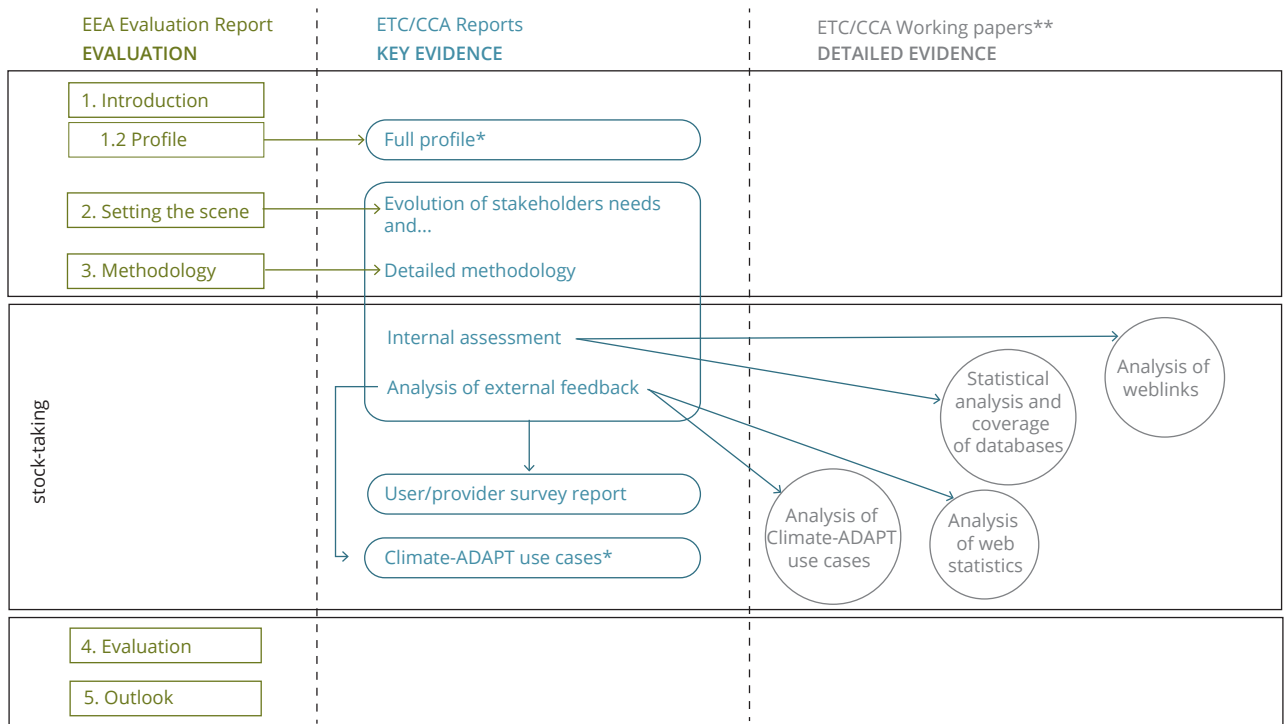
1. ETC/CCA Working paper 'Climate-ADAPT database statistical and coverage gaps analysis';
2. ETC/CCA Working paper 'Systematic analysis of Climate-ADAPT weblinks';
3. ETC/CCA Working paper 'Analysis of Climate-ADAPT web statistics'.

These documents may be of particular interest to experts working on the evaluation and development of web-based transnational- and national-level adaptation platforms in Europe. Experts preparing and maintaining web-based platforms for sector policies related to adaptation, e.g. at the EU level, may also find inspiration for the evaluation and development of their platforms.

^(?) Published separately on Climate-ADAPT (<http://climate-adapt.eea.europa.eu>)

^(?) http://cca.eionet.europa.eu/reports/TP_2-2018

Figure 1.1 Guidance on the structure of the report



Notes: (a) Published on Climate-ADAPT; (b) available on request.

Source: EEA.

1.2 Perspectives of platform developers and information users and providers

1.2.1 *The adaptation platform developer's perspective*

The report may also be of interest for experts maintaining and developing transnational and national adaptation platforms in Europe. Experts preparing and maintaining web-based platforms for sector policies related to adaptation, e.g. at the EU level may find inspiration for the development of their platforms. Furthermore, the report offers lessons learned for experts working in the field of adaptation to climate change beyond Europe, e.g. those working on adaptation in developing countries, including the development of national adaptation platforms in these countries.

1.2.2 *The adaptation platform user and provider's perspective*

Apart from the evaluation of the platform, which is the focus of the report, two parts of the report may

be of wider interest to platform users and providers. Therefore, these two parts of the report have been published separately on Climate-ADAPT ⁽⁴⁾. They may be particularly helpful to users and potential providers to improve their understanding of the platform's structure, content and functionalities. Firstly, the full 'Climate-ADAPT profile' presents all aspects of the platform's content, functionalities, submission procedures and dissemination. Secondly, the collection of 17 Climate-ADAPT use cases at all governance levels and across regions of Europe shows how the complex content on the platform has been used in practice to address specific adaptation challenges.

Users who are not yet very familiar with Climate-ADAPT may find inspiration in both documents on how to use Climate-ADAPT knowledge to address adaptation challenges in their specific policy or planning context. Experts working on adaptation in Europe in the fields of research, strategic planning or practical implementation may find that presenting their information on Climate-ADAPT provides added value. The description of the submission process may help to overcome barriers to becoming information providers for Climate-ADAPT.

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

2 Background

Summary

- Web-based adaptation platforms that support decision-making by collecting, providing and sharing knowledge on adaptation are an important tool within adaptation policy processes at various governance levels.
- Climate-ADAPT, launched in 2012, is a key element of the EU adaptation strategy for better informed decision-making and it operates in a partnership between the European Commission and the EEA. Its objectives are (1) to facilitate the collection, sharing and use of information on climate change impacts, vulnerability and adaptation (CCIVA) and build a consistent and updated knowledge base, (2) to assist the effective uptake of the relevant knowledge by decision-makers, and (3) to contribute to a greater level of coordination among sectors and institutional levels.
- Within the ongoing evaluation of adaptation policies in various EEA member countries and of the EU adaptation strategy at EU level, the evaluation of adaptation platforms provides essential information about the development, sharing and actual use of adaptation knowledge.

2.1 Evaluating Climate-ADAPT in the context of knowledge platforms in Europe

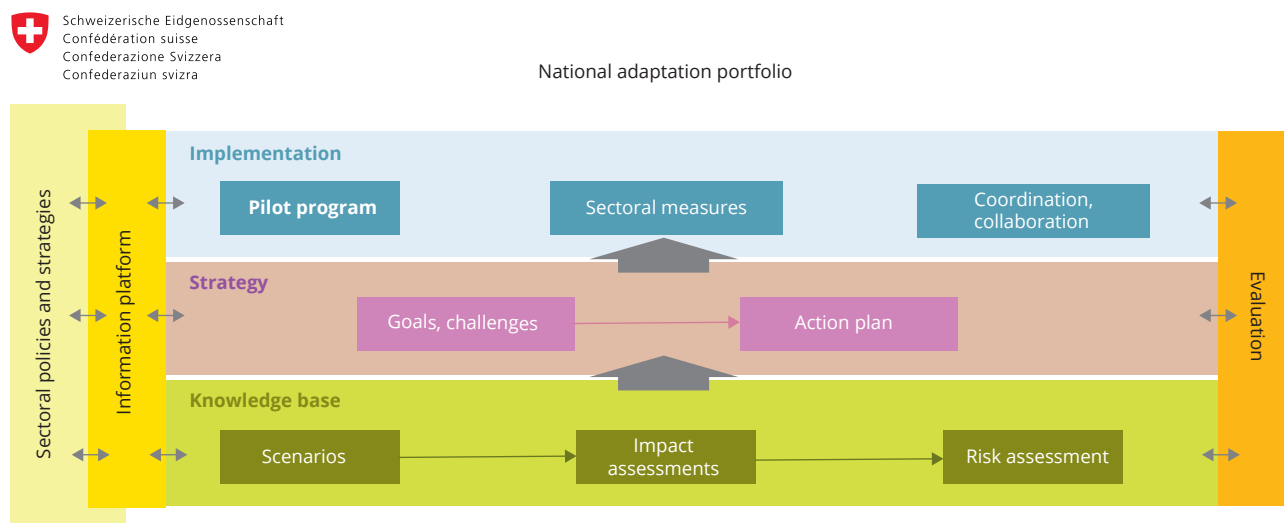
Knowledge is essential for designing and implementing effective action for all actors involved in adaptation, ranging from public authorities at different governance levels to researchers and practitioners in many sectors. At the local level, public authorities face the climate change challenges directly and need to come up with solutions for how to address, for example, heat waves, flooding risks and the effects of sea level rise and how to finance adaptation actions. The increasing recognition of adaptation as a necessary and critical element of institutional and societal responses to climate change has created a need for the development of a robust and up-to-date knowledge base to support decision- and policymakers — and the public at large (Karali and Mattern, 2017). Web-based adaptation platforms are recognised as an important element of adaptation policy and planning in Europe. They support

decision-making by collecting, providing and sharing knowledge on adaptation ⁽⁵⁾ (see Figure 2.1).

To facilitate the sharing and uptake of valuable knowledge and experiences by all the actors involved, in 2012 the European Commission and the EEA set up Climate-ADAPT. It aims to provide a common knowledge base on CCIVA to support decision-making on adaptation in Europe.

In 2013, the European Commission adopted the EU adaptation strategy (EC, 2013), the development of which was also supported by Climate-ADAPT. The strategy sets out specific activities in three priority areas to encourage action by Member States, to support better informed decision-making and to promote adaptation in key EU vulnerable sectors (see Figure 2.2). In this context, the strategy acknowledges Climate-ADAPT in its Action 5 as a key element to be further developed to provide the best available climate adaptation information at the EU level.

⁽⁵⁾ No common definition of web-based adaptation platforms is yet available. The term 'web-based adaptation platforms' is used in this report taking the same approach as that used in EEA Technical Report 5/2015 *Overview on climate change adaptation platforms in Europe*. It covers the heterogeneity of approaches for sharing adaptation knowledge that encompasses 'portals' and 'websites' with varying levels of interactivity.

Figure 2.1 Adaptation platforms as supporting elements of adaptation strategies

Notes: The figure shows, using the example of Switzerland, that adaptation platforms are an important element of the adaptation policy process.

Source: FOEN (2012).

Figure 2.2 Overview of priority areas and actions of the EU adaptation strategy

Priority 1: Promoting action by Member States	
Action 1.	Encourage Member States to adopt adaptation strategies and action plans
Action 2.	LIFE funding, including adaptation priority areas
Action 3.	Promoting adaptation action by cities along the Covenant of Mayors initiative
Priority 2: Better informed decision-making	
Action 4.	Knowledge-gap strategy
Action 5.	Climate-ADAPT
Priority 3: Key vulnerable sectors	
Action 6.	Climate proofing the common agricultural policy, cohesion policy and the common fisheries policy
Action 7.	Making infrastructure more resilient
Action 8.	Promote products and services by insurance and finance markets

Notes: The figure shows all actions of the EU adaptation strategy as it was set up in 2013.

Source: EC (2013).

Climate-ADAPT is operating in the context of a growing number of web-based knowledge platforms related to adaptation (Figure 2.3). Information, data and guidance on adaptation are collected and shared through web-based platforms at all governance levels. The EEA published a comprehensive overview of the various approaches of web-based adaptation platforms in Europe in a technical report (EEA, 2015). Such platforms, which provide information on climate change and CCIVA at the global level are, for example, the United Nations Framework Convention on Climate Change (UNFCCC) platform⁽⁶⁾, which provides policy information, but also Provia⁽⁷⁾, operated by the United Nations Environment Programme (UNEP), or Preventionweb⁽⁸⁾, based on a UN Office for Disaster Risk Reduction (UNISDR) project. There are other adaptation knowledge providers at the global level, based on initiatives from research institutes such as WeAdapt⁽⁹⁾.

At the EU level, an example of another knowledge platform, with a different thematic scope, is the Biodiversity Information System for Europe (BISE⁽¹⁰⁾), funded by the EEA. It provides knowledge on biodiversity and green infrastructure and also some information on the impacts of and sector-specific knowledge related to adaptation to climate change regarding biodiversity. Another example of a relevant

EU knowledge platform is the Copernicus Climate Change Service (C3S) platform⁽¹¹⁾, funded by the European Commission, which provides a wide range of climate data and projections as well information on how these can be used by different sectors. There are also specific climate change adaptation knowledge platforms operating at the transnational level, e.g. for the Pyrenees⁽¹²⁾, the Alpine region⁽¹³⁾, the Carpathian Mountains⁽¹⁴⁾ and the Baltic Sea region⁽¹⁵⁾.

There is a large variety of platforms providing CCIVA information at the national level, such as in Denmark⁽¹⁶⁾ and in Poland⁽¹⁷⁾. Since the publication of the EEA report Overview of climate change adaptation platforms in Europe (EEA, 2015), the number of adaptation platforms in EEA member countries has grown from 14 national adaptation platforms to 16 platforms in 2017⁽¹⁸⁾ and more are under preparation, e.g. in Portugal and Italy. National adaptation platforms are also complemented by national climate services and sector- and research-related platforms. Platforms at local or city level support experts on urban adaptation, e.g. ClimAdaPT.Local in Portugal⁽¹⁹⁾. Figure 2.3 demonstrates the wealth of web-based platforms that intend to support and enable action on adaptation by providing adaptation-related knowledge.

⁽⁶⁾ <http://www4.unfccc.int/sites/nwp/Pages/Home.aspx> (last accessed February 2018).

⁽⁷⁾ <http://www.wmo.int/pages/prog/wcp/cca/unep-provia.php> (last accessed February 2018).

⁽⁸⁾ <http://www.preventionweb.net/english> (last accessed February 2018).

⁽⁹⁾ <https://www.weadapt.org> (last accessed February 2018).

⁽¹⁰⁾ <https://biodiversity.europa.eu> (last accessed February 2018).

⁽¹¹⁾ <https://climate.copernicus.eu/about-c3s> (last accessed February 2018).

⁽¹²⁾ <https://opcc-ctp.org> (last accessed February 2018).

⁽¹³⁾ The Climate Adaptation Platform for the Alps (CAPA) is currently offline and will be re-launched under the umbrella of EUSALP (EU strategy for the Alpine region — www.alpine-region.eu) at a new domain in 2018.

⁽¹⁴⁾ http://climate-adapt.eea.europa.eu/countries-regions/transnational-regions/carpathian-mountains/general/index_html (last accessed February 2018).

⁽¹⁵⁾ <http://climate-adapt.eea.europa.eu/countries-regions/transnational-regions/baltic-sea-region/adaptation/general> (last accessed February 2018).

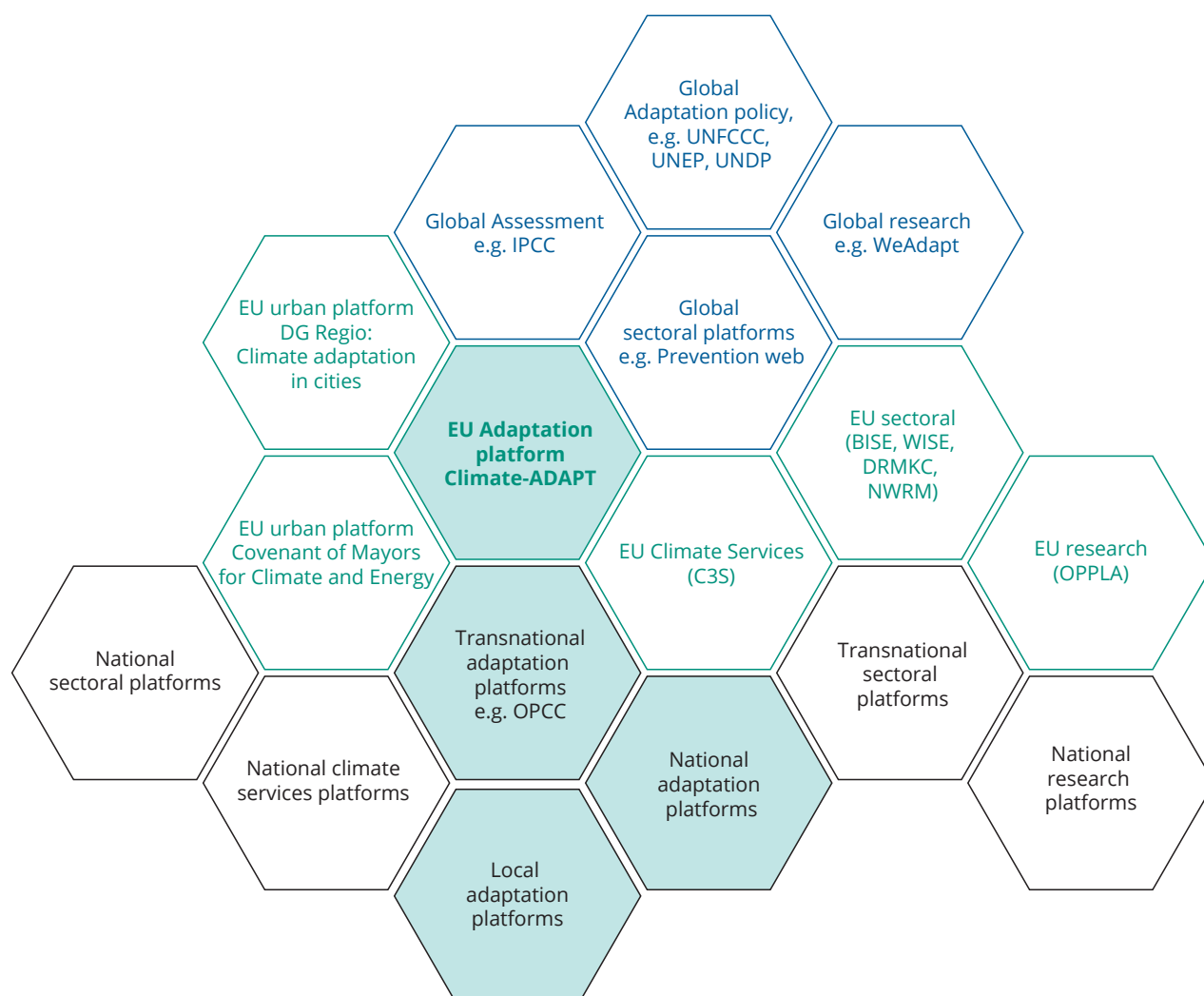
⁽¹⁶⁾ <http://en.klimatilpasning.dk> (last accessed February 2018).

⁽¹⁷⁾ <http://klimada.mos.gov.pl/en> (last accessed February 2018).

⁽¹⁸⁾ Since 2015, national adaptation platforms have been launched for Ireland (<https://www.climateireland.ie/#/>) and Estonia (<http://www.klab.ee/kohanemine/en>). As no clear definition of web-based adaptation platforms is available, the platforms listed here are based on the feedback of National Reference Centres on adaptation.

⁽¹⁹⁾ <http://climadapt-local.pt/en> (last accessed February 2018).

Figure 2.3 Examples of web-based knowledge platforms on adaptation to climate change



Notes: The figure shows examples of web-based knowledge platforms on adaptation at different governance and sectoral levels. Platforms that focus primarily on adaptation are highlighted in blue. The figure shows also various other platforms that are relevant for adaptation. DG Regio, Directorate-General for Regional and Urban Policy; DRMKC, Disaster Risk Management Knowledge Centre; IPCC, Intergovernmental Panel on Climate Change; NWRM, natural water retention measures; OPCC, Observatoire Pyrénéen du Changement Climatique; OPPLA (Open Platform), an EU knowledge marketplace for information on ecosystem services, natural capital and nature-based solutions; UNDP, United Nations Development Programme; UNEP, United Nations Environment Programme.

Source: EEA.

According to its mandate, Climate-ADAPT aims to be complementary to the other adaptation platforms. Its set-up and further development of links to other governance levels (transnational regions, countries, cities), policy sectors (e.g. Disaster Risk Reduction – DRR), as well as to C3S was guided by the intention to allow a complementary presentation of adaptation information, taking into consideration the respective activities of other organisations at different governance levels.

The European Commission drives many activities to support the provision of comprehensive knowledge to cope with climate change. Complementing the C3S, the EU is funding research on climate services, as described in the 'European research and innovation roadmap for climate services' (EC, 2015). Closely linked is the Joint Programming Initiative (JPI) Climate, and its European Research Area (ERA-NET) for Climate Services (ERA4CS), co-funded by participating EU Member States and the European Commission, and aiming to develop climate services through multi-national research activities. Climate-ADAPT, which can be regarded as an adaptation service at the EU level, complements these various climate services. The European Commission also increased its focus on the development of innovative green infrastructure (GI) and nature-based solutions, e.g. through a number of project-based activities, such as OPPLA⁽²⁰⁾, an EU knowledge marketplace for information on ecosystem services, natural capital and nature-based solutions, and policy initiatives, such as natural water retention measures (NWRM⁽²¹⁾). Currently, the Commission and the EEA intend to enhance the interoperability of these various platforms, regarding in particular GI and nature-based solutions. Furthermore, an EU Disaster Risk Management Knowledge Centre (DRMKC)⁽²²⁾ has been set up by the JRC to support knowledge for action to prevent disasters. As many disasters are due to climate- and weather-related hazards, there is also an increasing interest in establishing links between the DRMKC, Climate-ADAPT and climate services.

The European Commission and the EEA aim to establish links between Climate-ADAPT and these many other relevant platforms, where relevant and needed. A number of meetings and workshops have been held

on the development and use of adaptation platforms in recent years (see [Climate-ADAPT profile](#)). This included, for example, an expert discussion on lessons learned from platform evaluations at the 2017 European Climate Change Adaptation Conference (ECCA) (Downing et al., 2017b).

The first evaluation of the EU adaptation strategy was launched by the European Commission at the end of 2016 (EC, 2016b). It examines the strategy's actual implementation status by assessing the 'relevance, effectiveness, efficiency, coherence and EU added values of the overall strategy, and assessing the actual state and progress in the implementation of the 8 actions against what could reasonably expect to have been achieved by the end of 2016' (EC, 2016b) (see Figure 2.2). The evaluation follows the standard framework for evaluation of EU policies (EC, 2017c). The process is supported by a service contract and considers the input of stakeholders via workshops, expert surveys and interviews, as well as a public consultation on the internet⁽²³⁾. It is planned to be completed by mid-2018, and the results will be published through a Commission communication due in 2018. This evaluation will also to some extent cover action 5 of the adaptation strategy, which is related to Climate-ADAPT⁽²⁴⁾.

As mentioned above, to contribute to the European Commission's evaluation of the EU adaptation strategy, the EEA, with the support of the ETC/CCA⁽²⁵⁾, in 2017 carried out an evaluation of Climate-ADAPT. The outcomes of the evaluation, as well as lessons learned and reflections on possible actions in the next phase of the EU adaptation strategy, are presented here. This report thus aims to provide input to the Commission's EU adaptation strategy evaluation.

2.2 Climate-ADAPT profile

This section provides a brief overview of the mandate, intended target audience, and content and structure of the platform. Further important aspects of Climate-ADAPT that are needed to understand the current Climate-ADAPT setting are the management structure, the information providers and the content

⁽²⁰⁾ <https://www.oppla.eu> (last accessed February 2018).

⁽²¹⁾ <http://nwrn.eu> (last accessed February 2018).

⁽²²⁾ <http://drmkc.jrc.ec.europa.eu> (last accessed February 2018).

⁽²³⁾ https://ec.europa.eu/clima/consultations/evaluation-eus-strategy-adaptation-climate-change_en (last accessed February 2018).

⁽²⁴⁾ https://ec.europa.eu/clima/policies/adaptation/what_en (last accessed February 2018).

⁽²⁵⁾ <http://cca.eionet.europa.eu> (last accessed February 2018).

updating process. Additional information, such as that on the platform's promotion activities and more details for every aspect, is available in the full [Climate-ADAPT profile](#). It was compiled as part of this report, but it is published on Climate-ADAPT to inform users and providers about the general setting of the platform. Therefore, it also has a wider outreach and can be used for various promotion activities.

2.2.1 Mandate

Climate-ADAPT⁽²⁶⁾ is a partnership between the European Commission, mainly the Directorate-General for Climate Action (DG CLIMA), and the EEA. It was launched in March 2012 to support Europe in adapting to climate change. This role was reinforced in the EU adaptation strategy, which acknowledged Climate-ADAPT as a key element for supporting better informed decision-making and underlined the potential of the platform to act as the one-stop shop for adaptation information in Europe (Action 5).

More specifically, the objectives of Climate-ADAPT include: (1) to facilitate the collection, sharing and use of CCIVA information and build a consistent and updated knowledge base; (2) to assist the effective uptake of the relevant knowledge by decision-makers; and (3) to contribute to a greater level of coordination among sectors and institutional levels (EEA, 2014a).

2.2.2 Intended target audience

The intended target audience of Climate-ADAPT consists of 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. While the platform has, in practice, a wider spectrum of users, including business and non-governmental organisations, practitioners and interested citizens, the content of the platform is selected to cover the needs of the intended target audience described above. In terms of geographical scope, Climate-ADAPT initially targeted the 33 EEA member countries: the 28 EU

Member States, together with Iceland, Liechtenstein, Norway, Switzerland and Turkey (EEA, 2014a). However, the intended target audience was later extended to also include the EEA cooperating countries⁽²⁷⁾.

2.2.3 Content and structure

Climate-ADAPT consists of two main components: (1) the web content; and (2) the database. The web content contains information that is organised under four main entry points in the main menu: 'EU policy', 'Countries, regions and cities', 'Knowledge' and 'Network'. The 'EU policy' section provides information on the EU adaptation strategy and EU sector policies in which adaptation is being mainstreamed, as well as EU funding possibilities and the EU Covenant of Mayors for Climate and Energy Initiative⁽²⁸⁾. The geographic component ('Countries, regions, cities') covers policy information on adaptation at transnational, national and city level. The section 'Country information' contains information on national policies, assessments and stakeholder involvement reported under the EU monitoring mechanism (EC, 2013). The 'Knowledge' section offers tools for and knowledge on various adaptation topics, e.g. information on C3S and EU-funded research projects. The platform also includes an entry point for users searching for further contacts ('Network' section). A brief introduction to Climate-ADAPT and guidance and support material is available in the 'Help' section. The platform also provides access to information about relevant events, news, updates on the platform and the Climate-ADAPT newsletter.

The database aims first to share information on adaptation in Europe by guiding users to the relevant resources. Whereas the web pages provide context information, the second purpose of the database is to support the web content by visualising these knowledge resources in their policy context on various Climate-ADAPT web pages, e.g. the 'EU sector policies' pages. The database also contains information on the following topics: 'Adaptation options', 'Case studies', 'Guidance', 'Indicators', 'Information portals', 'Maps, graphs and datasets', 'Mayors Adapt city profiles', 'Organisations', 'Publications and reports', 'Research

⁽²⁶⁾ <http://climate-adapt.eea.europa.eu> (last accessed February 2018).

⁽²⁷⁾ The EEA has six cooperating countries: Albania, Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia, Montenegro, Serbia and Kosovo (This designation is without prejudice to positions on status, and is in line with UNSCR 1244/99 and the ICJ Opinion on the Kosovo Declaration of Independence) <http://www.eionet.europa.eu/countries>

⁽²⁸⁾ In 2014, the European Commission launched its Covenant of Mayors initiative on climate change adaptation (Mayors Adapt) to support urban adaptation in Europe. In 2015, this initiative was merged with the Covenant of Mayors initiative focusing on mitigation into an integrated Covenant of Mayors for Climate and Energy. In this report it is hereafter called the 'Covenant of Mayors for Climate and Energy'.

and knowledge projects' and 'Tools'. The information on these resources is provided by reliable, external sources, including, for example, research projects, countries and cities (see section 2.2). The database provides easy access by using tailored search criteria and allows a quick overview on these resources by screening the metadata available for each information resource.

2.2.4 Management

The EEA and the European Commission (DG CLIMA) share ownership of Climate-ADAPT, but they have different roles and tasks. DG CLIMA provides financial support for developing the functionalities of the platform and new content based on DG CLIMA-funded projects, while the EEA provides human and financial resources, supported by the ETC/CCA to ensure the maintenance and regular updating of the platform. Moreover, Climate-ADAPT has a dedicated advisory group, which provides advice on the strategic direction of the development of the platform, including potential revisions needed to the Climate-ADAPT work plan and the definition of priorities for action. Members of the advisory group include representatives of various Commission services.

2.2.5 Information providers and content updating process

The EEA, supported by ETC/CCA experts, are the main actors responsible for the preparation and updating of Climate-ADAPT content. Content comes from a wide range of providers, including agencies and ministries in EEA member countries; EU-funded projects (research, but also other sources such as the LIFE and Interreg programmes), transnational organisations and conventions, and cities. In order to remain a trusted information source, the EEA and the ETC/CCA work only with registered information providers and follow a quality assessment procedure based on clear eligibility criteria.

The overall design and maintenance system of Climate-ADAPT, as well as the updates in terms of its content and functionalities, aim to support the three main objectives of the platform outlined above. A detailed presentation of Climate-ADAPT's profile (i.e. mandate, structure, intended users and information providers, IT architecture, and management as well as a description of its dissemination and promotion channels) can be found on [Climate-ADAPT](#).

3 Evolution of stakeholder demands for adaptation information and of adaptation knowledge in Europe

Key messages

- Fulfilling the objectives of Climate-ADAPT to support better informed decision-making on adaptation requires an understanding of the changing user needs and stakeholder demands for adaptation information and selecting the right content to meet them.
- Twofold challenges are confirmed by various assessments and interactions with Climate-ADAPT's target audience: (1) there are varying adaptation knowledge needs that relate, among other things, to the governance level at which actors operate and their changing demands over time as a result of the progress they make in the adaptation policy processes; and (2) there is a steadily growing and diversifying amount of adaptation information that needs to be captured and shared with users.
- The intended users of Climate-ADAPT vary in terms of their level of expertise, background, interests and skills. This creates a need to provide information for both experienced and less experienced users.
- As the complexity and diversity of adaptation knowledge increases, new ways of presenting this knowledge will be required in the near future.

Understanding user needs and stakeholder demands for information, in conjunction with timely selection of the relevant content out of the wealth of information that is currently available, are considered among the main challenges that adaptation platform managers often face (EEA, 2015). These challenges are difficult to overcome for many reasons, including the inherent complexity of adaptation, the growing body of adaptation information and knowledge, and the diversity and evolution of user needs and demands for adaptation information. All of these aspects are rather critical for many platforms, including Climate-ADAPT, as they influence whether platforms can fulfil their objectives. This chapter provides an overview of both aspects, namely the growth in adaptation knowledge and the evolution of user needs, to explain the conditions under which Climate-ADAPT operates. More detailed information on these aspects is available in Annex 1 of the [ETC Technical paper](#).

3.1 Development of user needs and stakeholder demands

To date, several studies have been carried out to identify the topics that need to be better understood,

hence pointing out the areas on which adaptation research should concentrate. Information needs have also been explored in a series of European Commission service contracts, which aimed to assess the needs of specific user groups (e.g. users new to adaptation processes at the national level and sectoral experts at the EU level). Overall these studies have demonstrated the diversity of information needs, which depend largely on the different contexts in which actors operate.

At the European level, the information needs of the European Commission relate largely to its specific role and activities in which the Commission is involved. This includes, among others, mainstreaming of adaptation into relevant EU policies, adaptation funding, managing information on adaptation reported by Member States under the Monitoring Mechanism Regulation (MMR; (EU) No 525/2013). Furthermore, the EU adaptation strategy has identified some topics that are of relevance across Europe. These include 'damage and adaptation costs and benefits; regional and local-level analyses and risk assessments; frameworks, models and tools to support decision-making; and means of monitoring and evaluating past adaptation efforts' (EC, 2013, p. 7). Sector-specific needs at the EU level

were explored in a project funded by DG CLIMA in 2016 (EC, 2016a). This project provided insights into the challenges of promoting climate change adaptation in sectoral organisations and networks, including the identification of sector-specific knowledge gaps (Gancheva et al., 2017).

When looking at the transnational, national and local level, key knowledge gaps are usually reflected in stakeholders' demands for information. These are determined, among other things, by the governance level at which different actors operate, which, in turn, determines to a large extent the policy questions that actors have to answer.

At the transnational level, the capacity of the different regions to respond to climate change impacts varies and depends on a range of factors such as the financial capacity, the governance approach and the knowledge that is available in different regions. To date, some transnational regions have already managed to establish well-functioning structures to support the distribution and uptake of the available knowledge, while others are still challenged when they try to support awareness raising and capacity building (ETC/CCA, 2017). Despite the current differences in the type and the amount of available knowledge, detailed impact and vulnerability analyses at this level appear to be a common knowledge gap across European transnational regions, with the exception of a few cases for which such analyses have been carried out in the context of specific projects (e.g. Baltadapt⁽²⁹⁾, Carpivia⁽³⁰⁾).

At the national level, the stage in the adaptation policy cycle that a country has reached appears to be one of the most critical factors when assessing the type of information that national-level decision-makers in this country might need. Each stage in the policy cycle has specific aims and includes specific tasks, which often increase in complexity as countries move from one

stage to the other. Information needs are also expected to change accordingly. Table 3.1 provides an overview of the information that is expected to be useful for policymakers at national and other levels, considering the aims of the different stages of the adaptation policy cycle.

In 2014, the European Commission's Climate-ADAPT science/policy forum project⁽³¹⁾ delivered eight events targeted at countries that were at the time new to adaptation policy processes⁽³²⁾. The organised forums supported the exchange of adaptation knowledge and information to policymakers and other interested stakeholders and helped to identify the areas of interest on which future efforts should concentrate (Milieu, 2014). These also included specific recommendations for the improvement of the content and the user-friendliness of Climate-ADAPT, as well as for the development of a Climate-ADAPT community (for further information, see Milieu, 2014).

Furthermore, several studies have focused on identifying the information needs of national-level actors when undertaking specific tasks. For example, the EEA (2014b) report on national adaptation policy processes explored the topics on which additional information is needed for carrying out risk and vulnerability assessments (e.g. estimates of costs, benefits and uncertainties, vulnerability at the local level, consideration of social issues). More detailed descriptions of the state of vulnerability assessments at the national level and the main knowledge needs were published in 2018 by the EEA (EEA, 2018). Downing et al. (2017a) identified key knowledge gaps relevant to the development of national adaptation plans (e.g. assessment of social vulnerabilities, development of socio-economic scenarios and projections, sector-specific and common national-level methodologies particularly for countries that are at the early stages of adaptation and guidance about how to deal with uncertainty).

⁽²⁹⁾ <http://climate-adapt.eea.europa.eu/metadata/projects/development-of-a-baltic-sea-region-wide-climate-change-adaptation-strategy> (last accessed February 2018).

⁽³⁰⁾ <http://climate-adapt.eea.europa.eu/metadata/projects/carpathian-integrated-assessment-of-vulnerability-to-climate-change-and-ecosystem-based-adaptation-measures> (last accessed February 2018).

⁽³¹⁾ Science/policy forum: workshops for the dissemination and exchange of adaptation-related knowledge; contract number 071303/2013/663059/SER/CLIMA.C.3 (last accessed February 2018).

⁽³²⁾ The countries covered were Bulgaria, Croatia, Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia.

Adaptation action on the ground has specific knowledge needs. Actions will differ according to cities' individual characteristics, such as location, structure, size, resources, environmental characteristics and previous experience in adaptation, just to mention a few (Cortekar et al., 2016), and thus diversity is also expected in terms of cities' knowledge needs. A recent empirical study on urban adaptation identified key knowledge gaps that future research should consider (Romanovska et al., 2016). Analysis revealed that cities need additional information, data and know-how (e.g. the costs and social impacts of climate change; climate change impacts on essential urban services; adaptation indicators; downscaling and interpreting current, past and future impacts at the city level; avoiding maladaptation).

Finally, it should be mentioned that a range of networks (e.g. C40, the Cities Climate Leadership Group, and ICLEI, Local Governments for Sustainability) and initiatives provide support to urban adaptation. For example, under the EU adaptation strategy, the Covenant of Mayors for Climate and Energy aims to provide support, knowledge sharing and opportunities for engagement and networking among cities regarding both mitigation and adaptation⁽³³⁾. Similarly, the Directorate-General for Regional and Urban Policy (DG Regio) has set up a one-stop shop for cities⁽³⁴⁾ providing information on the various themes of the EU Urban Agenda⁽³⁵⁾, including also climate adaptation in cities⁽³⁶⁾. Among other sources, this web page also provides a link to the Climate-ADAPT page focusing on cities and towns.

3.2 Evolution of adaptation knowledge in Europe

In recent years, EU funds have greatly supported climate research and promoted climate action in different contexts, in order to meet climate targets and enhance climate resilience across Europe. According to the Multiannual Financial Framework 2014-2020 at

least 20 % of the European budget should be allocated to climate-relevant expenditure⁽³⁷⁾ through a range of instruments (e.g. European structural and investment funds, and the Horizon 2020 and LIFE programmes)⁽³⁸⁾.

The high number and wide range of EU-funded projects and initiatives, along with a substantial number of nationally funded projects have significantly enhanced the amount and quality of adaptation knowledge in Europe, and this trend is also expected to continue in the future.

In July 2015 the EEA, supported by the ETC/CCA, screened the CORDIS database involving 25 610 EU research projects funded under Seventh Framework Programme (FP7) 2007-2013 and 4 157 funded under the Horizon 2020 programme (H2020). From a total of 29 767 projects, 115 FP7 and 29 H2020 projects were identified as relevant to adaptation. The LIFE programme has been another important funding source for projects exploring adaptation issues, providing more practical evidence. During the period 2014-2016, 39 projects addressing adaptation issues were co-funded under the strand 'Climate change adaptation' with a total budget of EUR 115.0 million and an EU contribution of EUR 59.3 million. Other projects with some relevance to the theme of adaptation have also been funded also by the strands 'Nature', 'Environmental governance and information', 'Integrated projects Climate' and 'Climate governance and information'.

This impressive increase in adaptation knowledge also needs to be reflected appropriately in the content of Climate-ADAPT, as well as in that of other relevant knowledge platforms, to support its wide uptake by a large number of users. As adaptation knowledge grows and becomes more and more diversified, adaptation platform managers are required to find new forms and tools for presenting, sharing and promoting it to increasingly diverse audiences in order to meet their needs and demands in the best possible way.

⁽³³⁾ <http://climate-adapt.eea.europa.eu/eu-adaptation-policy/covenant-of-mayors> (last accessed February 2018).

⁽³⁴⁾ https://ec.europa.eu/info/eu-regional-and-urban-development/topics/cities_en (last accessed February 2018).

⁽³⁵⁾ https://ec.europa.eu/info/eu-regional-and-urban-development/topics/cities/urban-agenda-eu_en (last accessed February 2018).

⁽³⁶⁾ https://ec.europa.eu/info/eu-regional-and-urban-development/topics/cities/priority-themes/climate-adaptation-cities_en (last accessed February 2018).

⁽³⁷⁾ https://ec.europa.eu/clima/policies/budget_it, https://ec.europa.eu/clima/policies/budget/mainstreaming_en (last accessed February 2018).

⁽³⁸⁾ <http://climate-adapt.eea.europa.eu/eu-adaptation-policy/funding> (last accessed February 2018).

Table 3.1 Expected information needs per different stage in the adaptation policy cycle

Adaptation policy cycle	Aim	Types of information needed
1. Prepare the ground for adaptation	Introduce key elements that are important to build the basis for a successful adaptation process.	Actual and potential future climate change impacts; adaptation activities and good practice examples; effective methods to communicate climate change information.
2. Assess risks and vulnerability to climate change	Develop a comprehensive picture of current and future risks, the expected stress factors and opportunities that might arise from climate change and provide information on how to assess adaptive capacity and cope with uncertainty.	Past and current weather trends, climate projections and sensitivity to anticipated changes; expected (direct and indirect) impacts (threats, opportunities) at different timescales; level of confidence for impacts; assessment of socio-economic development and other non-climatic factors; estimation of adaptive capacity in terms of available financial and human resources and possible adaptation options; identification of transboundary issues.
3. Identify adaptation options	Identify adaptation options, in order to address the identified concerns, keep negative impacts to an acceptable level and take advantage of the opportunities that may arise from climate change.	Adaptation options to accommodate the relevant main concerns identified for a country; information to allow the comparison and prioritisation of options (e.g. scope, socio-economic and ecological context, actors responsible for their implementation, financial resources, time frame).
4. Assess adaptation options	Assess and prioritise the identified adaptation options, based on a detailed description and criteria, and prepare the national framework for climate change adaptation.	With reference to each identified option, information on the risks aiming to be addressed; the extent to which risks are likely to be reduced; the timeframe for the implementation of the individual option; the direct and indirect effects of its implementation (economic, environmental, social); the costs and benefits; the potential implementation barriers.
5. Implementation	Prepare an action plan, which sets out what needs to be done to implement adaptation options.	Entry points for adaptation; preferred adaptation options and ways of implementation; roles and responsibilities; implementation timetable; human and financial resources needed; funding opportunities; barriers to action and mechanisms to overcome them; mechanisms to monitor and evaluate the progress and success of implementation.
6. Monitoring and evaluation	Improve the understanding of the progress and performance of adaptation, learn and communicate lessons and inform future policy and practice.	Adaptation aims that the MRE system attempts to accomplish; methods used for the collection of data; actors involved in the relevant processes; the extent to which the results of MRE activities are used in policies and practice.

Notes: This information was not communicated directly by policymakers, but instead it was compiled taking account of the aims to be achieved and the tasks to be performed at each stage of the adaptation policy cycle. MRE: monitoring, reporting and evaluation.

Source: Climate-ADAPT: <http://climate-adapt.eea.europa.eu/knowledge/tools/adaptation-support-tool> (last accessed December 2017).

4 Evaluation methodology

Summary

- The evaluation of Climate-ADAPT was carried out as a process evaluation with the main focus on learning to assess what worked well and why for future improvements.
- The evaluation of Climate-ADAPT focuses on the three objectives of the platform, i.e. (1) to facilitate the collection, sharing and use of information on CCIVA and build a consistent and updated knowledge base; (2) to assist the effective uptake of the relevant knowledge by decision-makers; and (3) to contribute to more collaboration across governance scales and among sectors. A multi-method approach combining internal assessment and external feedback is used to evaluate the actual achievements of the platform. The outcomes of both approaches complement each other.
- The relevance, effectiveness, efficiency, coherence and added value of Climate-ADAPT as a key element in ensuring better informed decision-making for adaptation in Europe (Action 5 of the EU adaptation strategy) is then evaluated, based on expert judgement.
- Data provided by regular Climate-ADAPT monitoring and reporting procedures and collected using a limited number of additional tools are used to evaluate the platform.
- A tiered three-level approach was applied in the analysis of external feedback: (1) quantitative data from the Climate-ADAPT web statistics provided trends on what was used on Climate-ADAPT; (2) quantitative and some qualitative data collected by anonymous surveys helped to interpret the trends and to understand what was needed by users, how Climate-ADAPT matched these needs and which processes were informed by the platform knowledge; and (3) qualitative data captured by individual feedback through 17 examples of the use of Climate-ADAPT ('use cases') were analysed as 'evaluation case studies'. They provide insights into under which circumstances the information on Climate-ADAPT was used and how this supported the actual decision-making on adaptation in various places in Europe.

This chapter presents an overview of the methodology of the Climate-ADAPT evaluation. The specific methodologies of the internal assessment procedures, as well as of the external evaluation tools that were used to evaluate the achievements of the platform objectives, are explained in Annex 2 of the [ETC Technical paper](#).

Monitoring, reporting and evaluation (MRE) is a key aspect of any iterative adaptation policy process, as it helps to understand progress and performance, learn and communicate lessons and inform future policy and practice. It therefore plays a critical role in enabling adaptation policy and practice to evolve and improve over time. This is also true for platforms such as Climate-ADAPT, as it can help to assess and evaluate

whether it is successfully achieving the specific goals set out in its mandate (EEA, 2016a).

The EEA has presented its view on environment and climate policy evaluation to facilitate dialogue on the evaluation of the environment and climate policy in Europe among the professional environmental evaluation community (i. e. EEA, 2016b). That report describes the overall evaluation framework, including the well-established evaluation criteria, as agreed by the European Commission, to be applied to the evaluation of EU policies and the tools that can be used to collect the evidence base for evaluations. The evaluation approach that is being used in the evaluation of Climate-ADAPT follows that approach as far as possible.

A key aim of the Climate-ADAPT evaluation is to provide input to the European Commission's own broader evaluation of the EU adaptation strategy, which to some extent also covered Climate-ADAPT (Action 5 of the EU strategy).

The EEA approach to the Climate-ADAPT evaluation (EEA, 2017a) was presented in a dedicated Climate-ADAPT webinar on 18 January 2017 (EEA, 2017b). Feedback on the evaluation concept was collected from all key Climate-ADAPT users (i.e. experts from EEA member countries, transnational regions and Commission services), as well as information providers (such as the community of researchers working on EU-funded adaptation research projects). Several national platforms were subject to major updates based on the results of their MRE procedures, such as the Norwegian⁽³⁹⁾ and the German⁽⁴⁰⁾ national adaptation platforms, or they are revising their platforms, such as the Spanish national adaptation platform⁽⁴¹⁾. A dedicated evaluation of the KomPass platform (Buth, 2015) and the effectiveness of its tools (Kind, C et al., 2015) was, for example, carried out in Germany in 2015. Lessons learned from the evaluations of adaptation platforms in the EEA member countries, and at the transnational level, e. g. for the Alpine region (C3Alps), as discussed during the Expert Workshop on Climate Change Adaptation Platforms on 16 June 2016⁽⁴²⁾, were considered in the evaluation methodology (EEA, 2017a).

Ideally, an evaluation would use a set of quantitative indicators to measure whether Climate-ADAPT is effective in supporting better informed decision-making on adaptation in Europe. A well-established evaluation methodology for adaptation knowledge platforms is not yet available. Therefore, a pragmatic approach was applied, accepting that there would be gaps in the outcomes of the evaluation. It was carried out as a process evaluation with a focus on learning what worked well and what did not work to further improve Climate-ADAPT according to users and providers'

needs. The evaluation combines qualitative and quantitative methods coherently in a way that fits in with the evaluation questions.

The Climate-ADAPT evaluation follows eight key principles, explained in the following sections.

4.1 Focus on the actual achievement of the specific objectives of Climate-ADAPT

To ensure a consistent evaluation, the EEA collected and analysed the evidence in relation to the three objectives of Climate-ADAPT, which were set out in its mid-term work plan (EEA, 2014a). These objectives are to facilitate the collection, sharing and use of information on CCIVA and to build a consistent and updated knowledge base (objective A); to assist the effective uptake of the relevant knowledge by decision-makers (objective B); and to contribute to a greater level of coordination among the relevant sector policies and among institutional levels (objective C) (see Figure 4.1 and Section 2.2).

The three overall objectives were further interpreted into eight questions based on the mid-term Climate-ADAPT work plan (2013-2018) (see Figure 4.1). These questions allow determination of the actual achievements of the platform in a more operational way.

Objective A was interpreted in a threefold way. Firstly, the evaluation aimed to understand if Climate-ADAPT succeeded in continuously encouraging information providers to share their knowledge on adaptation with the community of adaptation experts in Europe and if the process of submitting information was organised in an efficient way. Secondly, Climate-ADAPT was supposed to act as a facilitator for collecting scientific information, data and case studies about CCIVA. Therefore, the evaluation aimed to understand if the

⁽³⁹⁾ The Norwegian Climate Change Adaptation Portal: <http://www.klimatilpasning.no/infosider/english> (last accessed February 2018).

⁽⁴⁰⁾ KomPass: <https://www.umweltbundesamt.de/en/topics/climate-energy/climate-change-adaptation/kompass> (last accessed February 2018).

⁽⁴¹⁾ AdapteCCa Platform for the exchange and consultation of information on adaptation to Climate Change in Spain: <http://www.adaptecca.es/en> (last accessed February 2018).

⁽⁴²⁾ See EEA Expert Workshop on Climate Change Adaptation Platforms, EEA, Copenhagen, 16 June 2016: <http://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/workshop-documentation>

content was selected to build a consistent knowledge base on adaptation in Europe that is relevant to better informed decision-making. Climate-ADAPT was supposed to help to identify or address gaps in available information and thus support potential action by countries and/or at the EU level (e.g. through research). Therefore, the analysis also answered the question of whether major gaps remain that need to be closed by targeted actions. Thirdly, the evaluation asked which sections of Climate-ADAPT were used by the Climate-ADAPT stakeholders and what additional content would be needed.

Objective B aimed to assist the effective uptake of knowledge by international, EU, national, regional, local or sectoral decision-makers, by offering guidance, tools and best practices for assessments of vulnerability to climate change at different geographical levels and of adaptation plans and measures. The evaluation aimed to determine if the content was presented in a useful way that assisted uptake and if the knowledge was taken up and led to better informed decision-making.

An evaluation of objective C would ideally cover all aspects of coordination, as described in an earlier EEA analysis on adaptation platforms in Europe (EEA, 2015). This would include cooperation on content, functionalities, and the dissemination of knowledge and promotion of adaptation platforms. This objective was also interpreted in a threefold way.

First, by asking if the information was presented on Climate-ADAPT according to its role as an EU-level platform. This should be complementary to the knowledge that is available on other relevant platforms, which are adaptation platforms at other levels of governance (such as national or transnational platforms), sectoral knowledge platforms or platforms from other knowledge providers, such as from climate services. Climate-ADAPT aims to provide added value compared with national adaptation knowledge platforms, due to its broader nature, by presenting comprehensive information about adaptation in the EU and an overview of adaptation in the EEA member countries in a structured way. Complementarity means that adaptation information is added to platforms only once and then kept updated. This helps adaptation experts to find complementary information that supports their work by providing the correct weblinks to the relevant knowledge providers.

A second aspect is the goal of Climate-ADAPT to support cooperation across countries and regions

(transnational, with neighbouring countries and/or regions with similar characteristics, e.g. mountains, river basins or seas). The cooperation of such countries and regions allows the exchange of knowledge and experiences or setting up government structures to cope with adaptation challenges jointly.

The third aspect relates to whether Climate-ADAPT supports the effective flow of information across governance levels. The most relevant example of such information flow is the governmental reporting of adaptation actions in accordance with the MMR (EU, 2013) by the EU member countries to the European Commission, which was established on Climate-ADAPT in 2015. Another example of an information flow is the submission of information on EU-funded research projects and their outcomes to Climate-ADAPT.

Table 4.1 shows the type of evidence that was used to answer the 14 questions related to the achievement of the Climate-ADAPT objectives. Evidence was available for almost all aspects of the three objectives, except for two aspects of objective C, which were beyond the scope of this evaluation. The analysis of the evidence in terms of its objective C does not cover the achievements of Climate-ADAPT in terms of supporting efficient flows of information across governance levels. Supporting cooperation across countries and regions with similar characteristics is covered to a limited extent.

No quantitative goals were available to measure the achievements of Climate-ADAPT in terms of these three objectives and underlying questions. Therefore, the outcomes were assessed in a formative and qualitative way by assessing whether the processes are 'pointing in the right direction'.

The results of all individual evaluation tools are presented in a report related to the three Climate-ADAPT objectives and the underlying questions (see [ETC Technical paper](#), Annex 3). It is obvious that several outcomes relate to more than one question and more than one Climate-ADAPT objective. Although these overlaps exist, it was decided to use the structure presented in Table 4.1 to avoid duplicating information. According to the limits of the tools for collecting and analysing the evidence, the number of outcomes varies among the three objectives. The largest number of outcomes is related to Climate-ADAPT's objective B, whereas objective C has less extensive results. The outcomes of the various tools employed in the evaluation are synthesized in Chapter 5 (Evaluation).

Table 4.1 Aspects of Climate-ADAPT objectives covered by the evaluation approach

	Internal assessment ⁽⁴³⁾	Analysis of external feedback ⁽⁴⁴⁾
Objective A: Facilitating the sharing of information to build a consistent knowledge base		
A1) Does Climate-ADAPT successfully involve potential information providers in sharing their information?	Not covered in the analysis.	3.2.1.2 User/provider survey 3.2.1.3 Survey on the Climate-ADAPT case studies uptake
A2) Does Climate-ADAPT provide the relevant content on the platform?	3.1.1.1 Climate-ADAPT database analysis (E) 3.1.1.2 Coverage of adaptation options (E) 3.1.1.3 Coverage of Climate-ADAPT case studies (E) 3.1.1.4 Web content development (E)	Not explicitly covered in the analysis.
A3) Which sections of Climate-ADAPT are currently being used?	Not covered in the analysis.	3.2.1.1 Climate-ADAPT web statistics 3.2.1.2 User/provider survey 3.2.1.3 Survey on the Climate-ADAPT case studies uptake 3.2.1.4 Ad-hoc collected feedback (E) 3.2.1.5 Feedback collected through Climate-ADAPT use cases
A4) What information is also needed by Climate-ADAPT users?	Not covered in the analysis.	3.2.1.2 User/provider survey 3.2.1.4 Ad-hoc collected feedback (E) 3.2.1.5 Feedback collected through Climate-ADAPT use cases
Objective B: Assisting the uptake of the information		
B1) Who is using Climate-ADAPT?	Not covered in the analysis.	3.2.2.1 Web statistics 3.2.2.2 User/provider survey 3.2.2.3 Feedback collected through Climate-ADAPT use cases
B2) What products or processes are the users using the information for?	Not covered in the analysis.	3.2.2.2 User/provider survey 3.2.2.3 Feedback collected through Climate-ADAPT use cases 3.2.2.4 Survey on the Climate-ADAPT case studies uptake
B3) Which sections of Climate-ADAPT are used to develop tailor-made products or to support processes?	Not covered in the analysis.	3.2.2.2 User/provider survey 3.2.2.3 Feedback collected through Climate-ADAPT use cases 3.2.2.4 Survey on the Climate-ADAPT case studies uptake

⁽⁴³⁾ The references to this evidence information refer to the ETC/CCA Technical Paper, Annex 3, Section 3.1.

⁽⁴⁴⁾ The references to this evidence information refer to the ETC/CCA Technical Paper, Annex 3, Section 3.2.

Table 4.1 (cont.) Aspects of Climate-ADAPT objectives covered by the evaluation approach

	Internal assessment ⁽⁴³⁾	Analysis of external feedback ⁽⁴⁴⁾
B4) Is the knowledge presented on Climate-ADAPT in a useful way of assisting the uptake of the information?	3.1.2 Climate-ADAPT functionalities	3.2.2.2 User/provider survey covering the whole platform 3.2.2.3 Feedback collected through Climate-ADAPT use cases
B5) Is the knowledge on Climate-ADAPT disseminated and promoted in a way that it assists the uptake of the information?	Not covered in the analysis.	3.2.2.5 Newsletter statistics
B6) Which additional services are needed to assist the uptake of the information on Climate-ADAPT?	Not covered in the analysis.	3.2.2.2 User/provider survey 3.2.2.3 Feedback collected through Climate-ADAPT use cases 3.2.2.3 Survey on Climate-ADAPT case studies uptake
Objective C: Contribute to better cooperation		
C1) Does Climate-ADAPT present the information in a way that is complementary to the original source?	3.1.3. Weblinks to external platforms	3.2.3.1 Climate-ADAPT web statistics 3.2.3.2 User/provider survey 3.2.3.3 Feedback collected through Climate-ADAPT use cases
C2) Does Climate-ADAPT support cooperation across countries and regions with similar characteristics (such as mountain regions) and neighbouring countries, e.g. in transnational regions?)	Not covered in the analysis.	3.2.3.3 Feedback collected through Climate-ADAPT use cases
C3) Does Climate-ADAPT support an effective information flow between governance levels (such as on the reporting of adaptation information according to the MMR?)	Not covered in the analysis.	Not covered in the analysis.
C4) Does Climate-ADAPT support cooperation on adaptation across sector policies?	Not covered in the analysis.	Not covered in the analysis.

Notes: The table shows the tools that were used to provide evidence for the evaluation. (E) denotes existing tools that were regularly applied on Climate-ADAPT. The others are additional tools specifically designed for the evaluation. The chapter numbers refer to the ETC/CCA Technical paper.

Source: EEA.

4.2 Evaluation perspective

Taking into account that the sharing of knowledge on adaptation in Europe, which is covered in the first objective of Climate-ADAPT, touches not only on the use of the knowledge, but also on the provision of the information, the evaluation considers both the user and the information provider perspective (see [Climate-ADAPT profile](#)). This decision was also

made considering that many users (e.g. the National Reference Centres for climate change impacts, vulnerability and adaptation) are involved in various processes on adaptation at EU levels. Therefore, they are often also acting as information providers (e.g. in the reporting of adaptation action at national levels according to the MMR (EU, 2013) and voluntary updates by EEA member countries).

4.3 Evaluation period

Considering the evolution of users' needs and the growing amount of adaptation information available in Europe, as well as the development of IT solutions for the web-based presentation of knowledge since the launch of the platform in March 2012, it was intended to cover the full period from March 2012 to March 2017 in the evaluation. However, because of limited data availability for 2012, the evaluation covers only the period from 2013 to 2017. This also ensures that the evaluation of the EU adaptation strategy, covering the period 2013 to 2016 (EC, 2016b), can be informed by the Climate-ADAPT evaluation.

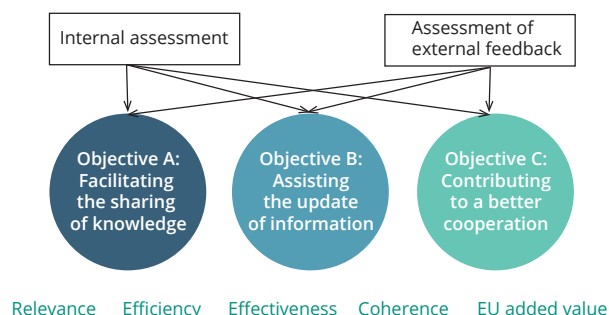
4.4 Multi-method approach — combination of external feedback tools with internal assessment

The Climate-ADAPT evaluation was carried out by the EEA with a limited set of methodologies to assess the level of achievement of each objective of the platform.

Figure 4.1 illustrates the practical multi-method approach used for this evaluation, combining elements of external feedback with elements of internal assessment. The external feedback included the analysis of the Climate-ADAPT web statistics, a number of surveys as well as evaluation case studies (see [ETC Technical paper](#), Annex 3, Chapter 2). The internal assessment included the statistical analysis of the content of the database, the analysis of weblinks to key partners (see [ETC Technical paper](#), Annex 3, Chapter 1). Specific sections of Climate-ADAPT, which require a substantial amount of resources in terms of maintenance, e.g. the case studies and adaptation options, were analysed in more depth (see [ETC Technical paper](#), Annex 3, Sections 1.1.2, 1.1.3 and 1.1.4).

The outcomes of the internal assessment of Climate-ADAPT and the analysis of external feedback complement each other to clarify the achievements of Climate-ADAPT in terms of its three objectives. The internal assessment contributes to evaluating the achievements in terms of all three Climate-ADAPT objectives. The effectiveness of Climate-ADAPT in assisting the uptake of the information to support better informed decision-making relies on external feedback from the platform's users and providers.

Figure 4.1 Overall methodology of the Climate-ADAPT evaluation



Notes: The figure illustrates the multi-method approach that was used in the Climate-ADAPT evaluation. It combines external evaluation tools with internal assessment procedures. The different shades of blue denote the level of evidence that was available to answer questions related to the achievement of the Climate-ADAPT objectives. Objective C is not fully covered.

Source: EEA

4.5 Using data from existing Climate-ADAPT monitoring and reporting procedures and a limited number of new tools

Since its launch, Climate-ADAPT has been updated and further developed in the light of feedback from key stakeholders using a variety of channels (such as meetings, webinars and DG CLIMA service contracts (see [Climate-ADAPT profile](#)). The Climate-ADAPT platform has, since its inception in 2012, developed a set of annual monitoring and reporting (M&R) procedures, whose results have helped to make the necessary adjustments to the platform to maintain its effectiveness in supporting the needs of the evolving European adaptation policy process. Table 4.1 shows that the current monitoring and reporting procedures, such as the annual statistical analysis of the contents of the database, were used to answer some of the evaluation questions. The database analysis helped to understand whether the right content was being selected to build a consistent knowledge base or if gaps remained. To evaluate the achievement of further aspects of the Climate-ADAPT objectives, such as the actual uptake of the information by decision-makers, the evaluation needed to be more systematic and complete. Therefore, a limited number of additional

instruments were used, such as the analysis of weblinks to key EU sectoral websites (ETC Technical paper, Annex 3, Section 1.3) or a user/provider survey (ETC Technical paper, Annex 3, Sections 2.1.2, 2.2.2 and 2.3.2).

4.6 Using a tiered three-level approach for the assessment of external feedback

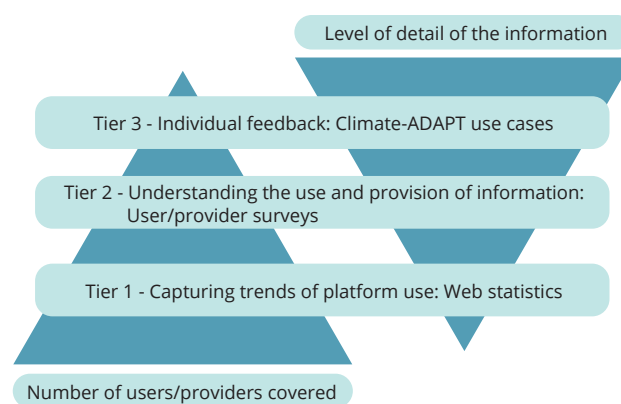
Figure 4.2 shows that all instruments of external feedback were selected and analysed according to their limits and added values in a stepwise approach. In tier 1, the Climate-ADAPT web statistics were analysed using Google analytics to understand the use of Climate-ADAPT across its various sections and over time. The weakness in the statistics is the lack of clarity on how the data were gathered by Google analytics. Therefore, the data were not used in absolute numbers but rather to show the trends in the use of the platform by all its users (ETC Technical paper, Annex 3, Sections 2.1.1, 2.2.1 and 2.3.1).

In tier 2, the user/provider survey adds more detailed quantitative information on the use of the platform, and thus gives a better understanding of the trends identified through the web statistics. In addition, it provides quantitative information and insights on the provision of content to the platform. A specific strength of the survey is that it provides for the first time quantitative information on the uptake of the knowledge provided on Climate-ADAPT. However, the outcomes of the survey need to be carefully assessed considering its limits, mainly relating to the size and representativeness of the sample. The survey was issued to 4 600 potential Climate-ADAPT users and providers, who were invited using EEA mailing lists, and an unknown number of potential users and providers through other emails, and it achieved 300 responses. Therefore, the results should be treated as indicative and providing a good indication of the views of users and providers. Two thirds of the respondents were from Climate-ADAPT's 'core audience' (EU, transnational, national, sub-national and municipal government, interface organisations and research organisations), thus providing valuable insights into the use of Climate-ADAPT and the needs of these core users. Half of these core users were from organisations that directly support decision-makers (boundary and research organisations). The other one third of

respondents was from other user groups (the 'wider target audience'), including consultants, businesses, and non-governmental organisations (see ETC Technical paper, Annex 2).

In tier 3, the individual feedback, that collected from voluntary submissions of use cases from the Climate-ADAPT target audience, serves as evaluation case studies. They provide valuable insights into the actual use of Climate-ADAPT for individual sets of adaptation challenges and institutional settings at all levels of governance in Europe. However, they cover only a very small group of users from Climate-ADAPT's audience. Therefore, they add evidence and allow better interpretation of the lessons learned from the user/provider survey and the web statistics, but they cannot be considered representative. An overview of all methodologies used in the evaluation and detailed descriptions of the strengths and weaknesses of the instruments is provided in ETC Technical paper, Annex 2.

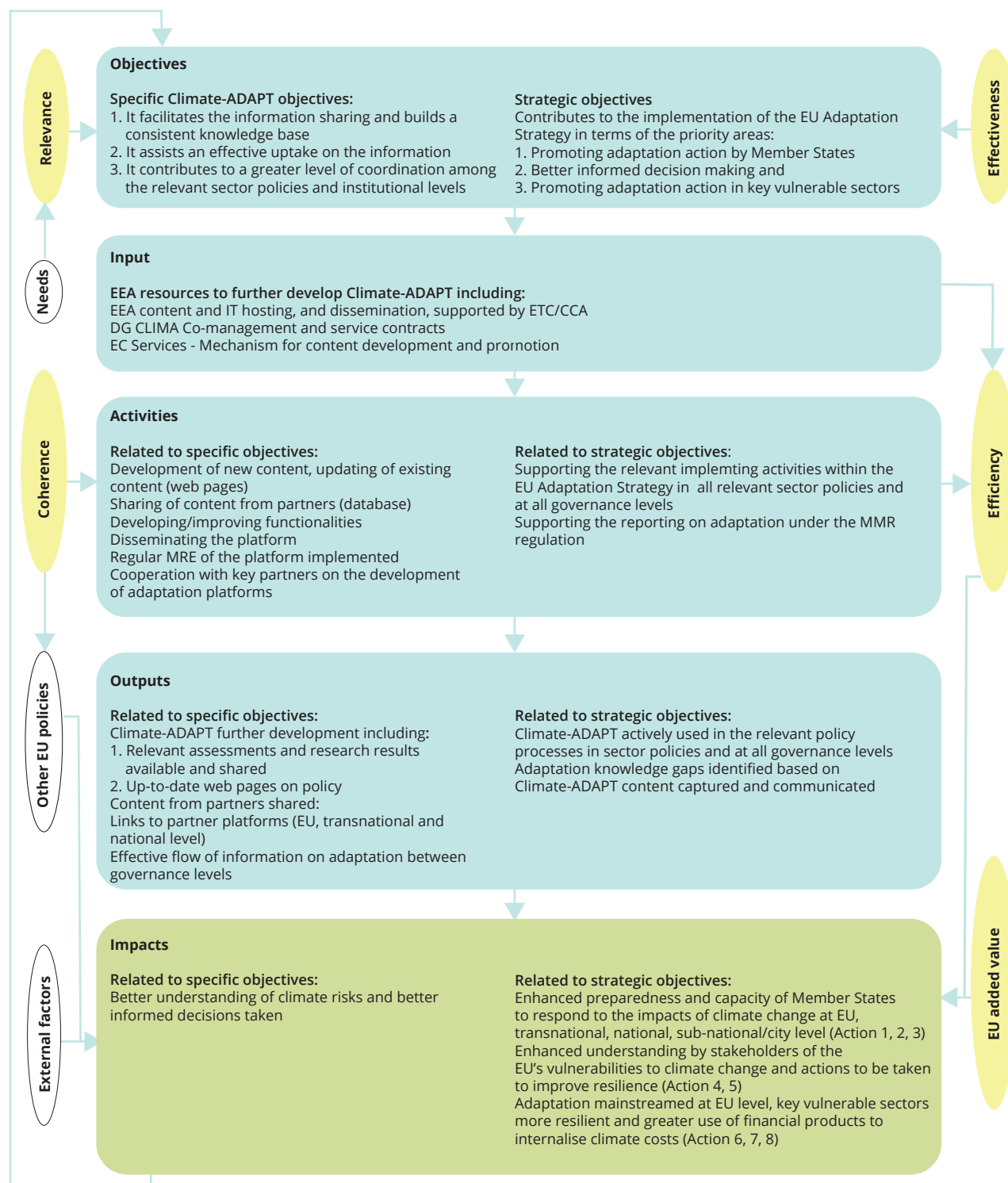
Figure 4.2 Tiered approach for the evaluation of external feedback to Climate-ADAPT



Notes: The figure shows the added value and limits of the methods used to capture and analyse the external feedback for the evaluation of Climate-ADAPT in terms of representativeness and level of detail.

Source: EEA.

Figure 4.3 Logical framework of the Climate-ADAPT evaluation



Notes: The logical framework of the Climate-ADAPT evaluation demonstrates the scope of the intervention carried out with the public investment in the platform in terms of objectives, policies and actions that should lead to the intended specific changes (better informed decision-making) and to strategic changes towards a more resilient Europe. Furthermore, the figure shows how this should be evaluated.

Source: Adapted from EC (2017c).

4.7 Expert-judgement-based link to the evaluation of the EU adaptation strategy

The Climate-ADAPT evaluation, carried out by the EEA, intends to inform the EU adaptation strategy evaluation. That evaluation is more summative and focuses on the legitimacy of the implemented adaptation policy framework at the EU level. As the framework of the EU adaptation strategy evaluation became available only late in the process, it was not possible to fully align the EEA Climate-ADAPT evaluation with the methodology of the strategy evaluation. Nonetheless, the EU strategy evaluation framework was used to guide the logical framework of the Climate-ADAPT evaluation (see Figure 4.3).

No quantitative goals or time schedule were determined for Climate-ADAPT in the EU adaptation strategy. Therefore, the achievements of Climate-ADAPT, identified through the EEA evaluation, were summarised qualitatively to inform the evaluation of the EU adaptation strategy. The outcomes of the EEA Climate-ADAPT evaluation are

presented in the context of the evaluation criteria (relevance, efficiency, effectiveness, coherence and EU added value). The fulfilment of the criterion 'complementarity' was also summarised.

4.8 Informing learning and development in a wider setting

A set of reflections is presented in Chapter 6 based on the lessons learned from the evaluation. These aim to further the development of Climate-ADAPT in the mid-term in order to fulfil the needs of platform users, to use potential information providers in the most effective way, and to allow using the best available technical solutions. Beyond the reflections directly targeting Climate-ADAPT, lessons learned can be applied to other thematic platforms maintained by the EEA, such as BISE, Water Information System for Europe (WISE) and WISE Marine. Lessons learned from the Climate-ADAPT evaluation may also be of use for adaptation platforms at national and transnational levels.

5 Evaluation

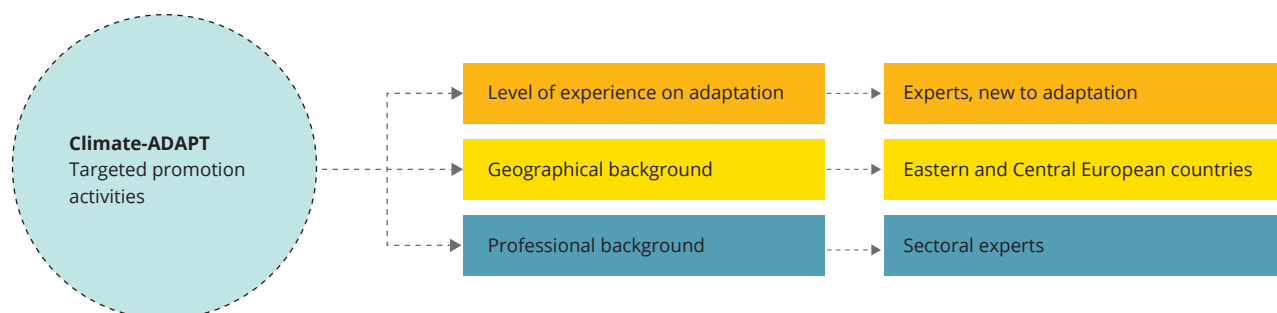
This chapter summarises outcomes of the internal assessment and the analysis of external feedback on Climate-ADAPT's achievements, related to its three objectives. It also presents the conclusions drawn based on those outcomes. These have been divided into technical and strategic conclusions for easier reading. It is crucial to understand whether an adaptation platform sufficiently reaches its target audience. Therefore, the composition of the actual users and providers is also presented here. Finally, the lessons learned for the internal management of Climate-ADAPT (including MRE) are summarised.

The outcomes of the systematic stock-taking of Climate-ADAPT's achievements are presented here in an integrated way. To keep track of the contribution of each tool that was used in the multi-method approach to this evaluation, the outcomes include a reference to the tool used. Overlaps in the presentation of the outcomes cannot be avoided. A very limited number of figures from the stock-taking is shown here for illustrative purposes. All information is available in the 'Key evidence' documents (see [ETC Technical paper](#), Annex 2). Further details of the evidence are available in the 'Detailed evidence' documents available on request.

5.1 Understanding the users of Climate-ADAPT

Box 5.1 Strategic conclusions

- Stakeholders working on adaptation at various governance levels in Europe were the target groups of regular dissemination activities carried out during the period 2013-2017. Climate-ADAPT succeeds in reaching out to its intended target audience, decision-makers on adaptation in Europe and organisations supporting them. The platform is used across all governance levels in Europe from city/local level to sub-national, national, transnational up to the European level. However, some specific user groups have not yet been sufficiently reached, i.e. sectoral experts at the EU level and across Europe, users from eastern and central European countries and users with less experience of adaptation.
- A dedicated Climate-ADAPT dissemination strategy could be developed by the EEA, working with the European Commission, as an element of the 2019-2021 Climate-ADAPT work plan. It should aim to broaden the outreach of the platform towards sectoral experts at the EU level and across Europe — notably, extending the promotional activities of Climate-ADAPT beyond the community of experts working on adaptation in general towards more sector-specific users' needs to consider the involvement of key EU-level policy sector experts.
- The strategy should also aim to promote the platform in a more targeted way towards users from eastern and central European countries and users with less experience of adaptation (see Figure 5.1). Such a dissemination strategy should involve key actors from those user groups as 'multipliers' to promote the platform in a collaborative way.

Figure 5.1 Proposed target audiences of a broadened and more targeted promotion of Climate-ADAPT

Source: EEA.

5.1.1 B1) Who is using Climate-ADAPT?

Source: Outcomes of the analysis of external feedback to Climate-ADAPT (see [ETC Technical paper](#), Annex 3, Section 5.2).

Overall outreach

The number of Climate-ADAPT users increased fivefold between 2013 and 2017. It increased from 2 800 monthly users in March 2013 to 14 100 monthly users in March 2017. This trend suggests an increasing reach of the platform since its launch in 2012. Climate-ADAPT continually gains new and returning users (web statistics). The user/provider survey and the Climate-ADAPT use cases confirm that there is increased awareness of its added value and growing trust in the quality of the information.

The way in which Climate-ADAPT was set up and is maintained seems to be successful overall. Climate-ADAPT succeeds in reaching out to its intended target audience, which are decision-makers on adaptation in Europe and organisations supporting them (user/provider survey, Climate-ADAPT use cases).

Use of Climate-ADAPT by the intended target audience

The user/provider survey captured opinions from a range of users, as two thirds of respondents were from the intended core audience of decision-makers in Europe and organisations that support them and one third was from the wider audience.

Climate-ADAPT has been used primarily by research organisations supporting decision-makers to develop evidence documents that feed into the adaptation policy process (user/provider survey).

The high proportion of organisations using Climate-ADAPT that are supporting governmental decision-makers, such as researchers and intermediary organisations, but that are not decision-makers themselves is also confirmed by the Climate-ADAPT use cases. It corresponds to Climate-ADAPT's set-up as a knowledge platform.

Box 5.2 Technical conclusions

- The overall set-up of the platform in terms of content and functionalities could be continued in a potential following period of the EU adaptation strategy to keep fulfilling the needs of the intended target audience.
- Current activities to promote the platform through the European Climate Adaptation Newsletter ('Newsletter') and the Climate-ADAPT development webinars (Webinars), carried out by the EEA with the ETC/CCA since 2015, seem to have been successful in lowering the barriers to participation in the Climate-ADAPT community. These activities could be continued.

Box 5.3 Technical conclusions

- The intermediaries, representing organisations, supporting adaptation decision-makers, representing the largest user group, could be more prominently highlighted in the Climate-ADAPT mandate ('organisations supporting governmental decision-makers and decision-makers on adaptation') and when considering the further development of the platform.
- The target audience could be more clearly addressed on the Climate-ADAPT home page to improve communication about the platform's scope and objectives.

Geographical background of users

Climate-ADAPT has successfully engaged users from the EU level (user/provider survey) and from all European countries, but it is less used by eastern and central European countries (web statistics, user/provider survey). The publication of the platform in English was mentioned as one of the barriers (user/provider survey). A high proportion of users from countries with smaller populations (such as Belgium

and Denmark) demonstrated the differences in the activities of users across the countries (web statistics).

Although Climate-ADAPT is designed for adaptation experts in Europe, the platform is used outside Europe (user/provider survey), which offers opportunities to promote EU adaptation approaches at the global level and also in neighbouring regions of Europe, e.g. the Mediterranean.

Box 5.4 Technical conclusions

- The promotion of the platform to less represented countries, particularly from eastern and central Europe, could be stepped up by the European Commission, e.g. by re-using the 'science/policy forum' format. This format was successfully used in earlier promotion activities by the European Commission. It can help to involve experts that act as multipliers for Climate-ADAPT's use.
- The added value of the 'low barrier' initiatives to promote Climate-ADAPT, carried out by the EEA and ETC/CCA, i.e. the series of webinars, and of the regular active involvement of national reference centres (NRCs⁽⁴⁵⁾) and transnational regions in the publication of the newsletter from 2016 onwards was confirmed by many experts. These activities could be continued and targeted to reach out to users in those less represented countries.
- The benefits of participation in the platform by experts and decision-makers outside Europe could be enhanced. Such benefits could, for example, be realised by considering the possibilities of promoting Climate-ADAPT at the global level or in neighbouring regions through selected channels, such as newsletters or key events.

⁽⁴⁵⁾ National Reference Centres are nominated by EEA member countries. They are nationally funded experts or groups of experts in national-level organisations that provide data and knowledge in specific areas of environmental activities, e.g. for climate change adaptation.

Professional background of users

Climate-ADAPT content is valuable for users in various roles in terms of their type of work, governance level and professional background.

Climate-ADAPT is used across all governance levels in Europe from city/local level to sub-national, national, transnational up to the European level (Climate-ADAPT use cases).

Nearly half of respondents to the user/provider survey have multiple types of work, such as science, policy development, operational/technical and stakeholder engagement (user/provider survey, Climate-ADAPT use cases).

Box 5.5 Technical conclusions

The diversity of Climate-ADAPT users in terms of their professional backgrounds suggests that there is potential to provide different content for different roles/types of users (new to adaptation, science, national or urban users) on Climate-ADAPT and to offer tailor-made entry points (see Figure 5.2) to and improved navigation routes between the relevant areas of the platform.

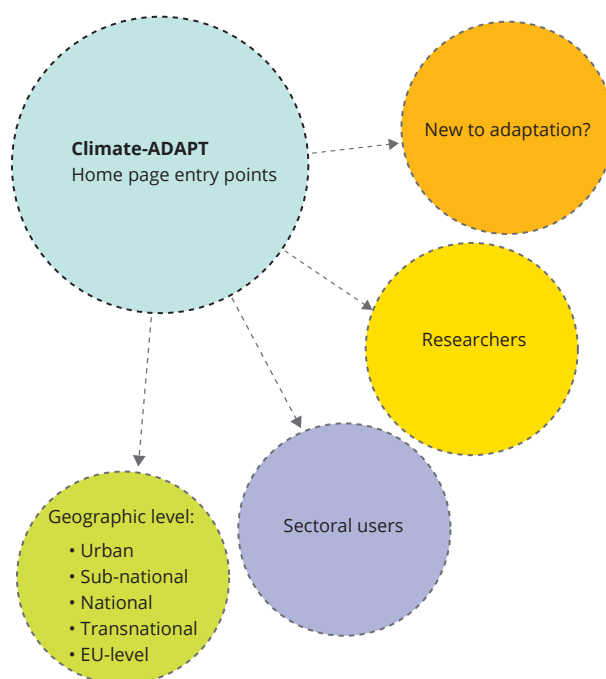
Sectoral background of users

As the platform was designed for and mainly promoted to governmental decision-makers on adaptation in general, its use by organisations and experts with a sectoral background is still limited.

Although the user/provider survey showed that more than half of respondents (171 out of 298) work on adaptation to climate change in general and many sectors are represented, the respondents do not represent all sectors to the same degree: urban, water management and energy were those most represented.

There is only one Climate-ADAPT use case provided by a sectoral organisation (Sustainable Development Unit for the Health and Social Care System in Public Health England, use case no 16). Ad hoc collected feedback from selected EU-level sectoral stakeholders indicated a limited awareness of Climate-ADAPT among those experts (Gancheva et al. 2017). Therefore, while it is encouraging that Climate-ADAPT is used by sectoral experts, the promotional activities do not sufficiently cover users in all EU sector policies.

Figure 5.2 Proposed entry points for Climate-ADAPT user groups



Source: EEA.

Box 5.6 Technical conclusions

- Promotional activities targeting potential sectoral users could be broadened by the European Commission across various EU policy areas. As adaptation is relevant to 13 EU sector policies ⁽⁴⁶⁾ to date, such additional promotional activities could be implemented by involving the Climate-ADAPT advisory group. The targeted promotion should aim to further mainstream adaptation knowledge in sectors addressed by EU policies. This could build on the experiences of previous outreach activities funded by the European Commission in 2016 through a service contract targeting selected pilot sectors ('communities of practice') ⁽⁴⁷⁾. NWRM ⁽⁴⁸⁾ could be a pilot sector for such activities. This could, for example, include identifying key sector events at which the platform can be promoted with targeted materials.
- The EEA could cooperate more closely with key sector platforms at the EU level, e.g. DRMKC ⁽⁴⁹⁾ and the knowledge platforms on NWRM and on ecosystem services and natural capital (OPPLA ⁽⁵⁰⁾), and the urban data platform ⁽⁵¹⁾ could be another area of work. This could, for example, include specific weblinks from those platforms to Climate-ADAPT.

Level of users' experience of adaptation

The majority (86 %) of people who answered the user/provider survey had been working on adaptation for more than 2 years, and those that had been working on adaptation for less than 1 year were less represented. There are also not many Climate-ADAPT use cases from users with less experience of adaptation (See Box 5.7).

Proportion of users from countries with or without web-based national adaptation platforms

The lowest number of user/provider survey participants came from northern Europe, which may indicate that the majority of countries in this region already have web-based national adaptation platforms and/or national adaptation plans (NAPs) in place, hence less support is needed from Climate-ADAPT.

Most [Climate-ADAPT use cases](#) were provided by experts from countries without a national adaptation platform in place (11 out of 17 cases). For Italy, where a NAP and a national adaptation platform are not yet available to support decision-making on adaptation, six use cases from all levels of governance were provided (Climate-ADAPT use cases 4, 9, 10, 12, 14 and 15) (Table 5.1). This is also because the platform is particularly well promoted in Italy. All these individual use cases may indicate that experts in countries without a national adaptation platform in place might have used Climate-ADAPT more comprehensively and frequently than experts in countries with a national adaptation platform. Climate-ADAPT use case no three from Bulgaria explicitly shows that those involved in the national adaptation policy process are advised to use the Bulgaria Climate-ADAPT country page, as it is the most comprehensive and up-to-date overview of adaptation policy in Bulgaria (See Box 5.8).

Box 5.7 Technical conclusions

- The 'low barrier' initiatives to promote Climate-ADAPT, carried out by the EEA and ETC/CCA, such as the Climate-ADAPT webinars and the newsletter, could be more targeted to reach out to users with less experience of adaptation.
- More targeted material on the use of Climate-ADAPT from the perspective of users with less experience of adaptation could be provided on Climate-ADAPT and promoted in key events.
- Presenting more content from users with less experience of adaptation could be another option to attract those users. Such content could be jointly developed with them. One concrete activity to jointly develop and present national-level case studies was offered by the Bulgarian Ministry of Environment and Water (MOEW) (see Climate-ADAPT use case no 3)

⁽⁴⁶⁾ There are EU sector policies pages for 13 policy areas on Climate-ADAPT.

⁽⁴⁷⁾ Climate-ADAPT: Dissemination and capacity-building supporting adaptation in the framework of the EU adaptation strategy. Service contract number 340202/2015//18400/SER/CLIMA.C3.

⁽⁴⁸⁾ <http://nwrn.eu>

⁽⁴⁹⁾ <http://drmkc.jrc.ec.europa.eu>

⁽⁵⁰⁾ <https://oppla.eu>

⁽⁵¹⁾ <http://urban.jrc.ec.europa.eu>

Box 5.8 Technical conclusions

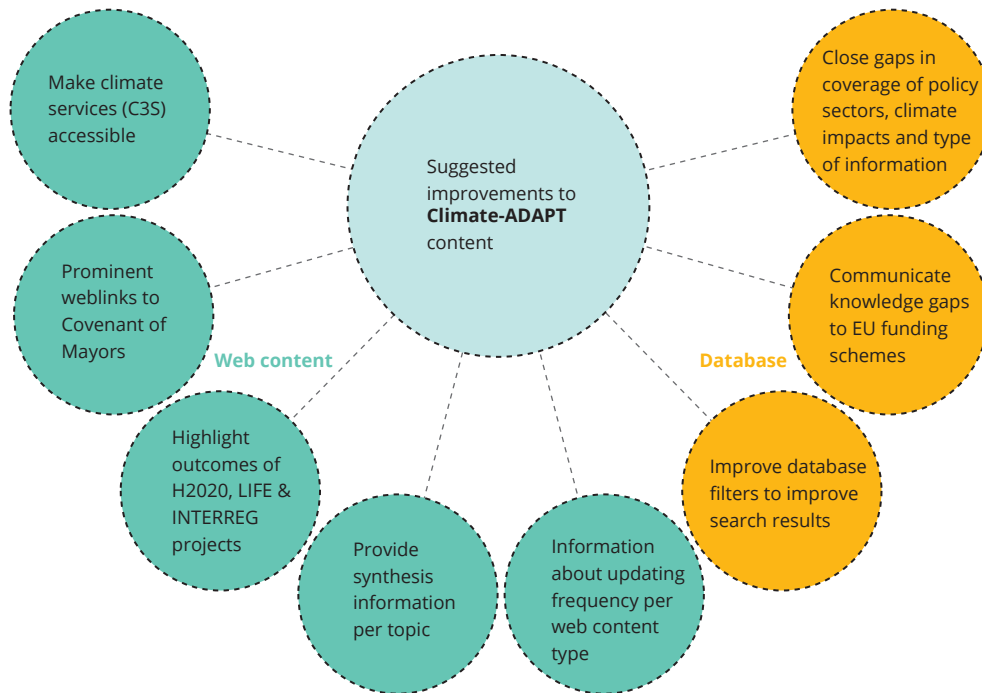
Climate-ADAPT continues to fulfil a temporal gap for experts from countries with no web-based national adaptation platform in place. This may indicate that experts in countries without a national adaptation platform might have used Climate-ADAPT more comprehensively and frequently than experts in countries with a national adaptation platform.

5.2 Meeting the objective A: sharing the knowledge to build a consistent and updated knowledge base

Box 5.9 Strategic conclusions

- Climate-ADAPT has successfully involved key information providers in sharing their knowledge with the adaptation community in Europe. The ability of Climate-ADAPT to contribute to building a knowledge base on adaptation in Europe could be further improved by investing more in providing information to the platform. The Climate-ADAPT dissemination strategy should also focus on further engaging relevant providers of adaptation information to share information through the database.
- The potential indicated by local contacts for Climate-ADAPT case studies for further developing the quality of Climate-ADAPT case studies from 'state of the art' to 'good practice' could be explored by the EEA as a priority.
- Climate-ADAPT has substantially improved the provision of multi-level policy information, tools and guidance, as well as access to the relevant information sources through its database. The growth in knowledge related to CCIVA, generated in Europe is reflected in the Climate-ADAPT database in terms of its quantity and diversity.
- The five most used features (i.e. 'Country information', 'EU policy' 'Database', the 'Adaptation Support Tool' and 'Case studies'), which could be valued as Climate-ADAPT core content, should remain the first priority of further content updates and the development of the platform's functionalities. This could be clearly communicated on Climate-ADAPT and also in the mandate of the platform.
- The revision of the Climate-ADAPT work plan 2019-2021 should anticipate improved access to C3S and to the outcomes of EU-funded projects as the main focus of further content development (see Figure 5.3). The ongoing improvement of the Climate-ADAPT database structure will allow more efficient searching and should remain a continuous task.
- The improved exchange of information between climate services and Climate-ADAPT could be discussed at strategic level in the European Commission with the Commission services involved in the strategic definition of the future of C3S.
- The Climate-ADAPT work plan should also focus on the provision of synthesis information for various topics. Such additional information could be developed based on EEA assessments (such as vulnerability assessments). Key topics for such additional synthesis could be systematically identified by the EEA. The current activities of key partners on such synthesis documents, e.g. those of the Directorate-General for Research and Innovation (DG RTD) on the summary of EU research and innovation projects on progress in closing adaptation knowledge gaps, could be used as pilot activities to encourage synthesis information from more providers.

Figure 5.3 Suggested improvements to Climate-ADAPT content



Source: EEA.

5.2.1 A1) Does Climate-ADAPT successfully involve potential information providers in sharing their information?

Source: Outcomes of the analysis of external feedback to Climate-ADAPT (see [ETC Technical paper](#), Annex 3, Section 2.1).

Climate-ADAPT is on the right track in selecting, collecting and sharing relevant information in Europe to build a consistent knowledge base by involving a wide range of information providers. Ninety-eight out of 211 respondents to the user/provider survey stated that they have submitted information to Climate-ADAPT and 66 of those have contributed to more than one section. There is awareness of the added value of presenting their information in its policy context on Climate-ADAPT by some of the intended providers (user/provider survey).

However, it is not well known that Climate-ADAPT is open to contributions to sharing information across

Europe and which content is valued as appropriate to share (user/provider survey). This suggests that Climate-ADAPT could do more to raise awareness of the fact that it is a platform that is open to contributions and also to convert existing users into providers.

The submission process is mostly clear, but more transparency over the status of submission would be welcomed (user/provider survey, ad hoc selected feedback).

It is encouraging that some people from local organisations, who provided detailed information on Climate-ADAPT case studies on request, explicitly expressed their willingness to further support developing new Climate-ADAPT case studies: there is potential to demonstrate the implementation of new approaches in their regions and to improve the quality of current case studies.

Box 5.10 Technical conclusions

- It is encouraging that Climate-ADAPT has already successfully involved a variety of key information providers in sharing their content and that there are offers to enhance content, e.g. from local contacts of Climate-ADAPT case studies.
- However, the potential to submit information to the Climate-ADAPT database could be promoted more prominently on the home page and in dissemination activities to increase potential submissions. This would explain Climate-ADAPT's role in collecting and sharing content, particularly through the database. Thus, it could enhance the sharing of key information from potential providers in Europe, and in particular involve experts from eastern and central European countries. Previous EEA activities, such as webinars, to explain what content is eligible to be shared through Climate-ADAPT and to promote the added value of presenting information on the platform could be reinstated.
- The transparency of the process of approving submissions could be improved, e.g. through functionalities to improve the tracking of the progress of submitted content. Further submissions could be encouraged by making it easier for providers to revise content already published on Climate-ADAPT.

5.2.2 A2) Does Climate-ADAPT provide the relevant information on the platform?

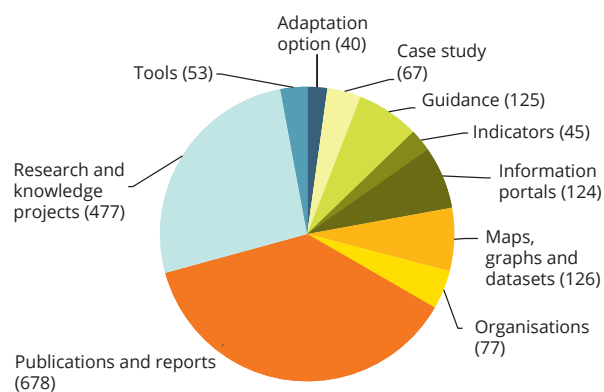
Source: Outcomes of the internal assessment of Climate-ADAPT content and functionalities ([ETC Technical paper](#), Annex 3, Section 1.1).

Climate-ADAPT database

Knowledge on adaptation in Europe was generated through research and practical experience through various EU funding streams during the implementation of the EU adaptation strategy. There is no quantitative goal to capture this information in the Climate-ADAPT database. However, analysis of the Climate-ADAPT database content confirms that the knowledge base on adaptation in Europe has been built in a consistent way by ensuring that only relevant content was selected by applying a set of eligibility criteria.

Relevant knowledge resources are represented in the database in terms of the policy sectors, climate change impacts and timeliness, as well as of the elements that are needed in the steps of the adaptation policy cycle, such as vulnerability assessments (Climate-ADAPT database statistical and coverage gaps analysis). The database content also reflects the increasing diversification of the types of knowledge on adaptation (see Figure 5.4). Experts working on adaptation in Europe can select from various formats of knowledge resources that have emerged from the development of adaptation knowledge and became available to support decision-making, such as indicators, case studies and tools.

Figure 5.4 Number of items per type of data in the Climate-ADAPT database in February 2017



Source: EEA.

However, some gaps in the database content were identified in terms of a lack of scientific or practical knowledge, e.g. for indicators on the progress of adaptation measures and actions and on adaptation plans and strategies and for marine indicators. Gaps in the database that need targeted screening and collection of available information were also detected, such as for information on the sector 'Marine and Fisheries', and 'Tools' for sector policies.

Specific database content that does not provide metadata on external information sources, but can be directly used in the decision-making on adaptation, are 'Adaptation options' and 'Case studies'. It also shows systematic coverage in terms of climate impacts, policy sectors and geographic distribution across the EU. Adaptation options are available for all policy sectors but with varied coverage (analysis of adaptation options coverage). Sectors with the largest numbers of resources are disaster risk reduction, coastal areas, urban and water management. The coverage of case studies in terms of policy sectors shows a similar pattern (analysis of case studies coverage). Adaptation options are also provided for all types of climate impacts, such as for flooding, storms, sea level rise, drought⁽⁵²⁾ and, to a smaller extent, water scarcity. There is a gap in the adaptation options for ice- and snow-related impacts, corresponding to the same coverage pattern of case studies. However, specific gaps in terms of policy sectors need to be addressed such as for the marine and fisheries sector and in terms of climate impacts related to ice and snow.

Climate-Adapt offers a minimum of one case study to highlight the practical implementation of adaptation measures for 35 out of 40 generic adaptation options. Closing the gaps in the provision of case studies for adaptation options not yet covered should be considered while developing new case studies.

The set-up of database filter criteria has been continuously improved, e.g. by implementing a new 'urban' filter to facilitate access to resources on urban adaptation. However, the database structure needs further improvement to allow more specific search results according to evolving users' needs (e.g. further specifying the filter options for climate impacts) (Climate-ADAPT database statistical and coverage gaps analysis). This would also enable these knowledge resources to be shown in more policy contexts across all relevant Climate-ADAPT web pages. They can be viewed as key Resources for the respective topic or as 'search results' for further reading on the topic, e.g. as in the Adaptation Support Tool or on the 'EU sector policies' pages.

Box 5.11 Technical conclusions

- The Climate-ADAPT database presents relevant content on adaptation in Europe. Some knowledge gaps that were identified for all types of database content could be closed by targeted EU funding and by practitioners developing further experience. Targeted screening and collection of available information from key providers could help to fill some of the other gaps identified.
- This focused database updating should reinforce the EEA's ongoing activities to make the relevant outcomes of projects funded by the European Commission, such as from LIFE, Interreg, FP7 and H2020 projects accessible through the Climate-ADAPT database.
- The set of adaptation options and case studies should be further complemented in a structured way to close the gaps identified in terms of sectors and impacts. Working together with adaptation experts in communities of practice could support development of new cases. The local providers of case studies who were willing to help with their further development should be involved in extending the set of Climate-ADAPT case studies and further developing them into 'best practice' case studies (survey of the uptake of Climate-ADAPT case studies).
- The structure of the Climate-ADAPT database should be further developed. This should be done according to the priorities that were identified in the gap analysis in order to add new content to the database in a structured way and to allow it to show in the search results. Examples of such improvements would be more options for the data type 'Climate impacts' to capture content related to the impacts of ocean acidification or desertification or another option for 'Type of data' ('Multimedia').
- While improving the database structure, options to align the filters of the Climate-ADAPT database with the terminology of relevant policies such as disaster risk reduction could be explored.

⁽⁵²⁾ Floods, storms and droughts are extreme events that might be aggravated by climate change. The impacts used in this report refer exclusively to the elements 'Floods', 'Storms', and 'Droughts' of the filter criterion 'Impacts' in the Climate-ADAPT database.

Climate-ADAPT web content

The assessment of the Climate-ADAPT web content has shown that it has been substantially improved over time, according to the priorities of the EU adaptation strategy (analysis of web content).

Policy information

Major achievements are a new 'EU policy' section with information on actions of the EU adaptation strategy and on all sources of EU funding on adaptation in Europe. It also includes 'City profiles' showing the progress of adaptation in signatory cities of the EU Covenant of Mayors initiative. The Urban Adaptation Support Tool provides tailor-made decision support for cities in Europe. A diverse set of pages provides information on the progress of mainstreaming adaptation in 13 EU sector policies. Officially reported 'Country information' on adaptation in accordance with the MMR in 2015 replaced the 'Countries' pages. Thus, it provides reliable information on national adaptation policies for EEA member countries in a comparable way. Considering the multi-governance approach of adaptation, policy information was expanded to other governance levels in Europe: Overview information was provided under 'Transnational regions' and in detail for the Baltic Sea region.

Knowledge and tools

The research aspect of knowledge generated through EU funding has been highlighted in a new 'Research projects' section showing the most relevant H2020 projects and their outcomes. New information that was not explicitly covered in the Climate-ADAPT work plan could not be fully presented, e.g. the knowledge on ecosystem-based approaches generated by the European Commission. The 'Adaptation Support Tool' has been regularly updated based on EEA assessment reports.

The frequency of updates of the platform sections has been determined by the policy processes in which the content was generated, e.g. on adaptation in the Baltic Sea region. It is also determined by the need to prioritise the update of the large amount of Climate-ADAPT web pages. The reliability of the information across all Climate-ADAPT sections has been prioritised to the detriment of the timeliness of the updates.

However, some major objectives for the development of the Climate-ADAPT content could not be fully achieved in the intended period. For example, the envisaged access to the knowledge provided by the C3S is still limited, taking into account that the services only became operational in 2016.

Box 5.12 Technical conclusions

- The Climate-ADAPT web content, providing systematic information on adaptation policy at various governance levels and on knowledge and tools, has been substantially improved.
- However, missing information, such as that from C3S, once it becomes available, should be made accessible through Climate-ADAPT through weblinks on all platform sections in the relevant policy context. Examples of such pages are the 'Adaptation Support Tool', and the 'EU sector policies' pages.
- Projects from EU funding streams providing evidence and information, such as LIFE and Interreg, could be systematically highlighted on Climate-ADAPT, complementing the current information on projects from EU research funding through H2020 and FP7.
- Solutions should be explored by the European Commission and EEA on how to make knowledge on cross-cutting topics, such as on ecosystem-based approaches, systematically accessible.
- All Climate-ADAPT sections should explain the schedule of its updating process more clearly. This would improve users' understanding of the expected frequency of updating the web content.

5.2.3 A3) Which sections of Climate-ADAPT are currently being used?

Source: Outcomes of the analysis of external feedback to Climate-ADAPT (see [ETC Technical paper](#), Annex 3, Section 2.2).

There is a growing trend towards Climate-ADAPT users viewing more pages (web statistics). It suggests a growing interest in exploring more content on the platform.

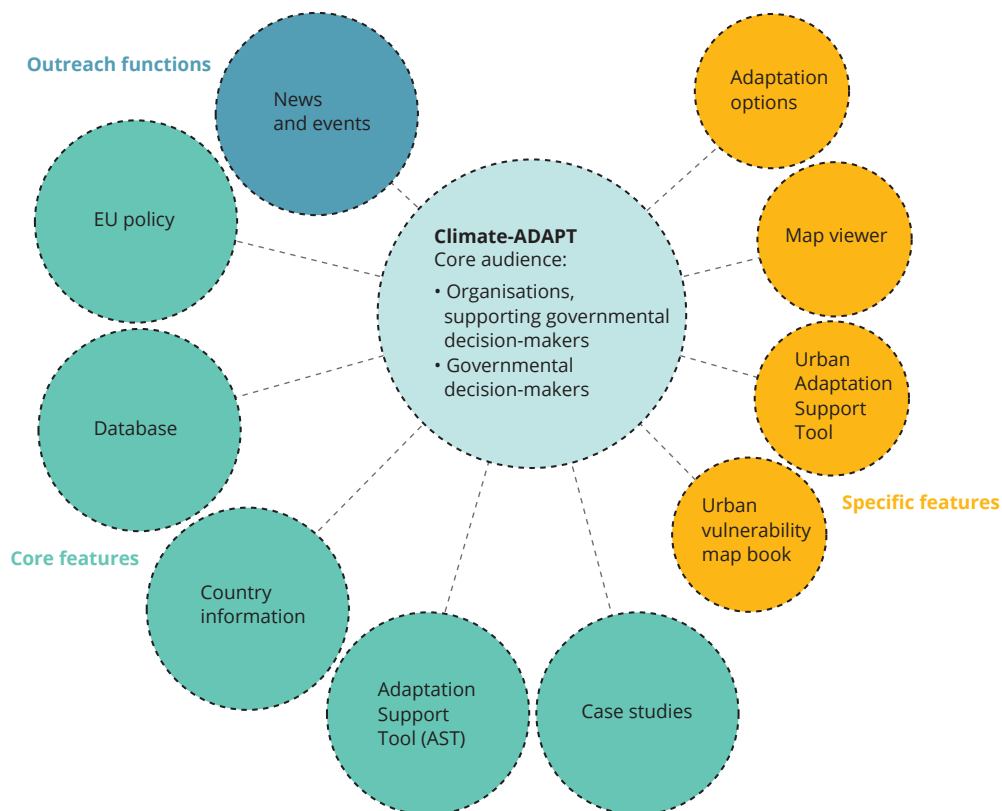
It seems that the outreach function of Climate-ADAPT is effective: as the home page is the landing page, it is naturally the most visited page on Climate-ADAPT (web statistics); the user/provider survey showed that this is also the case for the 'News'/'Events'/'Newsletter' sections.

All forms of Climate-ADAPT user feedback show the same pattern — users from the core audience use the following sections of Climate-ADAPT most to find what they need: 'Country information', 'Database', 'EU policy', 'Adaptation Support Tool' and 'Case studies' pages. These five main features are used across all governance levels and for all stages of the adaptation policy cycle (Climate-ADAPT use cases) (see Figure 5.5).

More specific features, i.e. 'Adaptation options' or tools such as the 'Map viewer', or the 'Urban Vulnerability Map Book', are used but to a smaller extent (user/provider survey, Climate-ADAPT use cases). The respondents who used the specific tools work mostly on operational tasks (user/provider survey). The Urban Adaptation Support Tool, developed by the Mayors Adapt initiative (now integrated into the Covenant of Mayors for Climate and Energy), supported by the EEA, as well as the EEA Urban Vulnerability Map Book are very much recognised as useful by city users (Climate-ADAPT use cases nos 11 (Barcelona region) and 13 (Cascais)).

Adaptation options proved to be particularly helpful to systematically select or revise solutions applicable at regional or local level (e.g. in Climate-ADAPT use cases nos 8 (Greece) and 11 (Province of Barcelona)). The Climate-ADAPT use cases show that the specific tools proved to be very useful for specific tasks (e.g. Climate-ADAPT use case no 9 (Lombardy region)). Therefore, the lower use of these specific tools may indicate that this is also because of less awareness of their existence and added value. It might also be because Climate-ADAPT is mainly used as a starting point to develop more specific tailor-made assessments and guidance documents rather than for the direct application of specific tools (Climate-ADAPT use cases).

Figure 5.5 Climate-ADAPT features used by its core audience



Source: EEA.

Box 5.13 Technical conclusions

- Climate-ADAPT succeeds in informing users about EU adaptation policy and the commonalities and diversity of approaches of adaptation across countries and in providing adaptation knowledge and tools. Thus, it supports the improvement of the coherence of adaptation policy and practice across Europe. It also offers access to adaptation information across Europe.
- The five most used features, i.e. the 'Country information', 'Database', 'EU policy', 'Adaptation Support Tool' and 'Case studies' pages, identified through the web statistics, the user/provider survey and the Climate-ADAPT use cases, can be valued as Climate-ADAPT core content (see Figure 5.5). These core features should remain the first priority of the updating and further development of Climate-ADAPT.
- The use of the more specific features (adaptation options, tools) of Climate-ADAPT, could be promoted by a visual overview of the site content. Their added value could be more explicitly highlighted on the home page. The Climate-ADAPT use cases that show successful applications of these tools could be published on Climate-ADAPT to inspire other users.
- The Urban Adaptation Support Tool could be kept on Climate-ADAPT, while taking into account that since 2017 the Covenant of Mayors website also contains adaptation guidance and resources, which will increase in future. The current 'City profiles' page, provided by the Mayors Adapt project, can be kept on Climate-ADAPT until mid/end 2018. After that, cities' reporting on their adaptation (policy) profiles will be fully implemented and the information will be presented on to the Covenant of Mayors for Climate and Energy website. By then, the Climate-ADAPT 'Cities and towns' pages will refer to the relevant Covenant of Mayors for Climate and Energy web pages.

5.2.4 A4) Which information is also needed by Climate-ADAPT users?

Source: Outcomes of the analysis of external feedback to Climate-ADAPT (see [ETC Technical paper](#), Annex 3, Section 2.1).

The diverse Climate-ADAPT user community, also often working in multiple roles, requested additional content on Climate-ADAPT that covered a broad range of information types, with a preference for synthesis information, such as assessments and indicators, but also for guidance documents and case studies (user/provider survey) (see Figure 5.3).

Experts would also like to find knowledge on environmental, economic and social aspects of adaptation. Such knowledge is needed to address the mainstreaming of adaptation and to assess adaptation options in a systemic way, taking into account the

synergies, conflicts and co-benefits relative to other developments in society (user/provider survey, Climate-ADAPT use cases).

More specific feedback on additional information was collected in the Climate-ADAPT use cases. Examples include information on implementing adaptation (all use cases), the announcement of funding calls on the 'EU policy' pages (European Commission DG RTD, use case no 1), a thematic layer giving quick access to MRE approaches from countries (ISPRA, Italy, use case no four), synthesis information on national-level vulnerability assessment approaches (Poland, use case no 5), an additional database filter criterion 'type of funding' to quickly identify the background of project information (Greece, use case no 8), adaptation plans and actions in cities (Bologna, use case no 12), methods on MRE for cities (Cascais, use case no 13), and information on non-governmental adaptation activities (Lombardy Foundation, use case no 15).

Box 5.14 Technical conclusions

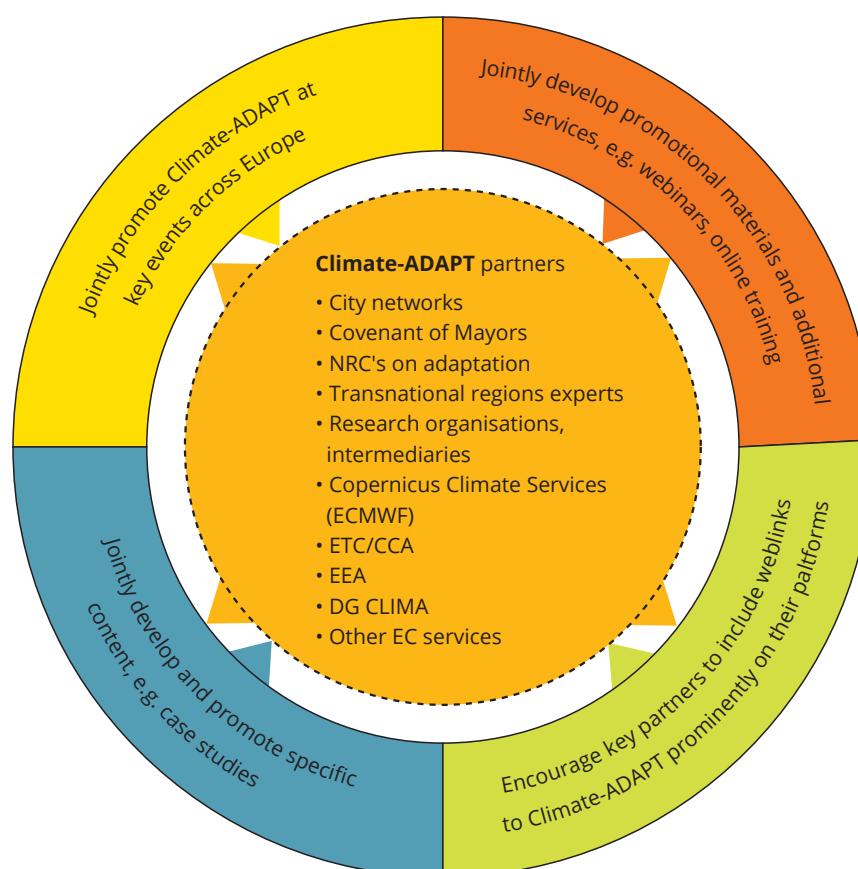
- According to the needs of the wide variety of Climate-ADAPT users, the platform should continue to provide its broad range of information.
- The development of assessments and synthesis information requested by many users across all governance levels could be considered by the EEA, taking into account the past and planned assessments that the EEA is conducting on a range of themes and sectors. Other key partners should also be encouraged to provide synthesis information on their topics.
- Proposals for additional content will be considered by the EEA in the priority setting of the further platform development.

5.3 Meeting the objective B: assisting the effective uptake of knowledge to inform decision-making

Box 5.15 Strategic conclusions

- Climate-ADAPT succeeds in assisting the uptake of knowledge to inform decision-making on adaptation in Europe. Information submitted to the platform and presented in its relevant policy context reaches more users and is better understood by users than if it is presented only on project websites. Climate-ADAPT is used to support decision-making on adaptation at all governance levels and at all stages of the adaptation policy cycle across Europe. The knowledge on the platform is used in a variety of policy processes supporting decision-making, such as for developing adaptation plans and strategies, but primarily to inform policy processes by developing evidence documents (assessments).
- The knowledge is used in particular as the reference frame to identify state of the art adaptation in Europe and as a starting point for extended searches and developing tailor-made products for various policy processes. Considering this use pattern, the branding of the platform in its mandate could be adjusted from being the 'one-stop shop' to being the 'first-stop shop' for adaptation information in Europe. It could also highlight its reference function and supporting role more clearly ('provide access to state of the art knowledge on adaptation in Europe for developing tailor-made information for adaptation policy processes' rather than providing tailor-made knowledge that is ready to use directly in the policy processes).
- The knowledge, in order to be used for developing tailor-made documents, should be made as easily accessible as possible by providing more synthesis information for various topics (while taking into account the existing and planned EEA assessment reports on a range of themes and sectors) and by publishing the Climate-ADAPT use cases as inspiring examples on the website.
- The user-friendliness of the platform is key to its success. It could be further improved by providing visual overview information on the content of the site, a more straightforward and consistent structure with additional entry points into the information for various specific user groups, such as sectoral and urban users, as well as more help for new users.
- The proposed Climate-ADAPT dissemination strategy could explore the provision of additional services, such as training sessions, tutorials and targeted webinars. This strategy should include a systematic analysis of the contribution of the dissemination channels of Climate-ADAPT. The strategy should explicitly cover the provider's perspective, including activities to turn Climate-ADAPT users into providers, thereby making them more aware of the platform's content and enhancing the uptake of the information.
- More extended Climate-ADAPT promotion activities require active collaboration with key partners from all governance levels. The dissemination strategy should cover more fields of action including, for example, the joint development of promotional materials (see Figure 5.6). This should be complemented by more active engagement of sectoral users, which can be promoted through communities of practice.

Figure 5.6 Possible work areas and key partners in a Climate-ADAPT dissemination strategy



Source: EEA.

5.3.1 B2) What products or processes are the users using the information for?

Source: Outcomes from the analysis of external feedback to Climate-ADAPT (see [ETC Technical paper](#), Annex 3, Section 2.2).

The user/provider survey and the Climate-ADAPT use cases show that Climate-ADAPT fulfils its role of assisting users in their uptake of adaptation information and supporting decision-making on adaptation in Europe at all governance levels and at all stages of the adaptation policy cycle. Climate-ADAPT knowledge is used in a variety of policy processes supporting decision-making, such as developing tailor-made products like adaptation plans and strategies, but primarily to inform the policy processes by developing evidence documents (assessments) and methodologies (e.g. on case studies and indicators) feeding into the policy processes. Participatory processes, as well as the development of proposals for EU funding, are supported by Climate-ADAPT (use cases and user/provider survey). Table 5.1 gives an

overview of the processes supported by the use of Climate-ADAPT in 17 exemplary cases across Europe.

Respondents to the user/provider survey felt that the information submitted to the platform and presented in its relevant policy context reaches more users and is better understood by users than if it is presented only on project websites.

Survey respondents who saw no benefit in submitting information to Climate-ADAPT were also less likely to use information from Climate-ADAPT to support adaptation policy processes. Climate-ADAPT could further promote input from users (i.e. converting users to providers), and the greater involvement of users is also likely to encourage the further uptake of the information. This is also confirmed by the Climate-ADAPT use cases.

A specific survey among local contacts for case studies indicated that the Climate-ADAPT case studies are appreciated by a range of users and used in a variety of policy processes.

Table 5.1 Examples of processes supported by Climate-ADAPT (use cases)

Number	Country, region, organisation	Governance level	Research	Developing evidence documents feeding into policy processes (e.g. assessments)	Informing the development of adaptation strategies and plans	Support participatory processes	Develop methodologies and tailor-made guidance	Developing funding proposals
1	Directorate-General for Research and Innovation	European Commission	x	x				
2	Carpathians	Transnational		x				
3	Bulgaria	National			x	x		
4	Italy	National			x		x	
5	Poland	National			x	x	x	
6	Spain	National				x	x	
7	Turkey	National			x	x		x
8	Greece	National			x	x		x
9	Lombardy region	Subnational		x	x	x		
10	Sardinia region	Subnational		x		x		
11	Province of Barcelona	Subnational		x			x	
12	Bologna	Local			x			
13	Cascais	Local			x		x	
14	Sorradile	Intermediary organisation		x	x			
15	Lombardy Foundation	Intermediary organisation	x	x	x			
16	England	Sector		x	x			
17	United Kingdom	Research organisation	x	x		x		x

Notes: The table summarises information from Climate-ADAPT use cases. Key information for this table is provided in the [ETC Technical paper](#), Annex 3, Section 5.2.3. All use cases are provided on [Climate-ADAPT](#).

Source: EEA.

5.3.2 B3) Which sections of Climate-ADAPT are used to develop tailor-made products or support processes?

Source: Outcomes from the analysis of external feedback to Climate-ADAPT ([ETC Technical paper](#), Annex 3, Section 2.2).

The sections of the website that are being used to create tailor-made products (such as research and evidence documents, adaptation strategies and/or plans and methodologies), and enhance the capacity

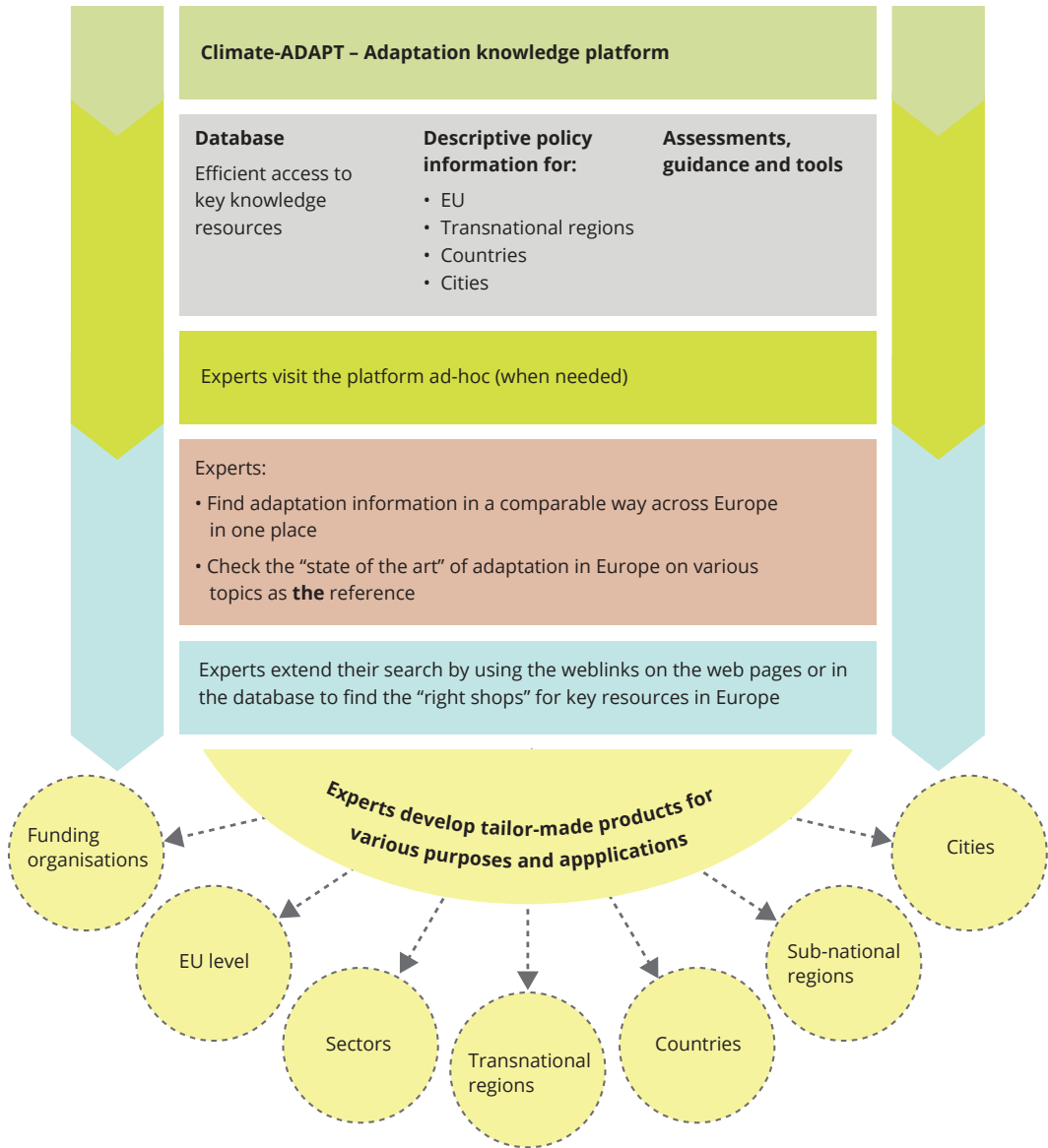
of individuals are the 'Country information' pages, all areas, urban information related sections, 'Case studies' pages, all 'Tools' pages, assessment of impacts and vulnerability, and the 'Database' (user/provider survey). The broad use of Climate-ADAPT features is confirmed by the Climate-ADAPT use cases.

Climate-ADAPT is widely accepted among the target audience as the reference frame — where to find state-of-the-art comprehensive knowledge on adaptation in Europe (Climate-ADAPT use cases). The Climate-ADAPT use cases provide an insight into how

the platform is mostly used, i.e. as the starting point for extended searches and developing tailor-made products for various policy processes. Intermediaries play a major role in using Climate-ADAPT to support governmental decision-makers by preparing these

tailor-made assessments for specific circumstances. The sections used most in this common pattern of use in developing tailor-made products are clearly the 'Country information' pages and the 'Database' (see Figure 5.7).

Figure 5.7 Observed pattern of most common use of Climate-ADAPT



Source: EEA.

5.3.3 B4) Is the knowledge presented on Climate-ADAPT in a useful way of assisting the uptake of the information?

Source: Outcomes from the internal assessment of Climate-ADAPT ([ETC Technical paper](#), Annex 3, Section 1.2).

Feedback continuously collected during the maintenance of the platform was used to set the priorities for improving functionalities. Significant progress was made in assisting users in the uptake of the knowledge, such as by setting up interactive map-based access to country, transnational and city information, and case studies (assessment of Climate-ADAPT functionalities). These map-based functionalities allow information to be selected using filter criteria (e.g. in the 'Case Study Search Tool') and using thematic maps, i.e. in the 'Country information' section. The 'Database' search function, the navigation structure and support for new users were improved according to users' and providers' feedback; a dedicated 'Help' section, including FAQs for users and information providers, is also available. A 'quick (Climate-ADAPT) guidance' section for various types of user was published in the rotating banner on the home page supported by a DG CLIMA service contract (Gancheva et al., 2017).

However, there were also significant delays in the improvement of the user-friendliness of the platform because of the need to overcome the technical limitations of the Climate-ADAPT IT infrastructure and to focus on other priorities. Urban users indicated very specific and detailed requests to support their practical work on the development of urban adaptation plans in the frame of the Mayors Adapt initiative, e.g. discussion forum users' ratings of items that were beyond the scope of Climate-ADAPT functionalities.

Source: Outcomes from the analysis of external feedback to Climate-ADAPT ([ETC Technical paper](#), Annex 3, Section 2.2).

Climate-ADAPT is considered user-friendly overall, but some improvements would assist the uptake of information. Key improvements collected through the user/provider survey are as follows.

Users would benefit from a more straightforward structure to allow easy access to the complex information, particularly through a visual overview of the content. This explains the trends found in the web statistics that show users explore more pages but time spent on the platform is decreasing. The navigation of the site is good, but improved help is needed, directly available on each page, to increase the platform's user-friendliness for new users. Users from different backgrounds indicated that they need more specific entry points to understand what is available for their needs on Climate-ADAPT and how to navigate to find this information (see Figure 5.8). These entry points should be visible on the home page by showing which types of users Climate-ADAPT is for (user/providers survey, ad hoc collected feedback).

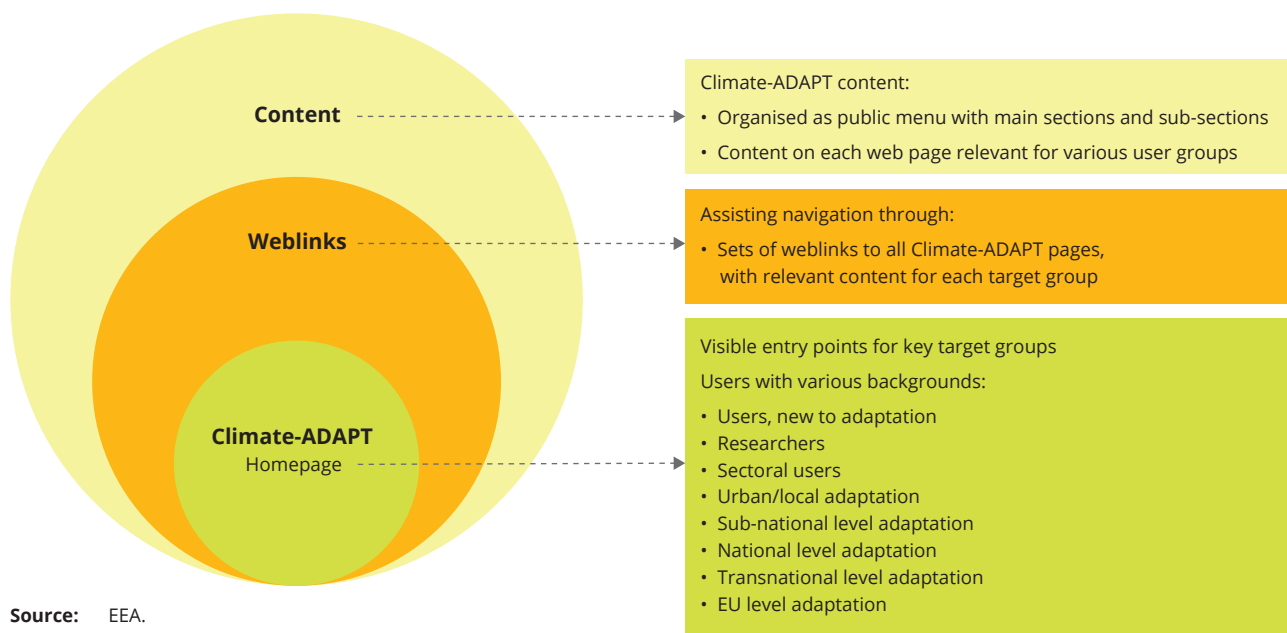
The uptake of the information on Climate-ADAPT could be further increased, such as by informing users of the full range of information available on the platform through RSS feeds, improving the performance of the database and adding more search filters, such as 'type of funding' (Climate-ADAPT use cases).

The use of the interactive map-based tools could be extended by improving their profile on the website and by making them more user-friendly (user/provider survey).

Box 5.16 Technical conclusions

The user-friendliness of the platform should be improved as a high priority in a concise way and considering the consistency of the web content and the database content.

Figure 5.8 Possible improvements in navigation of Climate-ADAPT for various user groups



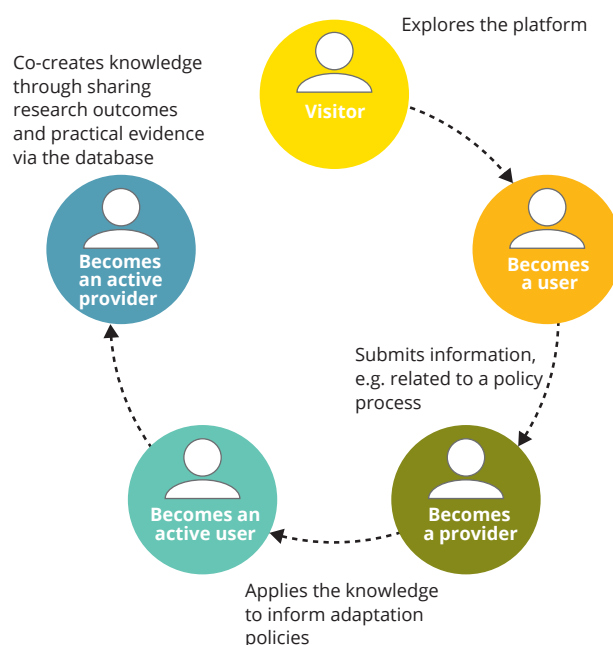
Source: EEA.

Box 5.17 Technical conclusions

Proposed improvements to Climate-ADAPT's functionalities could be implemented through a collaboration between the European Commission and EEA with clear priority setting.

The user/provider survey has shown that respondents experienced in adaptation have contributed a significant amount of information through the submission process. Significantly more experienced respondents have used the Climate-ADAPT information for informing the adaptation policy process (43 out of 162) than those that are new to adaptation (1 out of 23). Respondents that are new to adaptation are also less likely to have submitted information. That suggests that the active involvement of users in providing information to Climate-ADAPT could improve their understanding of the platform and increase their ability to actively use the knowledge in policy processes (see Figure 5.9).

Figure 5.9 Turning Climate-ADAPT visitors into advanced users of Climate-ADAPT information to support policy processes



Source: EEA.

Box 5.18 Technical conclusions

Targeted activities could include training on the submission process to encourage experts to submit content to Climate-ADAPT. Thus, they can familiarise themselves with the platform and could be enabled to use it more actively.

5.3.4 B5) Is the knowledge on Climate-ADAPT disseminated in a way that it assists the uptake of the information?

Source: Outcomes from the analysis of external feedback to Climate-ADAPT ([ETC Technical paper](#), Annex 3, Section 2.2).

Climate-ADAPT is promoted through various channels including conferences and meetings, webinars and a newsletter (see [Climate-ADAPT profile](#)). A comprehensive assessment of the contribution of Climate-ADAPT dissemination activities to the successful uptake of the knowledge was not in the scope of the evaluation.

However, the contribution of the bi-monthly newsletter was analysed. Among other topics, it regularly informs readers about new developments on Climate-ADAPT. The number of subscribers to the newsletter has increased substantially since its launch in 2015 to about 4 000. The newsletter statistics show that the newsletter has led to a higher average time spent on Climate-ADAPT pages (almost 6 minutes). These longer visits to the pages suggest that this dissemination channel has contributed to the uptake of the knowledge. In 2016, the EEA started to involve the NRCs and experts from transnational regions in the production of the newsletter, which might have also contributed to the increase in the numbers of Climate-ADAPT users (see [ETC Technical paper](#), Annex 3, Section 2.2).

Box 5.19 Technical conclusions

Promoting Climate-ADAPT through the newsletter has increased the use of the platform. The full contribution of other promotion channels could be explored.

5.3.5 B6) Which additional services are needed to assist in the uptake of the information on Climate-ADAPT?

Source: Outcomes from the analysis of external feedback to Climate-ADAPT ([ETC Technical paper](#), Annex 3, Section 2.2).

The user/provider survey indicated that the most common way of learning about the platform is through a colleague, which suggests that the number of referrals from other platforms to Climate-ADAPT could be enhanced or users will find what they need on the referring platform.

Users do not need more information, but they need more help to make better use of the knowledge through additional products, such as synthesis documents per sector or topic, and training services (tutorials and webinars).

A range of additional promotional activities were suggested in the user/provider survey to facilitate better uptake of the information, such as information campaigns on the platform, regular online events and targeted outreach rather than broad engagement.

Specific support for users new to adaptation was suggested, e.g. to use key parts of the information translated into national languages for targeted promotional activities.

Box 5.20 Technical conclusions

A systematic check of the coverage of weblinks to Climate-ADAPT on key partner platforms could be a first step in further promotional activities. The feasibility of additional promotional services should be explored in the next step.

5.4 Meeting the objective C: to contribute to a greater level of coordination among sectors and institutional levels

Box 5.21 Strategic conclusions

- Climate-ADAPT succeeds in providing information in a complementary way: weblinks to key information providers are available for all aspects of adaptation knowledge to meet the needs of experts working on adaptation in general. Strengthening Climate-ADAPT's complementary role, which may help coordination among sectors and governance levels, can mean further improving those weblinks. The analysis carried out in this evaluation could be used to provide more diversified weblinks to meet the needs of users working on specific aspects of adaptation in EU sector policies.
- Contributing to coordination between governance levels requires improving the accessibility of those weblinks to complementary information on Climate-ADAPT: users are well aware of those weblinks for information on national adaptation and vulnerabilities and on impacts, but not so much for city and sub-national level information. Therefore, Climate-ADAPT needs to improve the visibility of hidden weblinks. Those improvements should consider the variety of Climate-ADAPT users and their many types of work by offering tailor-made entry points to the relevant content for each user group across all Climate-ADAPT pages.
- Furthermore, the second aspect of Climate-ADAPT's twofold role ('Guiding users to the right shop') could be more clearly explained on the home page to make users generally more aware of this specific service provided by the 'Database': the Climate-ADAPT branding slogan ('Sharing adaptation information across Europe'), currently used on the home page and distribution materials, could be more prominently highlighted and better explained on the platform.
- This could be accompanied by the proposed Climate-ADAPT dissemination strategy to systematically extend and improve cooperation with key partners at various governance levels and in sector policies beyond the extension of weblinks. Examples of concrete activities supporting that strategy are joint promotion activities through Climate-ADAPT sessions during key partners' events. The strategy could also explore further aspects of cooperation, such as Climate-ADAPT support across regions and improving information flows across governance levels.
- Climate-ADAPT can explore ways to improve collaboration and coordination with national platforms. The Spanish Climate Change Office expressed interest in collaborating with the EEA to cross-harvest information on case studies to systematically develop complementary sets of Climate-ADAPT and AdapteCCa case studies. Such a pilot would be an example of more extended coordination between Climate-ADAPT and platforms at the national level.

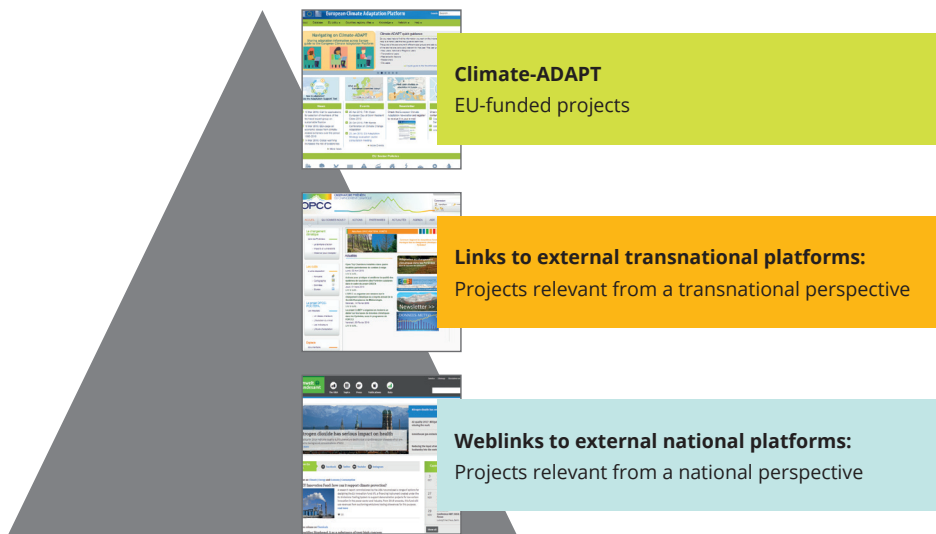
5.4.1 C1) Does Climate-ADAPT present the information in a way that is complementary to the original source?

Source: Outcomes from the internal assessment of Climate-ADAPT content and functionalities ([ETC Technical paper](#), Annex 3, Section 1.3).

Climate-ADAPT has a dual role, firstly to provide EU-level adaptation information on the platform.

Information at the sub-EU level is not hosted on Climate-ADAPT but made available via weblinks to the original external knowledge source. Climate-ADAPT provides only summary information for these levels on the platform; hence it aims to guide users via weblinks to key providers that are the 'owners' of the knowledge. The 'one-stop shop' concept of Climate-ADAPT, set up in the EU adaptation strategy (EC, 2013), is in practice complemented by a 'guiding the experts to the right shop' approach (see Figure 5.10).

Figure 5.10 Example of presenting information on Climate-ADAPT complementarily — weblinks to research projects on websites of transnational- and national-level platforms



Source: EEA.

As there is no clear reference frame to assess the coverage of weblinks to other information providers, the internal analysis of the coverage of weblinks on Climate-ADAPT aimed for a systematic analysis based on expert judgement covering selected aspects of knowledge. It has shown that Climate-ADAPT succeeds in providing a meaningful set of weblinks to key providers.

Weblinks to key providers of adaptation data and information in the 'Knowledge' section achieve comprehensive coverage, with the exception of some areas where weblinks are potentially missing, such as to LIFE and Interreg projects, as well as to economic tools and climate services. There is an extensive set of weblinks to other governance levels, provided in the main policy information sections on Climate-ADAPT ('EU policy', 'Countries, regions, cities'). Weblinks to external information sources in the 'EU policy sectors' section show a reasonable coverage of themes of interest. However, there are some missing weblinks to key actors that would be better covered, i.e. weblinks to providers of policy information resources for the buildings and transport sectors and for resources related to the knowledge base for all EU policy sectors.

Weblinks to information providers on urban adaptation in Europe were not assessed, because those will be revised and enhanced once the new platform of the Covenant of Mayors, dedicated to a European and global audience, is launched in 2018.

Box 5.22 Technical conclusions

The weblinks to complementary knowledge sources are quite comprehensive for the needs of experts working on adaptation in general. It could be systematically improved for some less covered aspects based on this analysis, i.e. for weblinks to LIFE and Interreg projects and to some providers of sectoral information.

Interactions with EU-level experts in some pilot EU sector policies (agriculture and forestry, water management and financial) through the DG CLIMA service contract for work on communities of practice (Gancheva et al., 2017) have shown that weblinks to sectoral adaptation knowledge providers that are more

relevant from the perspective of users working on specific aspects of adaptation in individual EU sector policies are potentially missing.

Box 5.23 Technical conclusions

Weblinks to a more diverse range of sectoral providers of knowledge resources that are relevant for users working on specific aspects of adaptation in individual EU sector policies could be the main focus of mid-term improvements. This would require involving EU-level sector experts.

The Climate-ADAPT 'Network' section aims to serve as an additional entry point for users coming from a networking perspective. It does not, however, efficiently fulfil its function of guiding users internally to the Climate-ADAPT sections with information on other governance levels and weblinks to those providers.

Box 5.24 Technical conclusions

Experts using the specific entry point into the networking function of Climate-ADAPT get access points to weblinks to external information sources. However, they could be better supported by systematically improving this additional guidance across the web pages. Therefore, an improvement in weblinks should also increase the capacity of Climate-ADAPT to deliver these weblinks across all relevant pages and to interlink the web pages to support users starting to explore Climate-ADAPT from those entry points.

Source: Outcomes of the external feedback to Climate-ADAPT ([ETC Technical paper](#), Annex 3, Section-2.3).

The Climate-ADAPT database is the feature that is key for guiding users to the 'right shops'. Web statistics show that the 'Database' search feature is increasingly used⁽⁵³⁾. This suggests that experts in Europe are becoming more aware of the role of the Climate-ADAPT database in guiding users

to complementary information sources. The user/provider survey confirmed the increasing awareness of the knowledge-sharing function, but it added more specific insight by showing that this is not valid to the same extent for all types of weblinks. Survey respondents are more aware of the availability of weblinks to national, transnational, and impacts and vulnerability information than they are of weblinks to city- and sub-national-level information. This is due to the low visibility of those weblinks, e.g. information and weblinks to urban information sources are, among others, presented on the 'Covenant of Mayors' pages, which are hidden in the 'EU policy' section.

The availability of weblinks to sector-level information is well known by respondents to the user/provider survey in EU countries without a national adaptation plan or adaptation web platform and those outside the EU. This suggests that Climate-ADAPT provides a solution for an important knowledge gap for respondents from countries that do not have a national adaptation plan or an adaptation web platform.

Supporting cooperation through Climate-ADAPT, by guiding users to key knowledge sources via weblinks, is particularly relevant for those who work at more than one governance level, such as the Sardinia region, Italy (Climate-ADAPT use case no 10). The Sardinia region experts coordinate adaptation activities at EU, transnational, national and sub-national level. Their use case has shown that the 'News' and 'Events' sections and weblinks to key partners, as well as policy information, helped to support the related policy processes in which the Sardinia region is involved (Climate-ADAPT use cases).

A number of specific requests to support coordination include new pages for sub-national-level information and pages on activities of non-governmental actors at all governance levels (Climate-ADAPT use cases).

Box 5.25 Technical conclusions

The visibility of information and weblinks to information sources for city, sub-national and sectoral information providers should be improved.

⁽⁵³⁾ The website search function on the Climate-ADAPT home page and the 'Database' search have the same URL (http://climate-adapt.eea.europa.eu/data-and-downloads#b_start=0).

5.4.2 C2) Does Climate-ADAPT support cooperation across countries and regions with similar characteristics and neighbouring countries?

Source: Outcomes from the analysis of external feedback to Climate-ADAPT ([ETC Technical paper](#), Annex 3, Section 2.3).

Climate-ADAPT provides information on adaptation policy for EEA member countries in a comparable way in one place through its 'Country information' pages. The information is governmental information that has been approved and reported according to the MMR.

The Climate-ADAPT use case of the Secretariat of the Carpathian Convention (Climate-ADAPT use case no 2) is an outstanding example of Climate-ADAPT supporting coordination among countries with similar characteristics, i.e. on adaptation in mountain areas. The Secretariat used the trusted information in the Climate-ADAPT 'Country information' pages of the five (EU) Carpathian countries to take stock of existing policies and programmes to provide an assessment of CCIVA at transnational level for the entire area of the Carpathian Convention. Lessons learned relating to the management of the platform

5.5 Lessons learnt to the management of the platform

Box 5.26 Strategic conclusions

- Internal MRE procedures have been regularly applied to Climate-ADAPT since its launch to ensure the meaningful development of the platform. A more comprehensive MRE approach could be set up by the EEA using the lessons learned in this evaluation to ensure the availability of data for internal planning, external reporting and possible future evaluations.
- Such an approach should be further developed to provide data to cover the platform objectives more evenly in possible future evaluations. It also needs to be feasible considering the available resources.
- An annual analysis and informal light reporting (to the user/provider audience) of Climate-ADAPT's developments could be established by the EEA. It could be published on the platform to complement the current reporting on the platform's progress to key stakeholders, as in the Climate-ADAPT advisory group, the regular Eionet⁽⁵⁴⁾ meetings and Climate-ADAPT development webinars.

⁽⁵⁴⁾ European Environmental Information and Observation Network.

The methodology used for the evaluation of Climate-ADAPT included collection and analysis of feedback from external providers in combination with an internal assessment of the platform's content and functionalities. This multi-method approach proved to be successful overall: the outcomes of the approaches complemented each other and meaningful conclusions could be drawn on the achievements of all three Climate-ADAPT objectives and identifying lessons learned. The results of the internal assessment were confirmed and complemented by the external feedback. Trends identified by the web statistics could be verified and further explained by the user/provider survey. The Climate-ADAPT use cases with individual feedback were valued as 'evaluation case studies'. They showed how the core audience used the platform and how the knowledge supported various processes across all governance levels. The results of the

evaluation have already been used to shape the EEA and ETC/CCA's work for 2018, as well as to develop the new Climate-ADAPT IT service contract implemented in 2018.

The evaluation was very time consuming, because the methodology was new and not yet well established. The methodology needed to be refined during the course of the evaluation: it was further developed into 14 questions to allow meaningful conclusions to be drawn for the three Climate-ADAPT objectives. Some tools could not be fully applied or needed to be adjusted because of the lack of consistent data, e.g. in the collection of evidence on the use of the Climate-ADAPT case studies (survey on the Climate-ADAPT case studies uptake) and in the statistical analysis of the database content.

Box 5.27 Technical conclusions

- The Climate-ADAPT evaluation has shown that the investment in a web-based thematic knowledge platform proved to be effective: providing searchable knowledge in the Climate-ADAPT database with the objective of sharing information across Europe goes beyond the publication of assessments. It is a system of environmental information product types that supports a wide range of users in various aspects of decision-making on adaptation.
- Based on the lessons learned in this first Climate-ADAPT evaluation, a systematic MRE approach could be set up by the EEA on Climate-ADAPT to ensure the availability of data for annual internal assessments and another possible evaluation after the next period of the EU adaptation strategy. ETC/CCA resources need to be allocated for this.
- The results of the evaluation and the methodology should be made available for other EEA thematic knowledge platforms (BISE, WISE, WISE Marine) to enhance synergies.
- The outcomes of the evaluation could also be communicated to other knowledge platforms outside the EEA to make use of co-benefits, e.g. platforms supporting ecosystem-based approaches such as OPPLA, NWRM), and to the managers of adaptation knowledge platforms at city/regional, national and transnational levels.

5.6 Informing the evaluation of the EU adaptation strategy

The ongoing evaluation of the EU adaptation strategy (EC, 2013), due in quarter 4 of 2018, will present the state of play and the progress made in the implementation of the strategy. It focuses on assessing outputs and results achieved so far, the factors influencing this and any links to the strategy, concentrating on identifying lessons learned (EC, 2016b). The development of Climate-ADAPT is one of the interventions of the strategy that was implemented under Action 5, and is the subject of this evaluation (see Chapter 4 and Figure 4.3).

The EU adaptation strategy evaluation uses the criteria outlined in the EU Better regulation guidelines (EC, 2017a). This section relates the outcomes of the process evaluation of Climate-ADAPT to these criteria. As quantitative goals for this Climate-ADAPT objective are not available, the reflections are qualitative. They provide input into the report of the European Commission to the European Parliament and the Council on the state of implementation of the EU adaptation strategy, due in quarter 4 of 2018.

5.6.1 Baseline

A baseline is needed to evaluate the success of Climate-ADAPT during the period April 2013 to December 2016. According to the White Paper on adaptation in Europe (EC, 2009), there was information on adaptation available in Europe, but it was very scattered. In 2012, at the launch of the platform, there were only five national adaptation platforms in place (EEA, 2015). The White Paper expressed the need to develop an IT tool to improve and share the information across EU Member States. In April 2013, Climate-ADAPT was put in place with the same main structure that it has now and populated with the first comprehensive set of content.

5.6.2 Relevance

To what extent does there continue to be a need for the Commission to further develop the one-stop shop for adaptation information in Europe?

The outcomes of the evaluation of all three objectives of Climate-ADAPT have shown that there is a continuous need for Climate-ADAPT to build the knowledge base, to share it across Europe, to assist its uptake by decision-makers and to support cooperation among sectors and across governance levels. The number of Climate-ADAPT users is continually growing

(web statistics), users continue to make specific information requests (user/provider survey) and the 17 Climate-ADAPT use cases have shown that all providers of these cases have indicated further need to be supported by Climate-ADAPT.

5.6.3 Effectiveness

To what extent has the further development of Climate-ADAPT led to better informed decision-making? What is due to other factors and what were the barriers/success factors?

The user/provider survey and the 17 Climate-ADAPT use cases have shown that Climate-ADAPT is used by its core audience, organisations supporting decision-makers on adaptation, and decision-makers in various policy processes. The Climate-ADAPT use cases provided in-depth insight into how the platform has supported better informed decision-making in the context of various specific adaptation challenges in Europe. Success factors are the transparent and systematic development of Climate-ADAPT that has led to its being branded as 'the European reference' and a 'trusted source of information'. The platform is less effective in its support of sectoral users, users new to adaptation and users from eastern and central European countries (web statistics, user/provider survey, ad hoc collected feedback). Further areas of improvement are in the submission of information to the platform and its user-friendliness.

One particular barrier is the need to submit and use information only in English. Although the platform is designed for EU experts, it is also used outside Europe (user/provider survey).

To what extent has the further development of Climate-ADAPT led to an increased understanding of climate change risks and better informed decision-making?

The internal assessment of the Climate-ADAPT database has shown that, over the evaluation period, Climate-ADAPT has captured the growth in CCIVA knowledge published in Europe in English and which is publicly available. It has furthermore captured the knowledge in its quantity and in its diversity and shared it in a timely manner. More specifically, it has also started to gather knowledge generated through the EU funding streams LIFE, FP7 and H2020, as well as Interreg. The knowledge is presented in the policy context in which it is relevant. This knowledge can be searched in the database using metadata. The user/provider survey showed the added value providers gained from making information visible on

Climate-ADAPT beyond project or initiative websites. Nearly half of the survey respondents who provided information to the platform stated that they had since made their information more relevant and that users gained a better understanding of their work.

The user/provider survey has shown that Climate-ADAPT knowledge is used in a variety of policy processes supporting decision-making, such as for developing adaptation plans and strategies, but primarily to inform policy processes by developing evidence documents and methodologies (such as on indicators and case studies) feeding into the policy processes. The Climate-ADAPT use cases confirmed the same pattern and showed that the knowledge was used in decision-making at all governance levels in Europe, at all stages of the adaptation policy cycle and across Europe. They pointed to the fact that using the state of the art information provided on Climate-ADAPT, e.g. on the 'Country information' pages, allows users to learn from front-runner approaches. Access to the same level of information for all experts in the EU helps to improve the understanding of climate change risks across the EU. A specific survey, carried out for the Climate-ADAPT case studies, indicated that these inspiring examples of adaptation measures implemented across Europe were used in the same variety of policy processes.

5.6.4 Efficiency

How adequate were the resources for the further development of a one-stop shop for adaptation information in Europe?

Between 2013 and 2016, annual resources for Climate-ADAPT management at the EEA included one full-time project manager, some of the time of other staff within the EEA's Impacts, Vulnerabilities and Adaptation Group, one IT expert (less than full time) and the ETC/CCA's annual activities funded by the EEA on content development.

In addition, DG CLIMA has provided various contracts to support the promotion and use of Climate-ADAPT, as well as IT contracts for developing functionalities (EEA, 2017b).

The management of the platform by the EEA, supported by an ETC, ensures an efficient link to the EEA member countries. A lot of coordinated effort is needed on the part of the EEA and a range of ETC/CCA experts to manage the platform who work remotely on all aspects of platform development. Many IT-related problems were overcome by the ETC/CCA migrating to the same content management system as that used by the EEA for its main website. Climate-ADAPT benefits

from all regular EEA IT services. Prioritising IT support for the Mayors Adapt initiative in 2014 led to a delay in improving the user-friendliness of the overall platform.

5.6.5 Coherence

To what extent is the development of adaptation strategies coherent with other relevant policies at all governance levels?

The Climate-ADAPT use cases and the survey have shown that the platform was developed in close consultation with key stakeholders at EU levels. Climate-ADAPT aims to be coherent with other EU platforms, which are also continually developing (climate change services, disaster risk reduction, sectoral knowledge platforms). However, there is a need to extend the outreach of the platform to sectoral users and providers to improve the mainstreaming of adaptation into EU policy sectors (user/provider survey).

5.6.6 EU added value

To what extent have the Commissions' activities to further develop Climate-ADAPT as part of the EU adaptation strategy added value to existing horizontal and vertical actions at Member State level?

The user/provider survey and the Climate-ADAPT use cases have shown that Climate-ADAPT goes beyond what individual EU Member States, regions and municipalities could have achieved on their own. It provides a trusted source of information on adaptation in Europe that can be used by a wide variety of experts to cope with various adaptation challenges. The platform adds value by providing the EU reference frame for state of the art adaptation in Europe, supporting peer-to-peer learning and increasing EU countries' coherence in terms of better informed decision-making. This is facilitated by all its sections of the platform, whereas the 'Country information' and the 'Database' sections seem to be of particular value across all user groups (user/provider survey, Climate-ADAPT use cases).

Experts are consulting Climate-ADAPT, despite the fact that web-based adaptation platforms are in place in 16 countries (user/provider survey). The Climate-ADAPT use cases confirm that Climate-ADAPT fills a temporal gap for experts from countries with no national adaptation platform in place.

In particular, Climate-ADAPT has shown that it has matured by responding to challenges and it is on track

to fulfil its tasks in the context of varying stakeholder demands and a growing and diversifying stock of knowledge.

5.6.7 Complementarity (additional)

The platform has proved to be complementary to other platforms in terms of the provision of CCIVA knowledge, e.g. to climate services, in terms of sectors,

e.g. to other EU-level sector platforms, and in terms of governance levels, i.e. to adaptation platforms at transnational and national levels (user/provider survey, Climate-ADAPT use cases). Information is not duplicated by Climate-ADAPT, but users are guided to complementary information sources by the searchable weblinks on Climate-ADAPT, supported by metadata to allow efficient screening of the information. However, in particular, the links to sector knowledge platforms need to be further improved.

6 Outlook

6.1 Implementation of the evaluation outcomes

The Climate-ADAPT evaluation provides a good basis for further developing Climate-ADAPT according to users' and providers' demands. Improvements will be made in a step-wise approach, and will be prioritised by consulting key partners and stakeholders.

The European Commission and the EEA, supported by the ETC/CCA, have already used the evaluation outcomes in 2017 to prioritise their 2018 work on Climate-ADAPT content, functionalities, dissemination and MRE. Concrete actions were initiated, such as the improvement of the Climate-ADAPT structure and layout, and funded by the European Commission. The EEA, working with the European Commission, will prepare a Climate-ADAPT work plan for the period 2019-2021, including a Climate-ADAPT dissemination strategy and an MRE scheme.

The outcomes of the evaluation were presented to the Climate-ADAPT advisory group in January 2018. It was agreed that during 2018, the systematic presentation of the results of adaptation-relevant LIFE, Interreg and other research projects would be improved on Climate-ADAPT.

It is also anticipated that the outcomes of the evaluation will be presented to the Climate-ADAPT user and provider community, e.g. in a webinar, and to discuss their implementation with the EEA member countries in the annual Eionet meeting on adaptation in 2018 and with regular follow-up in future years. Mid-term demands of users and information providers need to be considered in a proactive approach to delivering sustainable solutions.

6.2 Stakeholder demands

Upcoming adaptation policy developments in various policy fields and at various governance levels are relevant for Climate-ADAPT.

With the establishment of a global goal in the Paris Agreement (UNFCCC, 2015) to enhance adaptive capacity and to contribute to global development by strengthening resilience and reducing vulnerability to climate change, the Parties should, among other things, take comprehensive action to share information, good practices and lessons learned on adaptation. This is also relevant for EEA member countries. The EEA could thus consider how to improve weblinks to the UNFCCC website⁽⁵⁵⁾ and to other relevant global knowledge platforms such as those on disaster risk reduction (Preventionweb⁽⁵⁶⁾), in order to support EEA member countries.

Currently EU Member States report adaptation information under the MMR (Article 15)⁽⁵⁷⁾ every four years (starting in March 2015), while many countries also provide updates on a voluntary basis, and this reporting forms the basis for the country information on Climate-ADAPT. The next round of reporting is due by March 2019. After that, Member States' adaptation reporting is expected to be done under the proposed Energy Union governance regulation (Article 17)(EC, 2017b), which is being discussed among the EU institutions and expected to be agreed by mid-2018.

Various key data, knowledge and policy developments that are relevant to national adaptation strategies and to mainstreaming adaptation in sector policies should be taken into account for the future of Climate-ADAPT.

⁽⁵⁵⁾ <http://www4.unfccc.int/sites/nwp/Pages/Home.aspx>

⁽⁵⁶⁾ <https://www.preventionweb.net/english>

⁽⁵⁷⁾ <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32013R0525>

C3S is gradually developing, and more C3S products will become available in the coming years, which should also be made accessible through Climate-ADAPT. A dedicated Climate-ADAPT section provides information about the services and C3S's pre-operational projects and this will be enhanced. Weblinks to the C3S services will also be established across all relevant Climate-ADAPT pages. At the strategic level, the new Copernicus strategy that is currently under development may consider the need to improve its link to Climate-ADAPT.

Climate-ADAPT will also explore links to JRC's DRMKC. Various elements of the DRMKC are relevant for Climate-ADAPT. This includes its support for preparation of local risk assessments, including the possibility to visualise different potential impacts depending on the return period of the extreme weather or climate-related event. Another element is the Risk Data Hub⁽⁵⁸⁾, which includes knowledge and models developed by different sectors and for different hazards over recent decades and economic (and other types of) loss data to feed the models and to improve forecasting of expected losses.

The promotion of ecosystem-based approaches and green infrastructure is a key policy priority of the European Commission. There is an interest in improving the highlighting of ecosystem-based approaches and green-infrastructure-related solutions on various EU-funded websites, such as BISE⁽⁵⁹⁾ (managed by the EEA) and EU-funded project websites (e.g. OPPLA⁽⁶⁰⁾ and NWRM⁽⁶¹⁾), as well as on Climate-ADAPT. At the end of 2017, an EU environmental knowledge community (EKC) task force, including representatives of various European Commission services and the EEA, responsible for various relevant knowledge platforms, started to work on evaluating and enabling the interoperability of platforms and catalogues on ecosystem-based initiatives. Options that should be discussed in this task forces include the use of common templates for features that are used across relevant websites, such as case studies. A roadmap and initial results from the task force should become clear during 2018 and beyond.

The EEA will also explore technical options for improving the search function of its website⁽⁶²⁾ by 'harvesting' relevant content from all EEA thematic websites (WISE, WISE Marine, BISE, Climate-ADAPT).

Adaptation actions in transnational regions are already taking place, e.g. through EU-funded macro-regional strategies, other EU activities such as Interreg and regional conventions such as the Alpine and Carpathian Conventions⁽⁶³⁾. To be successful, they require the exchange of knowledge among actors in the regions and across those regions. The EEA is developing an overview of adaptation actions in transnational regions to be finalised by the end of 2018, including factsheets to be published on Climate-ADAPT.

There is also a need, from national stakeholders such as managers of national adaptation platforms, for better links between national adaptation platforms and Climate-ADAPT. The EEA will explore the possibilities of enhancing the interoperability of Climate-ADAPT with adaptation platforms at national level, as a pilot application. The interoperability of content, such as that of case studies, will be tested in 2018.

Adaptation action at city level is supported by the key EU-funded Covenant of Mayors on Climate and Energy initiative, which also promotes climate change mitigation, the EU Urban Agenda, which includes an action on climate change adaptation⁽⁶⁴⁾, and other city networks. The knowledge base for urban adaptation will be further developed by these various activities and Climate-ADAPT should include sufficient links.

Feedback, collected beyond this evaluation, such as in various sessions at the European Climate Change Adaptation Conference (ECCA) 2017 in June 2017 in Glasgow⁽⁶⁵⁾, and presented in the final plenary session, suggested that it is not enough to present adaptation information on knowledge platforms. To meet the needs of users and to promote taking action, additional services such as training and many other actions, including enhancing communities of practice, are needed. The EEA will explore such options, where feasible, working with key partners including the European Commission.

⁽⁵⁸⁾ <http://drmkc.jrc.ec.europa.eu/partnership/Scientific-Partnerships/Risk-Data-Hub#documents/789/list> (last accessed 23 March 2018).

⁽⁵⁹⁾ <http://biodiversity.europa.eu>

⁽⁶⁰⁾ <http://www.oppla.eu>

⁽⁶¹⁾ <http://nwrn.eu>

⁽⁶²⁾ www.eea.europa.eu

⁽⁶³⁾ <http://climate-adapt.eea.europa.eu/countries-regions/transnational-regions>

⁽⁶⁴⁾ <https://ec.europa.eu/futurium/en/climate-adaptation>

⁽⁶⁵⁾ <http://ecca2017.eu/conference/session-report>

6.3 Developments in adaptation knowledge

Adaptation knowledge is becoming more diverse, which might require new forms of presenting and sharing it through adaptation platforms (see ETC Technical paper, Annex 1). For example, Klein et al. (2017), provided an overview of the evolution of adaptation research over time in terms of its quality. Four generations of research themes are distinguished, based on the focus of research in each one of them: research and description, acceptance and norms, progress and policy, and acceleration and implementation (Table 6.1). Klein et al. (2017, p. 5) have argued that 'the fourth generation research will increasingly focus on the implementation of adaptation and the effort to build a climate-resilient future'. They propose research priorities that could be used for Climate-ADAPT as a source of inspiration to proactively prepare approaches to presenting the outcomes of research for transformative adaptation.

Several other studies point in particular to the need to develop new formats for presenting knowledge

for transformative adaptation that is embedded in systemic societal change, such as the EEA report on urban adaptation (EEA, 2016c). While 'traditional approaches', such as fact sheets, policy briefs and case studies are still relevant, new concepts were discussed by several H2020 projects related to the co-creation and co-design of knowledge. A dedicated session ⁽⁶⁶⁾ at the 2017 ECCA conference discussed new knowledge formats, approaches that were tested at local level to raise awareness of climate change impacts (e.g. sea level rise) and climate-related extreme events (e.g. flooding), in particular on vulnerable systems and assets (e.g. critical infrastructure). To support the selection of adaptation options interactive geographical information systems, gaming tools, sketches and drawings were identified as tools to encourage people to identify vulnerable areas. Critical demonstration sites of adaptation measures at the local level were other useful tools to encourage the implementation of adaptation.

The EEA could explore such new knowledge formats where possible taking into account resources and capacities.

Table 6.1 Adaptation research priorities and areas of focus over time

Type of question	Adaptation research questions
Descriptive questions	<ul style="list-style-type: none"> How does adaptation actually work on the ground? Which successful adaptation actions are replicable and scalable?
Normative questions	<ul style="list-style-type: none"> Should adaptation challenge underlying social, political and economic structures and drive transformation change?
Policy questions	<ul style="list-style-type: none"> When does adaptation require specific policies and institutions and when is it best mainstreamed into existing activities? What role do the private sector and other non-state actors play in adaptation implementation and governance?
Implementation questions	<ul style="list-style-type: none"> What technical knowledge is necessary to successfully engage in climate adaptation? How do we best measure the outcomes of adaptation projects and programmes? How do we learn from failure?

Note: Adapted from Klein et al. (2017).

⁽⁶⁶⁾ <http://ecca2017.eu/conference/session-report>

6.4 Principles of further developing Climate-ADAPT

Based on the vision of Climate-ADAPT, a number of main principles were identified in 2013, which guided the maintenance and development of the platform (EEA, 2014a). These principles are relevance, reliability, straightforward accessibility, complementarity, timeliness of the information, and transparent and responsive platform development.

The Climate-ADAPT evaluation has shown that these principles have been proven to guide the development of Climate-ADAPT well. They can be further used in the platform's development in the mid-term to accommodate emerging needs. The evaluation has shown that the 'reliability' criterion is one of the most important for the Climate-ADAPT core audience. This should be taken into account when considering priorities versus the resources available for the future management of the platform.

References

- Buth, M., 2015, *Information, Kommunikation und Kooperation im Rahmen der Deutschen Anpassungsstrategie an den Klimawandel (IKK-DAS III)*, Umweltbundesamt, Dessau-Rosslau, Germany.
- Cortekar, J., et al., 2016, 'Why climate change adaptation in cities needs customised and flexible climate services', *Climate Services* 4, pp. 42-51 (DOI: 10.1016/j.cliser.2016.11.002).
- Downing, C., et al., 2017a, *Assessing adaptation knowledge in Europe: Vulnerability to climate change*, Final Report, 340202/2015/719923/SER/CLIMA.C.3, Ecofys, London (https://ec.europa.eu/clima/sites/clima/files/adaptation/what/docs/climate_change_vulnerability_en.pdf).
- Downing, C., et al., 2017b, 'Capturing and sharing knowledge on adaptation across Europe: how to support decision makers in the EU (Session 5.4)', conference paper presented at: Third European Climate Change Adaptation Conference, Glasgow, UK, 5 June 2017.
- EC, 2009, White Paper — Adapting to climate change: towards a European framework for action (COM(2009) 0147 final of 1 April 2009).
- 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).
- EC, 2015, *A European research and innovation roadmap for climate services — EU Law and Publications*, Publications Office of the European Union (<https://publications.europa.eu/en/publication-detail/-/publication/73d73b26-4a3c-4c55-bd50-54fd22752a39>) accessed 28 February 2018.
- EC, 2016a, 'Dissemination and capacity-building supporting adaptation in the framework of the EU Adaptation Strategy (Contract number 340202/2015/718400/SER/CLIMA.C.3)', unpublished.
- EC, 2016b, *Roadmap for the Evaluation of the EU Adaptation Strategy* (http://ec.europa.eu/smart-regulation/roadmaps/docs/2016_clima_011_evaluation_adaptation_strategy_en.pdf).
- EC, 2017a, 'Better regulation guidelines — Evaluation and fitness checks' (https://ec.europa.eu/info/files/better-regulation-guidelines-evaluation-and-fitness-checks_en) accessed 7 March 2018.
- EC, 2017b, Corrigendum COM (2016) 759 final of 30.11.2016.
- EC, 2017c, 'Study to support the evaluation of the EU Adaptation Strategy — First interim report'.
- EEA, 2014a, 'European Climate Adaptation Platform (Climate-ADAPT): medium term work plan, 2013-2018'.
- EEA, 2014b, *National adaptation policy processes in European countries — 2014*, EEA Report No 4/2014, European Environment Agency (<http://www.eea.europa.eu/publications/national-adaptation-policy-processes>) accessed 11 June 2015.
- EEA, 2015, *Overview of climate change adaptation platforms in Europe*, EEA Technical Report No 5/2015, European Environment Agency (<http://www.eea.europa.eu/publications/overview-of-climate-change-adaptation>) accessed 4 March 2014.
- EEA, 2016a, 'EEA Expert workshop on climate change adaptation platforms' (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/workshop-documentation/expert-ws-cca-platforms_summary_report_final_201216-1).
- EEA, 2016b, *Environment and climate policy evaluation*, EEA Report No 18/2016, European Environment Agency (<https://www.eea.europa.eu/publications/environment-and-climate-policy-evaluation>) accessed 2 March 2018.

- EEA, 2016c, *Urban adaptation to climate change in Europe 2016 — Transforming cities in a changing climate*, EEA Report No 12/2016, European Environment Agency (http://www.gppq.fct.pt/h2020/_docs/brochuras/env/urban-adaptation-report-2016.pdf).
- EEA, 2017a, 'Scoping paper of a 2017 EEA Report on evaluation of the European Climate Adaptation Platform — Climate-ADAPT' (https://forum.eionet.europa.eu/nrc-climate-change-adaptation/library/workshops-meetings/climate-adapt-development-webinars/third-climate-adapt-webinar/webinar-follow/ca_evaluation_report-scoping_paper_20170410_final).
- EEA, 2017b, 'Third webinar on Climate-ADAPT development: 'Towards an evaluation of Climate-ADAPT'', European Environment Agency (https://forum.eionet.europa.eu/nrc-climate-change-adaptation/library/workshops-meetings/climate-adapt-development-webinars/third-climate-adapt-webinar/webinar-follow/third_climate_adapt_outline_webinar-documentation_final_010517).
- EEA, 2018, *National climate change vulnerability and risk assessments in Europe 2018*, EEA Report No 1/2018, European Environment Agency (<https://www.eea.europa.eu/publications/national-climate-change-vulnerability-2018>).
- ETC/CCA, 2017, 'Adaptation and knowledge base in European transnational regions', ETC/CCA Working paper.
- EU, 2013, Regulation (EU) No 525/2013 of the European Parliament and of the Council of 21 May 2013 on a mechanism for monitoring and reporting greenhouse gas emissions and for reporting other information at national and Union level relevant to climate change and repealing Decision No 280/2004/EC (OJ L 165, 18.6.2013, p. 13-40).
- FOEN, 2012, *Adaptation to climate change in Switzerland*, No UD-1055-E, Federal Office for the Environment, Bern, Switzerland (<http://www.bafu.admin.ch/publikationen/publikation/01673/index.html?lang=en>) accessed 1 June 2016.
- Gancheva, M., et al., 2017, *Climate-ADAPT: Dissemination and capacity-building supporting adaptation in the framework of the EU Adaptation Strategy — Final report*, Milieu Ltd, Brussels.
- Karali, E. and Mattern, K., 2017, 'Communicating climate change adaptation information using web-based platforms', *Advances in Science and Research* 14, pp. 241-245 (DOI: 10.5194/asr-14-241-2017).
- Kind, C., et al., 2015, *Entscheidungsprozesse zur Anpassung an den Klimawandel in Kommunen*, Umweltbundesamt, Dessau-Rosslau, Germany.
- Klein, R. J. T., et al., 2017, *Advancing climate adaptation practices and solutions: Emerging research priorities*, Stockholm Environment Institute, Stockholm (<http://www.jstor.org/stable/resrep02838>) accessed 6 March 2018.
- Milieu, 2014, 'Climate-ADAPT science/policy forums: Workshops for the dissemination and exchange of adaptation-related knowledge to policy makers — Feedback and recommendations for Climate-ADAPT'.
- Romanovska, L., et al., 2016, *Urban adaptation knowledge gaps in Europe. The Mayors Adapt knowledge base strategy*, Mayors Adapt, Brussels, Belgium.
- UNFCCC, 2015, 'The Paris Agreement' (http://unfccc.int/paris_agreement/items/9485.php) accessed 6 March 2018.

European Environment Agency

Sharing adaptation information across Europe

2018 — 66 pp. — 21 x 29.7 cm

ISBN 978-92-9213-945-2

doi:10.2800/933024

HOW TO OBTAIN EU PUBLICATIONS

Free publications:

- one copy:
via EU Bookshop (<http://bookshop.europa.eu>);
- more than one copy or posters/maps:
from the European Union's representations (http://ec.europa.eu/represent_en.htm);
from the delegations in non-EU countries (http://eeas.europa.eu/delegations/index_en.htm);
by contacting the Europe Direct service (http://europa.eu/europedirect/index_en.htm) or calling 00 800 6 7 8 9 10 11 (freephone number from anywhere in the EU) (*).

(* The information given is free, as are most calls (though some operators, phone boxes or hotels may charge you).

Priced publications:

- via EU Bookshop (<http://bookshop.europa.eu>).

European Environment Agency
Kongens Nytorv 6
1050 Copenhagen K
Denmark

Tel.: +45 33 36 71 00
Web: eea.europa.eu
Enquiries: eea.europa.eu/enquiries

