



12th EIONET workshop on climate change impacts, vulnerability and adaptation

6-7 June 2018, EEA, Copenhagen

Final minutes

This report provides an overview of the EEA 12th *EIONET Workshop on Climate Change Impacts Vulnerability and Adaptation* (CCIVA) which took place in Copenhagen at EEA premises on 6-7 June 2018.

All the documents related to this workshop (agenda, background documents, presentations, results of breakout groups and this report) are available at the following EIONET Forum URL: <https://forum.eionet.europa.eu/nrc-climate-change-adaptation/library/workshops-meetings/2018-eionet-workshop-climate-change-impacts-vulnerability-and-adaptation-6-7/>.

Objectives of the workshop

- Present an update on and discuss on-going and planned work by EEA, European Commission, international organisations and countries in the field of work of CCIVA
- Discuss in groups some main EEA topics, products and services for 2018/2019
- Exchange information between countries.

Participants

The workshop was, besides EEA staff, attended by 41 participants from: 22 EU Member States and 2 non EU EEA member countries (national reference centres on climate change impacts, vulnerability and adaptation; NRCs CC IVA), European Commission (DG CLIMA and DG JRC), the EIB, the ETC/CCA., and three international organisations.

Summary

EEA, European Commission (DG CLIMA and DG JRC) and EIB presented their key recently achieved, ongoing and planned activities relevant to CC IVA in Europe. Some main EEA activities were discussed more in depth in groups, namely: Climate-ADAPT, Monitoring and evaluation of adaptation strategies, urban and social aspects of adaptation, adaptation in European transnational regions, adaptation in the agriculture sector and adaptation of the energy system, informed by background documents, presentations and guiding questions.

A plenary session followed by a discussion was devoted to the development of the EEA State and Outlook of the Environment Report (SOER) 2020 and the and the Copernicus services on climate change and land.

A plenary facilitated discussion allowed countries exchanging information on their CC IVA relevant on-going and planned work, also informed by country/organisation presentations from Poland, Turkey, Switzerland, Ireland and the OPCC.

Key follow-up actions

EEA activities in 2018:

- Eionet consultation on the following reports:
 - Social inequalities and climate change impacts, air quality, noise (July 2018) (The related ETC/CCA Technical Paper "Social vulnerability to climate change in European cities – state of play in policy and practice" can be consulted at https://cca.eionet.europa.eu/reports/TP_1-2018)
 - Adaptation in the agriculture sector (end of 2018)
 - Adaptation of the energy system (end of 2018)
- Include comments collected during Eionet workshop to update EEA work Programme 2019-2021 and draft work programme 2020-2022.



EEA activities planned in 2019:

- Keep the NRCs CCIVA updated about the work on MRE of national adaptation policies.

EIONET

- NRCs CC IVA are advised to check if the contact names and details in the EIONET forum for their country are correct and if not to ask their NFP to make the necessary changes (see: http://www.eionet.europa.eu/ldap-roles/?role_id=eionet-nrc-climatechangeimpacts).
- Contributions to Climate-ADAPT and items for the Climate-ADAPT newsletter are welcomed (climate-adapt@eea.europa.eu), as well as a list of foreseen relevant events where Climate-ADAPT can be presented.
- Workshop participants are invited to answer the web-based consultation on the SEA Directive (until 23/07/2018): https://ec.europa.eu/info/consultations/public-consultation-evaluation-strategic-environmental-assessment-directive_en.
- Participate and encourage cities and other stakeholders to take part in the consultation of Urban Agenda Climate Adaptation Partnership Action Plan (June -August 2018).
- Workshop participants are asked to express their interest in the review on the draft Technical Paper on Adaptation in transnational regions (no full Eionet review).
- Case study examples are welcomed on adaptation of the agriculture sector and of the energy system.

An overview of presentations, discussions and resulting key actions is provided below.

Session 1: Framing overviews

European Commission (DG CLIMA): [EU Strategy on Adaptation to Climate Change - evaluation outcomes and latest state of play](#) (Elena Višnar Malinovská)

An overview of the state of play of the different actions from EU Adaptation Strategy was presented as well as the findings of the evaluation of the EU Adaptation Strategy for the criteria relevance, effectiveness, efficiency, coherence and EU added value.

The presentation also gives an overview of the latest state of play on the draft Energy Union Governance Regulation, the Multiannual Financial Framework (MFF), the EU Long-Term Climate Strategy and sustainable finance.

The discussion after the presentation included

- the need for simple reporting of actions at sub-national level and in particular their implementation and evaluation. Guidance for local and regional authorities should come from the country level.
- Climate proofing is transposed by different methodologies in countries and sharing knowledge on experiences is welcomed, including with EIB/JASPERS.
- Numbers of granted adaptation related research projects are available but their impact remains difficult to measure.

European Commission (DG JRC): [DRMKC and PESETA3](#) (Paulo Barbosa)

The Disaster Risk Management Knowledge Centre (DRMKC), as networking approach to the science policy interface in disaster risk management aims to develop collective knowledge to know better and lose less. This includes an innovative DRMKC support service, including the Risk Data Hub with data and visualisation tools.

PESTA III, the Projection of Economic impacts of climate change in sectors of the EU based on bottom-up analysis, results and next steps were presented, explaining the modelling results of physical impacts and the economic analysis for the different sectors. An outlook to the ongoing PESETA IV (results expected in March 2019) was given, focussing on additional climate runs and the further integration of models.

European Investment Bank: [EIB's Climate Risk Management System](#) (Rasmus Lauridsen)



This presentation shortly introduced EIB's Climate Strategy and Climate Action lending. It gave an overview of the Climate Risk Management (CRM) System, and how this leads to better projects (resilience) and reduced financial and reputational risk. A three-step approach defines what counts as adaptation climate actions: the context of the vulnerability (what), the statement of intent (why) and the link between climate vulnerability and the project (how). Illustrations were given on how the CRM is used in the EIB's project cycle.

The discussion after the presentation included

- The CRM System approach is applied on all projects of the EIB and not only Cohesion Policy projects.
- Attribution of the "adaptation part" in projects is challenging, with different shares and approaches across countries. OECD DAC Rio Markers can be used for an initial or indicative scoring system.
- Most of the tools used in the CRM System are internal for EIB. AWARE is commercially available and EIB shares the reports the system generates with project owners.

European Environment Agency: [EEA intro and activities CC IVA 2017-2018](#) (André Jol)

André Jol introduced the recent products and members of the EEA group working on climate change impacts, vulnerability and adaptation and the ETC/CCA consortium. The presentation contains an overview of planned work, Eionet consultations and foreseen publication deadlines.

The timeline for the adoption of the EEA programming document 2019-2021 and the work programme 2019 was presented. The output of this Eionet workshop will be taken into account when finalising the work programme 2019.

Session 2: Break-out Groups

The workshop continued with two time slots for break-out groups, both having three parallel sessions. Participants chose one session each time (see workshop agenda at the end of this report for details). They were followed by a reporting in plenary. All the break-out groups were structured with introductory presentations by EEA followed by round table discussions based on the guiding questions and background documents provided before the workshop.

Break-out session - presentations	Reporting to plenary	Background document
1. Climate-ADAPT: new developments based on evaluation results	Climate-ADAPT	Climate-ADAPT
2. Monitoring, reporting and evaluating Climate Change Adaptation Guest presentation by Markus Leitner (PLACARD): Adaptation and Disaster Risk Management – the way forward in support of M&E	MRE	Monitoring and evaluation of adaptation strategies and plans
3. Urban and social aspects of adaptation	Urban and social aspects	Urban and social aspects of adaptation
4. Adaptation policies in transnational regions in Europe	Transnational regions	Adaptation in transnational regions in Europe Annotated outline
5. Climate change and the agriculture sector in Europe	Agriculture sector	Climate change and agriculture in Europe
6. Adaptation challenges and opportunities for the European energy system: Facilitating a climate-resilient transition to a low-carbon energy system	Energy system	Climate change adaptation in the energy system



A summary of the discussed items during the breakout sessions is found in the presentations that were used to report back to the plenary.

Climate change adaptation in the energy system

As the reporting back to the plenary for this break-out sessions was based on flipcharts, the following bullet points complement the information available in the table above.

- Building climate resilient energy systems needs to consider both mitigation and adaptation;
- Many institutions are involved at many levels – international, European, national, private/public providers – and need to be involved in this dialogue;
- Countries in general welcomed the topic as not much is done in this field so far;
- Where assessments are done, a completely different energy system was envisaged for the future (making it more difficult to assess long term adaptation needs);
- Vulnerability and risk assessments of the energy system need to consider cascading effects and dependencies between regions and between sectors;
- Societal costs of not having a reliable energy system should be compared to the costs of the transition towards it;
- Where energy plans are developed, it is good to bring adaptation and resilience up the agenda, which is dominated so far by a low carbon agenda;
- A shift of investments away from hydropower to other renewable sources can become a necessity in some countries;
- The Energy Union should bring the work on climate change and energy, including adaptation, closer to each other.
- In some countries, energy companies have started to report climate risks;
- Elements to consider for the report: off-shore wind (related to storm surges and wave height), transboundary networks. What do impacts of extreme events mean for the decarbonisation of the energy system?
- Coverage suggested to include as well gas, bioenergy, networks and storage facilities, carbon capture and storage (despite uncertainty about its future application);

Session 3: SOER 2020 and CCIV assessments workshop

[State and Outlook for Europe's Environment Report 2020 \(aka. SOER 2020\)](#) (Tobias Lung, EEA)

The mandate and history of SOER were followed by the general structure and timeline for SOER2020. The parts for the integrated assessment are: setting the scene, environmental + climate trends, sustainability prospects and conclusions. Part 2 (environmental + climate trends) will include country information as no separate country assessments will be made. At least one quantitative country comparison per thematic assessment included. General criteria to choose these comparisons are defined, and Eionet will be involved.

[SOER2020 thematic chapter 'Climate change'](#) (Hans-Martin Füssel, EEA)

A combined chapter on climate change mitigation and adaptation in Part 2 of the SOER2020 will include the global and European policy context, trends and projections of greenhouse gas emissions, past and projected changes in climate, impacts on the environment, society and people, and adaptation efforts in Europe.

The discussion after the SOER presentations included

- Adaptation efforts on national were foreseen, adaptation efforts of transnational regions will be mentioned as well;
- Will a common chapter on mitigation and adaptation cross-linkages show how successful mitigation can reduce the need for adaptation in the long term? This will be clearer in the sector chapters in part 3 of the SOER.



- The selection of “the quantitative indicator” for adaptation is not final yet. The authors are very well aware of the fact that a set of indicators is needed to describe the changes in resilience, and this will be part of the narrative.
- For the impacts outside Europe, a reference will be made to the work done in the [CCIV in Europe in 2016 report](#).
- On the available funds, EEA had published a [report on urban adaptation funding](#) in 2017 that can be mentioned or referenced. On the economic losses, [CLIM039](#) does not include a policy evaluation aspect, some descriptive information on the Solidarity Fund can be found in the [CCA-DRR report](#).

Feedback from the expert meeting on national CCIV assessments (Hans-Martin Füssel, EEA)

As the majority of workshop participants participated in the expert meeting on national CCIV Assessments on 5-6 June, no presentation on the feedback was given. Having a meeting after the report is published aimed at strengthening mutual learning where the report itself could be used as a basis for discussion. The final minutes of the expert meeting are available at <https://forum.eionet.europa.eu/nrc-climate-change-adaptation/library/workshops-meetings/2018-expert-meeting-national-climate-change-vulnerability-and-risk-assessments/meeting-documents/draft-meeting-report>.

Session 4: Copernicus

[Introduction to the Copernicus Climate Change Service & the Sectoral Information Systems \(Samuel Almond, ECMWF\)](#)

After a general introduction on Copernicus and the Copernicus Climate Change Services (C3S), the focus was on the Climate Data Store (CDS) with observations, climate reanalyses, climate projections and seasonal forecasts. Besides data, it contains a toolbox that can be used by the sectoral information systems (SIS) as well.

Note: at the meeting was mentioned that the CDS will go live soon. It is now available at <https://cds.climate.copernicus.eu/#!/home>

The discussion after the C3S presentation included

- There are not concrete plans to work on pests and diseases within the agricultural SIS. The aim is not to do everything within C3S but to provide a framework where others can make use of the data and tools to build relevant applications.
- Downscaling techniques used will be described in a guidance document and the tools are available in the toolbox. Applications can make use of the downscaled data available in the data catalogue as where, when available.

[Copernicus land monitoring service – overview and CC relevant products \(Tobias Langanke, EEA\)](#)

The Copernicus Land Monitoring Service (CLMS) has a global, pan-European and local focus. For Europe, CLMS works on Land Cover & Land Use Mapping, thematic hotspot mapping, reference data (EU DEM and EU HYDRO) and a ground motion service. The actual and planned portfolio was presented and some examples like Corine Land Cover (CLC), Urban Atlas and the imperviousness layer were demonstrated. Two upcoming products potentially relevant for climate change are the snow and ice cover product and the high resolution phenology.

CLMS needs to balance the spatial resolution with the update frequency, keeping in mind that several products have a long and extended processing time. CLC and the high resolution layers (HRL) are impossible to create on with a frequency of under a year with the actual spatial resolution and actually have an update frequency of 3-6 years.

The discussion after the CLMS presentation included



- CLC+ will be land use mapping with units as detailed as 1 ha and therefore becomes more relevant for LULUCF.
- Soil moisture is in some but not all countries derived in more details from Lidar data. The CLMS products always try to cover all EEA 39 member and cooperating countries. On soil erosion and soil wetness, the use of Sentinel-1 is limited and some leading knowledge centres are already developing products in this domain.

Session 5: Facilitated discussion between countries

National Adaptation Strategy - 44MPA – Urban Adaptation Plans (Marcin Grądzki, Poland)

The presentation consists of two parts: the National Adaptation Strategy (NAS) and the development for urban adaptation plans. The origin of the NAS, in the KLIMADA project, and the relation to Poland's development management system were contextualized before explaining the sectors covered and the way mainstreaming of adaptation is happening.

The urban adaptation plans for the 44 largest cities in Poland (44MPA) will determine vulnerability of these cities, plan adaptation actions at and raise awareness for adaptation to climate change at local level. This is based on a common methodology for all cities, tailored for the local needs and in constant cooperation between the consultants and the local authorities. Examples on how the vulnerability assessment looks in practice and an overview of lessons learned were given.

The discussion after the presentation included

- So far, all information (methodology, guidelines) is only available in Polish.

Climate change adaptation in Turkey (Diren Ertekin, Turkey)

The presentation gives an overview of the national policy documents relevant for adaptation since 2007, including the national adaptation strategy and plan (NASAP,2011). There is a need to revise the NASAP and stimulate climate action at urban level. To enhance adaptation action, an adaptation toolbox and urban planning solution catalogue are developed, next to an assessment of the network involved. A targeted grant programme will be there to have nature based and innovative solutions happening next to a holistic planning approach, impact and vulnerability assessment and monitoring of adaptation actions and resilience programme.

Adaptation to Climate Change in Switzerland - Update (Carla Gross, Switzerland)

The presentation looked back at some recently finished projects, like the Pilot Programme Phase 1 (2013-2017) and the Assessment of Climate-related Risks and Opportunities. Reports are available in French, German and Italian.

In the outlook phase, there will be a re-evaluation of the sectoral fields of action of the adaptation strategy and if necessary a second action plan by the end of 2019. A methodology is developed. By the end of this year, new climate scenarios will become available as well. The Pilot Program will have a Phase 2 (2018-2022).

The discussion after the presentation included

- The type of projects financed in Phase 2 are implementation projects and a detailed description of the type of projects that are eligible was part of the call.

A national and regional approach to CCA in Ireland (John O'Neill, Ireland)

The presentation gives an overview of national policy and legislation, including the key actions from the National Adaptation Framework (published January 2018). Besides sectoral guidelines, regional climate action offices are established working in a region and on climate risk that are most prominent in that region.



The regional approach foresees effective links across sectors and to the national level, while policy coherence is a key overall challenge. One of the projects ongoing is on critical infrastructure. A national platform for adaptation is in place.

The discussion after the presentation included

- The importance of the policy coherence is clear to everybody, but the needed exchange of information takes time to repeat the dialogue to create a common understanding. The support for local authorities and partly to the private sector (training, portal) will in a next step become support to define and select actions at the level of local communities in Ireland.

Pyrenees Climate Change Observatory (Juan Terrádez, OPCC)

After a short introduction of the OPCC, the presentation focusses on the current OPCC2 project (Interreg-POCTEFA). There is a cross-border CCIVA assessment for the Pyrenees (launch September 2018) and the Adaptation Platform and Geoportal are updated and further developed.

Future directions include regional adaptation and cross-border cooperation within the Pyrenees and an update of the OPCC Strategy. New project proposals for the CC adaptation in the Pyrenees and for OPCC are prepared. In tools and methodologies, OPCC works together with other transnational regions, for example with the Alps on Phénoclim (for the OPCC Florapyr project).

Session 6: Wrap up and closing session (André Jol)

The wrap-up session gave a short summary of the main outcomes of the different sessions of the Eionet meeting and gave a time-line for follow-up actions.

The chair thanked all presenters and participants for their active involvement and EEa is looking forward to receive contributions/comments for the different work items in the Eionet reviews, by providing case studies etc.

All participants are invited to fill in the meeting evaluation questionnaire at <https://forum.eionet.europa.eu/nrc-climate-change-adaptation/library/workshops-meetings/2018-eionet-workshop-climate-change-impacts-vulnerability-and-adaptation-6-7/eionet-survey>



**12th EIONET workshop on Climate Change Impacts, Vulnerability and Adaptation,
6-7 June 2018
EEA, Conference room
(Kongens Nytorv 6, 1050 Copenhagen, Denmark)**

Final Agenda

The key objective of the workshop is to provide an update and discuss on-going and planned work by EEA, European Commission, international organisations and member countries in the field of work of 'Climate Change Impacts, Vulnerability and Adaptation'.

6 June 2018

12.30 – 13.30: Registration

13.30 – 14.00: Welcome and objectives of the meeting

- Welcome and practical messages
- Interactive polls and questions during the workshop (<https://forum.eionet.europa.eu/nrc-climate-change-adaptation/library/workshops-meetings/2018-eionet-workshop-climate-change-impacts-vulnerability-and-adaptation-6-7/meeting-documents/use-sli.do>)

14.00 – 15.30: Framing overviews

- European Commission DG CLIMA, Elena Višnar Malinovská
- European Commission DG JRC, Paulo Barbosa
- European Investment Bank, Rasmus Lauridsen
- EEA and ETC/CCA activities, André Jol

15.30 – 16.00 Coffee break

16.00 – 18.00: Break-out group discussions (part 1)

- Participants will be asked to join one of the following break-out groups:
 1. Climate-ADAPT: new developments based on evaluation results (chair: José Ramón Picatoste)
background document: https://forum.eionet.europa.eu/nrc-climate-change-adaptation/library/workshops-meetings/2018-eionet-workshop-climate-change-impacts-vulnerability-and-adaptation-6-7/meeting-documents/background-documents/1_background-document_climate-adapt
 2. Monitoring and evaluation of adaptation strategies and plans (chair: Wouter Vanneuville)
including a presentation "Adaptation and Disaster Risk Management – the way forward in support of M&E"
(by Markus Leitner, PLACARD project)
background document: https://forum.eionet.europa.eu/nrc-climate-change-adaptation/library/workshops-meetings/2018-eionet-workshop-climate-change-impacts-vulnerability-and-adaptation-6-7/meeting-documents/background-documents/2_background-document_monitoring-and-evaluation-adaptation-strategies-and-plans
 3. Urban and social aspects of adaptation (chair: Aleksandra Kazmierczak)
background document: https://forum.eionet.europa.eu/nrc-climate-change-adaptation/library/workshops-meetings/2018-eionet-workshop-climate-change-impacts-vulnerability-and-adaptation-6-7/meeting-documents/background-documents/3_background-document_urban-and-social-aspects-adaptation

19:30 Dinner (self-paid)



7 June 2018

09.00 – 9.30: Reporting in plenary from break-out groups day 1

09.30 – 10.45: Break-out group discussions (part 2)

- Participants will be asked to join one of the following break-out groups:
 - 4. Adaptation policies in transnational regions in Europe (chair: Sergio Castellari)
background document: https://forum.eionet.europa.eu/nrc-climate-change-adaptation/library/workshops-meetings/2018-eionet-workshop-climate-change-impacts-vulnerability-and-adaptation-6-7/meeting-documents/background-documents/4a_background-document_adaptation-transnational-regions-europe
 - 5. Climate change adaptation in the agriculture sector (chair: Blaž Kurnik)
background document: https://forum.eionet.europa.eu/nrc-climate-change-adaptation/library/workshops-meetings/2018-eionet-workshop-climate-change-impacts-vulnerability-and-adaptation-6-7/meeting-documents/background-documents/5_background-document_climate-change-and-agriculture-europe
 - 6. Climate change adaptation in the energy sector (chair: Hans-Martin Füssel)
background document: https://forum.eionet.europa.eu/nrc-climate-change-adaptation/library/workshops-meetings/2018-eionet-workshop-climate-change-impacts-vulnerability-and-adaptation-6-7/meeting-documents/background-documents/6_background-document_climate-change-adaptation-energy-system

10.45 – 11.15 Coffee break

11.15 – 11.45: Reporting in plenary from break-out groups day 2

11.45 – 12.30: Facilitated discussion

- State and Outlook of the Environment in Europe: SOER2020 report (Tobias Lung and Hans-Martin Füssel)
- Feedback from the expert workshop on national CCIV assessments (Hans-Martin Füssel)

12.30 – 13.00: Copernicus

- Copernicus Climate Change Service (C3S), Samuel Almond (ECMWF)
- Copernicus Land Service, Tobias Langanke (EEA)

13.00 – 14.00 Lunch and coffee

14.00 – 15.00: Facilitated discussion between countries and organisations (chair: André Jol)

- Poland, Marcin Grądzki
- Turkey, Diren Ertekin
- Switzerland, Carla Gross
- Ireland, John O'Neill
- OPCC, Juan Terrádez Mas

15.00 – 16.00: Wrap up and closing session

- Review of discussions
- EEA2019 work programme
- Wrap-up, next steps and closing
- Filling-in the EIONET workshop evaluation form



List of participants

12th EIONET Workshop on Climate Change Impacts, Vulnerability and Adaptation, 6-7 June 2018	Country/Organisation
Markus Leitner	Austria
Griet Verstraeten	Belgium
Veronika Dacheva	Bulgaria
Getlyn Denks	Estonia
Jaana Sorvali	Finland
Jerome Duvernoy	France
Inke Schauser	Germany
Padia Lariu	Germany (Bavaria)
Ioanna Tsalakanidou	Greece
Emese Nyitray	Hungary
Philip O'Brien	Ireland
John O'Neill	Ireland
Francesca Giordano	Italy
Claudia Sebbio	Italy
Jurga Valainytė	Lithuania
Bruno Alves	Luxembourg
Clifford Borg	Malta
Jelle van Minnen	Netherlands
Marcin Grądzki	Poland
Jose Paulino	Portugal
Pavel Stastny	Slovakia
Angelika Tamasova	Slovakia
Tanja Cegnar	Slovenia
Barbara Simonič	Slovenia
Paco Heras Hernández	Spain
Lotta Andersson	Sweden
Carla Gross	Switzerland
Diren Ertekin	Turkey
Sahra Caffarate	United Kingdom
Eleonora Musco	Secretariat of the Carpathian Convention
Marianna Elmi	Permanent Secretariat of the Alpine Convention
Juan Terrádez Mas	Observatorio Pirenaico del Cambio Climatico (OPCC)
Jorge Paz	TECNALIA
Samuel Almond	ECMWF
Valentina Giannini	ETC/CCA
Silvia Medri	ETC/CCA
Clare Downing	ETC/CCA
Rasmus Lauridsen	European Investment Bank
Paulo Barbosa	European Commission (DG JRC)
Jelena Milos	European Commission (DG CLIMA)
Elena Visnar Malinovska	European Commission (DG CLIMA)
André Jol	EEA
Hans-Martin Füssel	EEA
Blaz Kurnik	EEA
Aleksandra Kazmierczak	EEA
Sergio Castellari	EEA
José Ramón Picatoste Ruggeroni	EEA
Wouter Vanneuville	EEA
Corine Guma	EEA