European Commission

Climate Change Adaptation

Research, Science and Innovation

Informing decisions, providing solutions

Research and Innovation

Climate Change Adaptation – Research, Science and Innovation

European Commission
Directorate-General for Research and Innovation
Directorate — Climate Action and Resource Efficiency
Unit I.4 - Climate action and Earth Observation

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Manuscript completed in October 2018.

Luxembourg: Publications Office of the European Union, 2019

Print	ISBN 978-92-79-94137-5	doi:10.2777/576546	KI-06-18-107-EN-C
PDF	ISBN 978-92-79-94139-9	doi:10.2777/616375	KI-06-18-107-EN-N

EUROPEAN COMMISSION

Climate Change Adaptation

Research, Science and Innovation

Informing decisions, providing solutions

Edited by Miguel A. Martínez-Botí and Diogo de Gusmão-Sørensen

2019 Directorate-General for Research and Innovation

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FOREWORD

Carlos Moedas
Commissioner for Research, Science and Innovation

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Commissioner for Climate Action and Energy

Climate change is the defining challenge of our time. Mitigating its impacts and adapting to changes already taking place or impossible to avoid will require fundamental changes to societies and behaviours all over the world – as well as scientific breakthroughs, both technological and social.

In his latest State of the Union address, President Juncker called on Europe to continue its global leadership on climate action. The EU intends to remain at the forefront of the fight against climate change and the necessary transition to low-carbon, sustainable and climate-resilient societies.

The landmark Paris Agreement commits the world to limit global warming to well below 2°C above pre-industrial levels and pursue efforts to limit it to 1.5°C. However, climate change is already being felt around the world – so we must all prepare for impacts that we are unable to avoid.

The Intergovernmental Panel on Climate Change (IPCC), with a substantial contribution from EU-funded research and innovation, recently published its special report on global warming of 1.5°C. The message from the world's scientific community is clear: limiting the global temperature rise to 1.5°C is necessary to avoid the worst

impacts and reduce the likelihood of extreme events – and it is doable, provided we act now and use every tool at our disposal.

On 12 November this year, the European Commission published an evaluation of the EU strategy on adaptation to climate change. The evaluation shows that adaptation has progressed since 2013 at all levels of governance and across key EU policies. Moreover, the Commission has presented its strategic vision for a new EU long-term strategy for reducing greenhouse gas emissions on 28 November, setting out clear priorities to achieve a net-zero carbon economy in 2050. EU-funded research and innovation have underpinned both reports by bridging the knowledge gaps and developing effective adaptation solutions.

Over the past 2 years, we have asked over 70 of our Framework Programme 7 and Horizon 2020 projects to re-align their objectives with those of the Paris Agreement and its 1.5°C/2°C goal. We are grateful for their flexibility and their strong commitment to make their results relevant for decision and policymaking. In line with this request, the projects in this booklet have provided information on risks and impacts of global warming above 1.5°C/2°C and the costs and benefits of adaptation. They have helped to make our crops and forests more resilient to climate change, improved the capacity to protect our societies from climate-related threats, and fostered the development of nature-based solutions and climate services to support decision-making.

Research, science and innovation will keep playing a crucial role in our efforts to tackle climate change and here the EU will continue to lead. We have put climate at the heart of Horizon Europe – the EU's next research and innovation programme. We have proposed to invest 35% of the programme on climate objectives, through the development of innovative and cost-effective zero-carbon solutions. One thing is very clear. If we want to achieve a net-zero carbon economy by 2050, more and better focused R&I is a necessary condition to reach this target and to maintain our standard of living.

INTRODUCTION

Advancing climate change adaptation

The historic Paris Agreement set out the challenging long-term goal of keeping global warming to "well below" 2 °C above pre-industrial levels while pursuing efforts to limit it to 1.5 °C. At the same time, it called on societies to build up their resilience and ability to adapt to the adverse impacts of climate change.

Two other landmark global agreements were reached in 2015: the Sendai Framework for Disaster Risk Reduction and the 2030 Agenda for Sustainable Development with its 17 Sustainable Development Goals (SDGs).

The SDGs call for action by all countries to promote prosperity while protecting the planet, recognising that ending poverty must go hand in hand with strategies that build economic growth and address a range of social needs while tackling climate change and environmental protection. The Sendai Framework focuses on substantially reducing disaster risk and loss of life while protecting livelihoods and health, as well as the economic, physical, social, cultural and environmental assets of people, businesses, communities and countries.

Science, research and innovation are key to the EU's fight against climate change and the implementation of these three agreements.

The Intergovernmental Panel on Climate Change (IPCC) is the leading body responsible for the scientific assessment of climate change and the key global interface between climate science and policy. It provides the most authoritative, balanced and credible scientific input to policymakers and informs the implementation of the Paris Agreement.

IPCC reports are a significant driver of – and provide important guidance for – the strategic programming of EU-funded research and innovation actions, helping to maintain the focus on the most pressing climate-related knowledge gaps and policy-relevant research with the highest possible impact.

Over the coming years, the IPCC will publish a series of reports that will shape climate change science, mitigation and adaptation policies. Actions funded under the EU's research and innovation framework programmes will continue to actively contribute to this important global effort.

Research and innovation within Horizon 2020's 'Climate Action, Environment, Resource Efficiency and Raw Materials' societal challenge and 'Building a low-carbon, climate-resilient future' focus area aim to develop solutions for achieving the Paris Agreement mitigation and adaptation goals.

Overall, 35 % of Horizon 2020 is earmarked to fund climate-related research and innovation projects. The proposal for the next Research and Innovation Framework Programme – Horizon Europe – is set to maintain the 35 % target for the 2021-2027 period, reflecting the European Commission's continuous commitment to mainstream climate action across all EU programmes.

EU strategy seeks adaptation solutions

Being "Open to the World" is at the core of the EU's policy on science, research and innovation. International cooperation and global collaborative research actions, such as those coordinated by the Belmont Forum, contribute to tackling climate change – a global societal challenge – by developing and deploying effective solutions more rapidly. Equally, we will continue to work with partners and stakeholders to develop climate services that enable us to better adapt to climate change.

The EU Strategy on Adaptation to Climate Change was adopted in 2013 with the aim of making Europe more climate resilient. One of its objectives is to achieve better-informed decision-making by improving adaptation knowledge.

The strategy initially identified four main knowledge gaps that have since been reviewed and expanded. The European Commission's Research and Innovation Framework Programmes – FP7 and Horizon 2020 – have contributed to the implementation of the strategy by focusing on bridging knowledge gaps and the development of effective solutions for climate change adaptation.

The actions featured in this publication cover some of the areas that require research and innovation funding, such as high-end climate change, the economics of climate change adaptation and climate-resilient agriculture and forestry. Also featured are links between climate change adaptation and disaster risk reduction, nature-based solutions and climate services. They will help us create a climate-resilient society – and better understand limits to adaptation.

CLIMATE ADAPTATION

The C3S Climate Data Store (CDS) is a one-stop shop for climate information. Adaptation planners can use CDS to plan for and address potential climate change impacts that affect our lives.

ADAPTATION PLANNER

?

information/ visualisations/ processed data

EQC - Evaluation and quality control

compute

CDS

catalogue

cds.climate.copernicus.eu

SCIENCE AND DATA

Climate data

› ERA5 – reanalysis combining in-situ & satellite data into a model to produce a global dataset

› essential climate variables

› data from sentinels and other satellites

› CMIP5 - projections based on global models

› seasonal forecasts

› in-situ data

› CORDEX - projections based on regional models

Other data

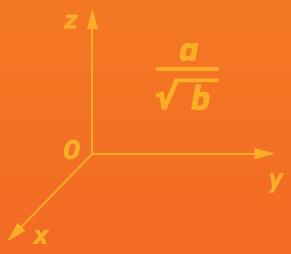
› EUROSTAT

› sector-specific climate data

1.2 °C above pre-industrial
2017

state of the climate

transport



insurance

energy

APPLICATIONS

health

coastal areas

infrastructure

tourism

agriculture and forestry

water management

› Users' data

Copernicus Europe's eyes on Earth

ECMWF

HIGH-END CLIMATE CHANGE

High-end climate change is generally associated with a global average temperature increase exceeding 2 °C above pre-industrial levels. However, with the adoption of the Paris Agreement came the recognition that some parts of the world may already experience high-end climate change with a 1.5 °C rise.

Knowing how much is at stake, the EU is taking concrete steps to learn more about what needs to be done to prepare for – and adapt to – high-end climate change scenarios.

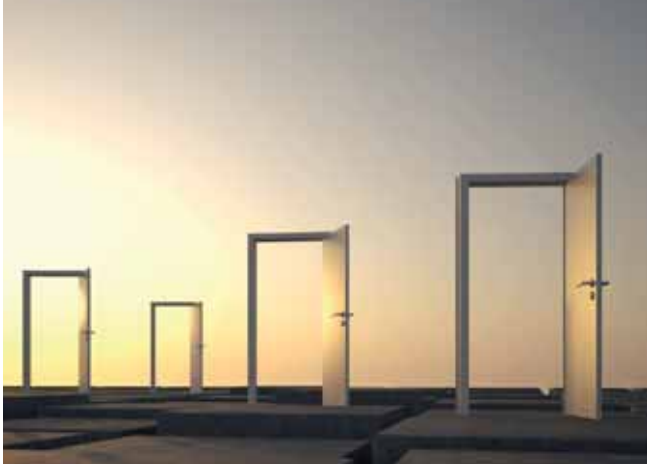
> **"A better assessment of the impact and vulnerabilities associated with high-end climate change scenarios comes with big benefits for the EU and its citizens."**

Stakeholder interviews and public consultations that took place during the evaluation of the EU Adaptation Strategy highlighted the need to continue to improve our knowledge on high-end climate change, as well as on the spillover effects from climate change impacts occurring outside the European Union.

A better assessment of the impacts and vulnerabilities associated with high-end climate change scenarios comes with big benefits for the EU and its citizens. It informs policy- and decision-makers of the social and economic risks, opportunities, costs and benefits, synergies and trade-offs linked to different adaptation strategies and mitigation pathways – and to possible tipping points.

Results of EU-funded projects on high-end climate change have already made their mark, with some feeding into the 2018 IPCC 'Special report on impacts of global warming of 1.5 °C above pre-industrial levels and related global greenhouse gas emission pathways'.

Among other topics, the report assessed the impacts of 1.5 °C global warming at different scales on both nature and humans together with current and emerging adaptation and mitigation options.



HELIX

HELIX developed a set of scenarios on what to expect should global warming reach 1.5 °C, 2 °C, 4 °C and 6 °C, in order to make adapting to changing climate more understandable and manageable. It showed policymakers a range of possible outcomes, allowing them to assess risks accordingly.

Coordinator:
The University of Exeter, United Kingdom

Total cost: EUR 11 876 482

EC contribution:
EUR 8 999 998

Start/end:
November 2013 to October 2017

Other countries:
Netherlands, Belgium, Italy, France, Sweden, Germany, Greece, Kenya, Bangladesh, India, Senegal

Web: https://www.helixclimate.eu/

IMPRESSIONS

IMPRESSIONS has advanced understanding of the implications of high levels of climate change to help decision-makers draw up integrated adaptation and mitigation plans for such potentially high-risk scenarios.

Coordinator:
Natural Environment Research Council, United Kingdom

Total cost:
EUR 11 288 441

EC contribution:
EUR 8 914 935

Start/end:
November 2013 to October 2018

Other countries:
Portugal, Sweden, Netherlands, Denmark, Finland, Austria, Italy, Belgium, Bulgaria, Romania, Germany, Spain, Hungary, France, Switzerland

Web: http://www.impressions-project.eu/

ECONOMICS OF CLIMATE CHANGE ADAPTATION

Both the Paris Agreement and the EU Adaptation Strategy promote climate change adaptation based on the best available science and knowledge. The goal is to mainstream adaptation into relevant socio-economic and environmental policies and action.

The EU has taken steps to boost information on damage and adaptation costs and benefits after this was identified as a key knowledge gap in the EU Adaptation Strategy.

It is clear that climate change will cause large-scale environmental and socio-economic damage. However, to further substantiate the economic case for adaptation to climate change, it is imperative to:

- quantify the economic and social costs of climate change impacts;
- assess the costs and benefits of adaptation and compare them with the consequences of delayed or no action;
- analyse the effectiveness of climate change adaptation policies and measures;
- explore the potential co-benefits with climate change mitigation.

EU-funded research and innovation has helped shed important light on the economics of climate change adaptation and how to address it. Both DG Research and Innovation and the European Commission's science and knowledge service, the Joint Research Centre (JRC), have been instrumental in this area.

> **"EU-funded research and innovation has helped cast an important light on the economics of climate change adaptation."**

One example is the JRC PESETA III project, which assessed the effects of climate change in the EU across 11 sectors.

It found that there is a clear North-South divide in the regional distribution of impact, with the Mediterranean area being the most vulnerable. Using results from the EU-funded HELIX project, which developed a set of high-end climate change scenarios, JRC PESETA III estimated that the effects of climate in third countries would increase EU welfare (consumption) loss by 20%.

ECONADAPT

ECONADAPT collated the knowledge base on the costs and benefits of climate change adaptation and made methodological advances in a range of areas, developing a policy-led approach focused on the practical application of adaptation. It also worked on project and policy appraisal frameworks.

Coordinator:
University of Bath, United Kingdom

Total cost:
EUR 3 700 787

EC contribution:
EUR 2 928 617

Start/end:
October 2013 to September 2016

Other countries:
Germany, Spain, Austria, Netherlands, Greece, Denmark, Italy, Czech Republic, Belgium

Web: https://econadapt.eu/

COACCH

COACCH aims to provide challenge-driven, solution-oriented and transparent knowledge on climate change impact and policy in Europe, making it directly usable by different stakeholder communities. Its objective is also to produce an improved assessment of the risks and costs of climate change.

Coordinator:
Fondazione Centro Euro-Mediterraneo sui Cambiamenti Climatici, Italy

Total cost:
EUR 4 999 843

EC contribution:
EUR 4 999 843

Start/end:
December 2017 to May 2021

Other countries:
United Kingdom, Austria, Netherlands, Germany, Czech Republic, Spain

Web: http://www.coacch.eu/

CLIMATE-RESILIENT AGRICULTURE AND FORESTRY

Europe's agriculture (so vital to our survival and economy) is both highly vulnerable to climate change and a contributor to the problem.

Agri-food value chains are responsible for at least 25% of the EU's greenhouse gas emissions, when considering the entire cycle from primary production to consumers.

At the same time, primary production is very susceptible to climate change. For example, rising temperatures and carbon dioxide (CO_2) concentrations may lead to enhanced plant growth but often at the expense of quality and with subsequent impact on food value chains. Furthermore, climate change can increase the sector's vulnerability to natural disturbances such as droughts or storms.

Forests – including living biomass, soils and wood products – and grasslands are major carbon sequestration reservoirs that can help mitigate climate change. Biomass can also be used as a substitute for non-renewable energy and materials.

Amid this backdrop, the EU is taking action to make our agriculture and forests more resilient to climate change while fostering the development of climate-friendly farming to help reduce greenhouse gas emissions.

> **"The EU is taking action to make our agriculture and forests more resilient to climate change."**

Building on the tradition developed under the Seventh Framework Programme, EU-funded research and innovation projects launched under Horizon 2020 have consistently supported both mitigation and adaptation action while continuing to satisfy the need for food, feed, bio-based products and energy for a global population projected to reach 10 billion by 2030.

A solid portfolio of EU projects has been developed that further examines the intrinsic capacity of plants to respond to both a changing climate and increasing and diversifying societal demands.

SOLACE

SOLACE is helping agriculture adapt to greater rainfall variability as a result of climate change and the reduced use of certain fertilisers for economic and ecological reasons. Solutions combine novel crop genotypes with innovations in the management of agro-ecosystems linked to potato, bread wheat and durum wheat.

Coordinator:
Institut National de la Recherche Agronomique, France

Total cost:
EUR 7 192 148

EC contribution:
EUR 6 000 000

Start/end:
May 2017 to April 2022

Other countries:
Austria, Belgium, Denmark, Germany, Hungary, Italy, Portugal, Spain, Sweden, Switzerland, Netherlands, Turkey, United Kingdom

Web: https://www.solace-eu.net/

B4EST

B4EST seeks to boost the survival, health, resilience and productivity of forests amid climate change while maintaining their genetic diversity, key ecological functions and fostering a competitive, bio-based EU economy.

Coordinator:
Institut National de la Recherche Agronomique, France

Total cost:
EUR 6 478 663

EC contribution:
EUR 6 000 000

Start/end:
May 2018 to April 2022

Other countries:
Finland, Italy, Norway, Portugal, Spain, Sweden, Netherlands, United Kingdom

Web: https://cordis.europa.eu/project/rcn/214319_en.html

DISASTER RISK REDUCTION AND CLIMATE CHANGE ADAPTATION

Linking climate change adaptation and disaster risk reduction is a top priority for the EU. We are focusing on how best to reduce the impact of extreme weather events and prevent catastrophes often tied to the tragic loss of both lives and livelihoods.

The EU Adaptation Strategy calls for the implementation of adaptation policies in synergy and full coordination with disaster risk reduction.

In this context, the EU Action Plan on the Sendai Framework for Disaster Risk Reduction aims to reinforce ecosystem and societal resilience to current and emerging risks by creating an approach to disaster risk management that encompasses all of society, strengthening the links with climate change adaptation and urban policies and initiatives.

> **"Linking climate change adaptation and disaster risk reduction is a top priority for the EU."**

Funding for this thematic area supports research and innovation on climate change impacts, vulnerabilities and risks. It also supports the development of innovative models, tools and methods to improve adaptation and long-term risk reduction. The goal is to protect sensitive resources, economic sectors, infrastructure and society from climate-related threats – and to reduce their vulnerability vis-à-vis these threats.

In an effort to foster further progress in this area, the fourth edition of the European Climate Change Adaptation (ECCA) Conference will take place in Lisbon in May 2019.

Convened by the EU-funded PLACARD, BINGO and RESCCUE projects, the conference will bring together climate change adaptation and disaster risk reduction communities to share knowledge and collaborate on common goals.

PLACARD

PLACARD is a platform for dialogue, knowledge exchange and collaboration between the climate change adaptation and disaster risk reduction communities. It addresses gaps and fragmentation challenges, informing and contributing to key research and policy processes.

Coordinator:
FCiências.ID – Associação para a Investigação e desenvolvimento de Ciências, Portugal

Total cost:
EUR 3 031 647

EC contribution:
EUR 2 852 760

Start/end:
June 2015 to May 2020

Other countries:
Sweden, Germany, Italy, United Kingdom, Austria, Switzerland, Netherlands

Web: https://www.placard-network.eu/

BINGO

BINGO is providing practical knowledge and tools to end-users, water managers, decision- and policy-makers to prepare for and adapt to a range of future climate conditions, including droughts and floods. It provides demand-driven solutions for water resources of strategic importance in six areas across Europe.

Coordinator:
Laboratório Nacional de Engenharia Civil, Portugal

Total cost:
EUR 7 822 422

EC contribution:
EUR 7 822 422

Start/end:
July 2015 to June 2019

Other countries:
Netherlands, Germany, Spain, Norway, Cyprus

Web: http://www.projectbingo.eu/

NATURE-BASED SOLUTIONS

Green roofs, sustainable drainage systems and flood-plain restoration are examples of nature-based solutions (NBS) inspired and supported by the natural world around us to improve health and well-being, increase resilience and adapt to climate change.

They simultaneously provide environmental, social and economic benefits while contributing to climate adaptation and mitigation by fixing carbon, purifying air and water, creating water cycles and maintaining stable temperatures.

> **"Europe has extensive pools of knowledge, scientific expertise, skills and technological capacity relevant to nature-based solutions."**

EU policies on climate action, disaster risk reduction, the circular economy, biodiversity protection and health security have already greatly contributed to the international mainstreaming of policies that innovate with nature.

Since 2013, the Commission has actively invested in NBS. The main policy targets of the EU research and innovation agenda for NBS include:

- enhancing the framework conditions at EU policy level;
- developing the community of innovators;
- providing evidence base and knowledge;
- advancing development, uptake and upscale;
- mainstreaming NBS within the international research and innovation agenda.

Specific actions that support the NBS research and innovation agenda include a series of research and demonstration projects in cities linked to climate adaptation and urban regeneration, hydro-meteorological risks, business models and insurance value, as well as a stakeholder platform and a collection of best practices.

NATURVATION

NATURVATION is assessing what nature-based solutions can achieve in urban areas and how innovation is taking place. It involves six European cities working with communities and stakeholders to develop the knowledge and tools required to realise NBS's potential for meeting urban sustainability goals. The project is also compiling 1 000 NBS examples from across Europe in an Urban Nature Atlas.

Coordinator:
Durham University, United Kingdom

Total cost:
EUR 7 797 877

EC contribution:
EUR 7 797 877

Start/end:
November 2016 to October 2020

Other countries:
Hungary, Germany, Netherlands, Sweden, Spain

Web: https://naturvation.eu/

UNALAB

UNALAB will implement urban-living lab demonstration areas in three cities, addressing identified climate- and water-related challenges by co-creating NBS with local stakeholders and end-users, using an innovative systemic decision-support tool.

Coordinator:
Teknologian tutkimuskeskus VTT Oy, Finland

Total cost:
EUR 14 278 699

EC contribution:
EUR 12 768 931

Start/end:
June 2017 to May 2022

Other countries:
Germany, Netherlands, Italy, Norway, Spain, France, Czech Republic, Turkey, Belgium, Portugal, Sweden, China, Argentina

Web: https://www.unalab.eu/

EUROPEAN CLIMATE SERVICES

Adequately responding to climate change requires informed decision-making at all levels and, in line with the Paris Agreement, the EU has taken steps to ensure this is the case.

Climate services translate climate-related data and information to support the best possible decision-making on climate change adaptation, mitigation and disaster risk reduction.

In 2015, the European Commission launched the European Research and Innovation Roadmap on Climate Services to set some of its research and innovation priorities and to foster the growth of the European climate service market, which is contributing to economic growth and job creation.

The roadmap is being implemented through Horizon 2020 and partnerships with a range of different stakeholders including Copernicus, the EU's earth observation programme.

Implementation has already contributed to improving the frameworks and tools available to support climate-related decision-making. It has also provided regional and local-level analyses and risk assessments, helping to fill knowledge gaps identified by the EU Adaptation Strategy.

"Responding to climate change requires informed decision-making at all levels and, in line with the Paris Agreement, the EU has taken steps to ensure this is the case."

Also promoting informed decision-making is Climateurope, which integrates and assesses European Earth system modelling and climate services activities. Furthermore, it enhances the communication and dissemination of information to relevant stakeholders.

Climateurope events such as the 'Climate information at your service' festivals support climate services at both European and national levels, offering a varied programme of lectures and discussions to explore state-of-the-art climate information, its uses and value. Such gatherings also promote networking among scientists, policymakers, businesses, practitioners, and entrepreneurs.

COPERNICUS CLIMATE CHANGE SERVICE

The Copernicus Climate Change Service (C3S) develops authoritative, quality-assured climate information related to Europe and the rest of the world. It is implemented by the European Centre for Medium-Range Weather Forecasts (ECMWF) on behalf of the European Commission.

The service builds upon, and complements, capabilities existing at national levels and will become a major EU contribution to the generation and provision of climate services by partners and stakeholders. It is built around the Climate Data Store (CDS). The CDS provides easy access to a wide range of climate datasets via a searchable catalogue. An online toolbox is available that allows users to build workflows and applications suited to their needs.

Web: https://climate.copernicus.eu/

EU-MACS

EU-MACS focused on obstacles, drivers and opportunities affecting the uptake of climate services, as well as their development and supply. In particular, it explored challenges facing the finance, tourism and urban planning sectors. EU-MACS found that the absence of clear incentives – such as obligations for adequate adaptation plans – slows down the uptake of climate services.

Coordinator:
Ilmatieteen Laitos, Finland

Total cost:
EUR 1 499 621

EC contribution:
EUR 1 499 621

Start/end:
November 2016 to October 2018

Other countries:
Germany, Italy, United Kingdom, Netherlands, Austria, Belgium

Web: http://eu-macs.eu

MARCO

MARCO combined up-to-date market research and direct engagement with relevant players with the aim of improving the identity and visibility of the climate services sector. It found that key demands from users include transparency about methods and uncertainty, the provision of a range of future scenarios, translation of climate-related risks into financial terms and the need for quality assurance.

Coordinator:
CLIMATE KIC, France

Total cost:
EUR 1 530 053

EC contribution:
EUR 1 520 303

Start/end:
November 2016 to October 2018

Other countries:
United Kingdom, Denmark, Finland, Germany, Austria

Web: http://marco-h2020.eu/

VISCA

With the aim of making the southern European wine industry resilient to climate change, VISCA is developing a tool to support wine producers in the application of adaptation strategies so as to achieve optimum results. The project is also focused on minimising costs and risks linked to climate change and involves sites in Spain, Italy and Portugal.

Coordinator:
Meteosim SL, Spain

Total cost:
EUR 3 197 958

EC contribution:
EUR 2 793 145

Start/end:
May 2017 to April 2020

Other countries:
Italy, Portugal, France, United Kingdom

Web: http://visca.eu/

H2020_INSURANCE

H2020_INSURANCE aims to offer climate services to the insurance industry, operationalising a framework that provides a standardised risk assessment process. It will make the results available to other economic sectors, supplying environmental and risk data along with tools and services.

Coordinator:
Potsdam-Institut für Klimafolgenforschung, Germany

Total cost:
EUR 5 438 922

EC contribution:
EUR 4 802 522

Start/end:
May 2017 to April 2020

Other countries:
United Kingdom, France, Netherlands, Hungary, Denmark, Spain, Austria, Serbia, Kenya, China

Web: https://h2020insurance.oasishub.co/

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OPEN DATA FROM THE EU

The EU Open Data Portal (**http://data.europa.eu/euodp/en**) provides access to datasets from the EU. Data can be downloaded and reused for free, both for commercial and non-commercial purposes.

Climate change is the defining challenge of our time. Mitigating its impacts and adapting to changes already taking place or impossible to avoid will require fundamental changes to societies and behaviours all over the world – as well as scientific breakthroughs, both technological and social. The EU intends to remain at the forefront of the fight against climate change and the necessary transition to low-carbon, sustainable and climate-resilient societies. With this objective, in 2018 the European Commission published an evaluation of the EU strategy on adaptation to climate change and also its strategic vision for a new EU long-term strategy for reducing greenhouse gas emissions, setting out clear priorities to achieve a net-zero carbon economy in 2050. EU-funded research, science and innovation have underpinned both reports, and will keep playing a crucial role in our efforts to tackle climate change and here the EU will continue to lead. We have put climate at the heart of Horizon Europe – the EU's next research and innovation programme. If we want to achieve a net-zero carbon economy by 2050, more and better focused R&I is a necessary condition to reach this target and to maintain our standard of living.

Research and Innovation policy

Publications Office