



## Newsletter Dec 2018

### Dear Readers

Welcome to our most recent ECRA newsletter!

ECRA - The European Climate Research Alliance - is a network of climate scientists. We've been active since 2011, and our objective is to bring together, expand and optimise expertise in climate research. As Chairs of ECRA, we would like to thank you for reading this newsletter.

In this issue we're announcing our upcoming General Assembly, where the scientific progress on our four Collaborative Programmes will be presented. Alongside this we also be discussing current high-level topics of ECRA research, as well as news from other institutions and organisations.

We would like to invite all of you to our General Assembly in Brussels (27-28 February). To help us prepare we ask you to answer our short questionnaire, to let us know of any burning issues or topics you would like to see included in our General Assembly programme.

*Kind regards, and see you soon!*

Prof. Peter Braesicke  
Chair of ECRA

Prof. Len Sheffrey  
Co-Chair of ECRA



### Members, partners, associates—the ECRA network

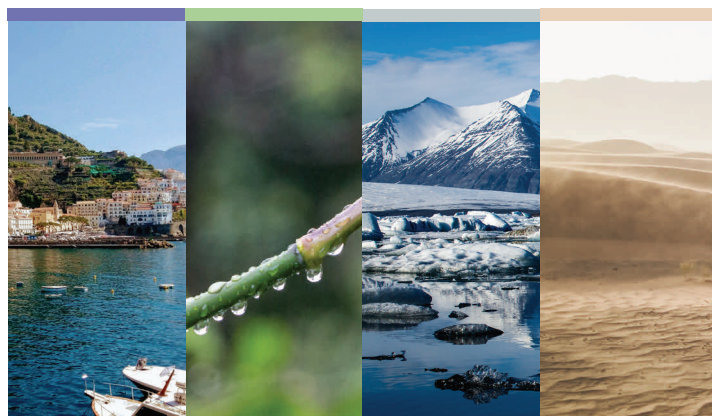


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The European Climate Research Alliance (ECRA) is an association of [23 leading European research institutions](#). ECRA's objective is to bring together, expand and optimise expertise in climate research through a bottom-up approach. The initiative is a platform for joint research planning by sharing existing national research capacities and infrastructures. ECRA acts as a unified voice for climate research in Europe.



### Registration open!

For the third time, the European Climate Research Alliance is hosting the ECRA General Assembly in Brussels on **Wednesday 27 and Thursday 28 February 2019** at the [Square Brussels](#) venue.

This event is open to all and will provide a platform for exciting discussions on our present and future climate. On the first day's afternoon and evening, scientists, decision-makers and experts from other fields will join for presentations and panel discussions, and we would welcome your participation. The second day will focus on science and ECRA's Collaborative Programmes.

The agenda with more details is available on the

**event website** [bit.ly/ECRA\\_GA19](http://bit.ly/ECRA_GA19)

The ECRA General Assembly 2019 will provide a forum to debate climate research priorities, vulnerable regions, impacts and potential adaptation strategies, along with advancing integrative and collaborative research. The theme will be *Climate Change and Actionable Information*.

Registration for the event is open via the event website [or directly on ECRA\\_GA19.eventbrite.com](#).

For any questions, contact the ECRA Secretariat at [Winfried.Hoke@ecra-climate.eu](mailto:Winfried.Hoke@ecra-climate.eu). The General Assembly 2019 follows up on GAs in [2017](#) and [2015](#).

To tell us what you would like to discuss during the General Assembly, or if you have any other comments:

**Help us prepare the Assembly: a two-minute survey at [bit.ly/preparing\\_ECRA\\_GA19](http://bit.ly/preparing_ECRA_GA19)**

We are looking forward to see you!

### What is ECRA?

The European Climate Research Alliance (ECRA) aims to **strengthen, expand and optimise EU climate research capabilities** through the sharing of world-class national facilities in Europe and the collaborative realisation of pan-EU programmes. National and European Climate change research programmes have to be streamlined and coordinated, in order to ensure optimum use of human resources, modelling capacities, field activities, and infrastructures, maximising therefore the impact of scientific results and reinforcing the European Research Area for climate change science.

The high-level objectives of the Alliance are to:

- Accelerate the development of climate change research by conceiving and implementing Collaborative Programmes of research, combining capacities of research institutions and maximising complementarities and synergies, including collaboration with international partners.
- Work towards a long term, durable integration of excellent but dispersed research capacities across Europe, optimising the use of resources, building additional research capacity and developing a comprehensive range of pan-European research infrastructures.
- Strengthen Europe's capacity to initiate and execute large fundamental and comprehensive research and development programmes in climate science.
- Develop training, education and outreach activities, encouraging researcher mobility and providing a training environment for PhD students and other scientists in strategic climate sectors.
- Develop links and sustained partnerships with industry to strengthen the interplay between research outcomes and innovation and to foster the early take-up of promising results.
- Provide advice to policy and public in respect to climate change.



## CP High Impact Events



There is growing awareness that climate change cannot solely be considered as a 'mean state' modification. The impacts of climate change are closely tied to regional and local conditions. Changes in the characteristics, frequency, and severity of extreme weather events are amongst the most significant aspects of climate change. To understand and predict such events, which are typically responsible for the most disastrous climate impacts, is of paramount importance. Not all extremes lead to high impacts. However, high impact events are conditioned based on the exposure and vulnerability of particular regions or locations. Different types of extremes, e.g. droughts and extreme precipitation, might be associated with different regions.

This Collaborative Programme examines how high impact events work, how they can be simulated accurately in numerical models and how we might be able to project future changes reliably, highlighting the important regional differences regarding their impacts. As such, high resolution climate and impact modelling as well as downscaling with different methodologies are among the key issues. The CP further focuses on climate risk analysis, vulnerability and adaptation.

We work based on a list of science topics. The science topics can be adjusted and allow flexible participation of ECRA and non-ECRA partners. The general strategy starts from fundamental physical concepts, continues via process understanding and goes towards the best possible numerical simulations of the global and regional changes of extreme events, including composition-climate interactions, feedback and impacts.

Current key topics are:

- Understanding mechanisms: Assessment of past and future high impact events
- Projecting changes: High resolution climate and impact modelling
- Producing climate information at relevant scales: Downscaling with different methodologies
- Co-creating climate services with users: Climate risk analysis, vulnerability and adaptation

See the website [bit.ly/ECRA-CP-HIE](http://bit.ly/ECRA-CP-HIE) for more information, the whitepaper, brochure, and factsheet. The leads of this CP are Hilppa Gregow (Finnish Meteorological Institute) and Martin Drews (Danmarks Tekniske Universitet).

## CP Sea Level Change



The rate of global sea level rise accelerated throughout the previous century, with estimates ranging between 1–2 mm/yr for the whole century, and increasing to more than 3 mm/yr for the last couple of decades. Although significant regional differences due to tectonic settings

exist, sea level is rising along many coasts worldwide and will continue into the future.

Sea level rise poses a particularly ominous threat to human habitations and infrastructure in the coastal zone: 10% of the world's population (about 0.7 billion people)

live in low-lying coastal regions within 10 m elevation of present-day mean sea level. Sea level rise impacts have been identified as a critical variable for the establishment and maintenance of coastal communities, as a threat to biodiversity and as being responsible for the increasing magnitude and spatial extent of storm surge flood hazard. There are however still large uncertainties regarding the dimensions and timing of the changes to come.

Therefore, more research is needed on methods to assess the effects of climate change, to establish sea level confidence thresholds, to consistently assess future risk of extreme sea level events, and to create and implement adaptation strategies to face the most drastic sea level rise impacts, particularly those associated with low-probability but high-impact changes.

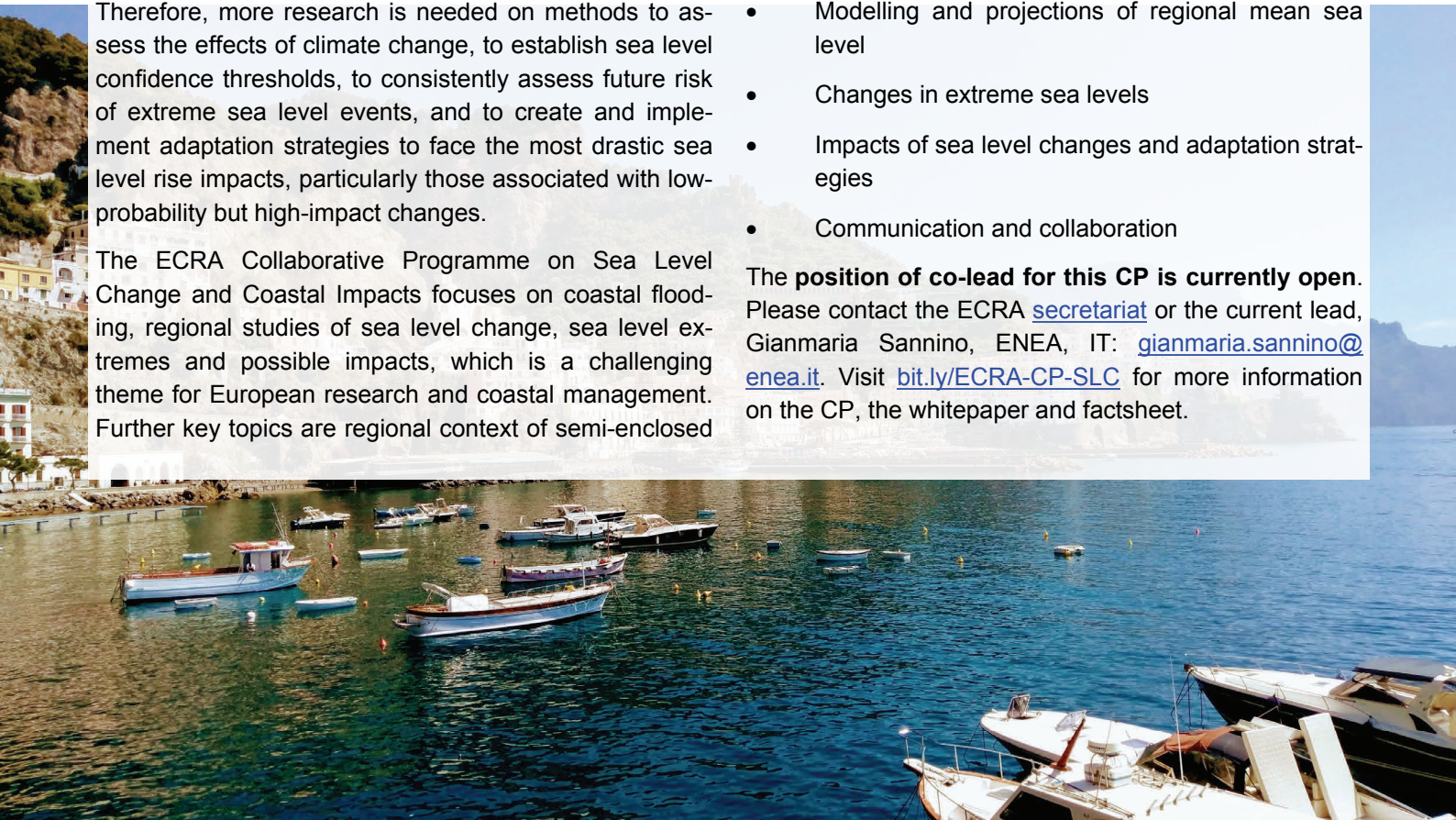
The ECRA Collaborative Programme on Sea Level Change and Coastal Impacts focuses on coastal flooding, regional studies of sea level change, sea level extremes and possible impacts, which is a challenging theme for European research and coastal management. Further key topics are regional context of semi-enclosed

basins (e.g. Mediterranean Sea and Baltic Sea), adaptation strategies in a regional context, communication and collaboration between natural, social and economic scientists, stakeholders, policy makers, and the public.

Current key topics include:

- Observations of mean sea level change and contributing processes
- Modelling and projections of regional mean sea level
- Changes in extreme sea levels
- Impacts of sea level changes and adaptation strategies
- Communication and collaboration

The **position of co-lead for this CP is currently open**. Please contact the ECRA [secretariat](#) or the current lead, Gianmaria Sannino, ENEA, IT: [gianmaria.sannino@enea.it](mailto:gianmaria.sannino@enea.it). Visit [bit.ly/ECRA-CP-SLC](http://bit.ly/ECRA-CP-SLC) for more information on the CP, the whitepaper and factsheet.



## CP Arctic ECRA



**The Arctic climate is changing** at a rate, which takes many people – including climate scientists – by surprise. The ongoing and anticipated changes provide vast economic opportunities; but at the same time they pose significant threats to the environment.

**ECRA aims to advance Arctic climate research** for the benefit of society by raising awareness of key scientific challenges, carrying out coordinated research activities using existing resources, and writing joint proposals to secure external funding for coordinated, cutting edge European polar research and education projects. Arctic

ECRA is a network of climate research institutions from different European countries and provides a breadth of expertise including theory, observations, modelling, operational forecasting and logistics.

- Why is Arctic sea ice disappearing so rapidly?
- What are the local and global impacts of Arctic climate change?
- How to advance environmental prediction capabilities for the Arctic and beyond?



Visit the CP website at [bit.ly/ECRA-CP-ARC](https://bit.ly/ECRA-CP-ARC) if you want to learn more and access the Strategy and Work Plan and the factsheet.

**Arctic ECRA is open to new participants. The CP is**

**also looking for one or two persons to take on the lead in the future.** For any questions, do not hesitate to contact the ECRA [secretariat](#) or the current lead, Lars H. Smedsrud, Bjerknes Centre for Climate Research, NO; [Lars.Smedsrud@uib.no](mailto:Lars.Smedsrud@uib.no).



## CP Hydrological Cycles



**The global hydrological cycle** includes many different components reacting in complex, dynamic and often non-linear ways to external forcings such as, but not limited to, climate change. While hydrological impacts of climate change – e.g. spatial and temporal alterations in water balance, streamflow and extreme events (floods, droughts) - typically occur at regional or local scales, they can trigger modifications that lead to larger-scale or even global changes in the water cycle.

This Collaborative Programme aims at improving the scientific understanding of hydrological processes under modified climatic boundary conditions and at studying possible impacts of changing hydrological cycle components (precipitation, runoff, snow, etc) on the environment and the society. Meeting emerging societal challenges, in fact, is another aspect this CP intends to address.

Current key topics of the CHC-CP include:

- **Global precipitation changes and runoff.** Precipitation changes at the global level display a complex pattern, without a clear-cut average trend
- **Interaction between climate and hydrological/land surface processes.** Modifications of the water cycle significantly affect land surface properties and ecosystem functioning and are at the same time driven by changes in vegetation and land surface changes. In order to better understand these complex interactions, this CP uses a hierarchy of models working at different spatial and temporal resolutions, compared to/validated against in-situ and EO data.
- **Climate hot spot regions: Mediterranean region and Global Mountains.** The Mediterranean

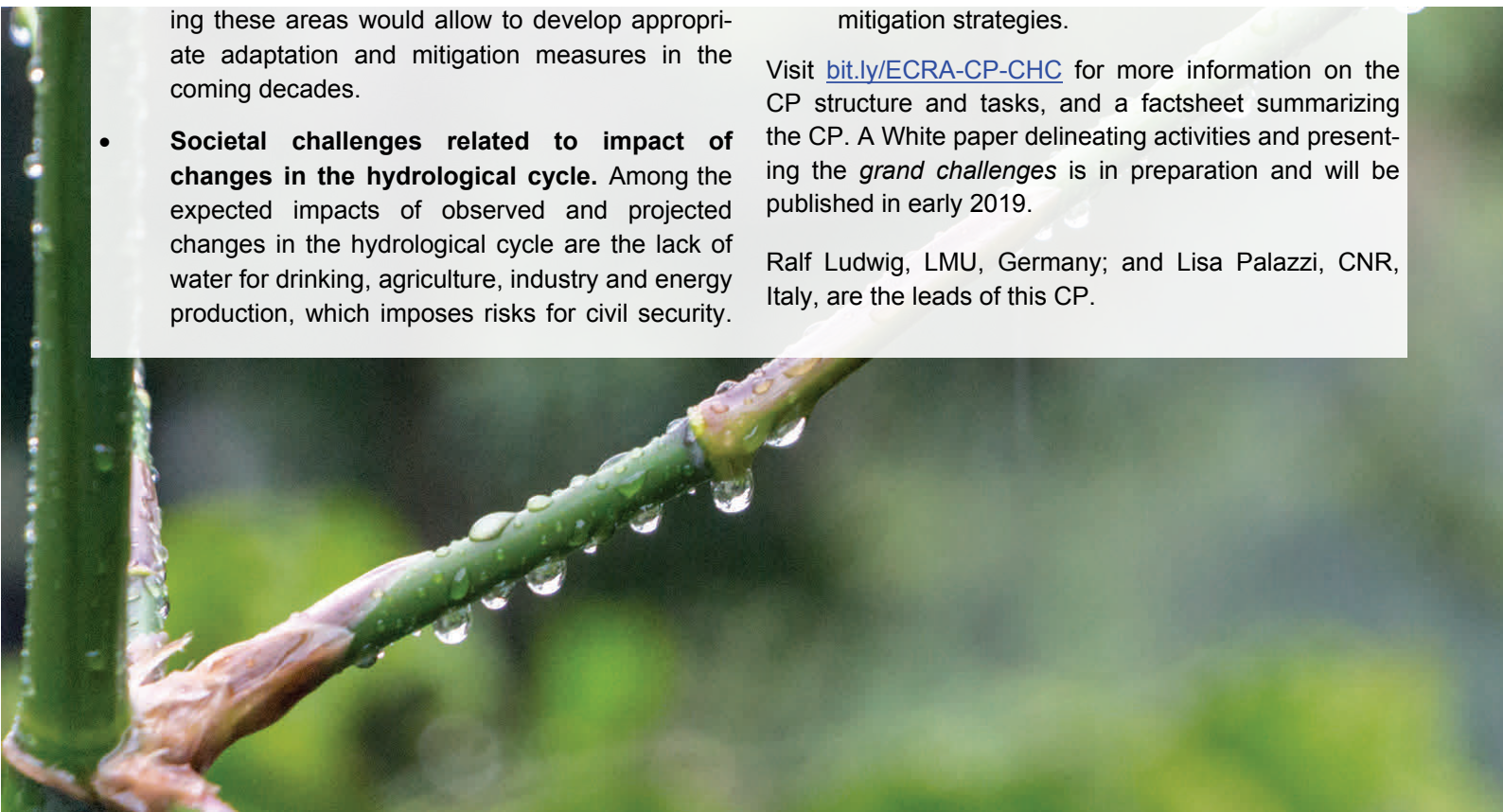
basin and mountains areas are among the regions which are referred to as “climate change hot-spots”. In these regions climate change signals are amplified, as are their possible effects. Studying these areas would allow to develop appropriate adaptation and mitigation measures in the coming decades.

- **Societal challenges related to impact of changes in the hydrological cycle.** Among the expected impacts of observed and projected changes in the hydrological cycle are the lack of water for drinking, agriculture, industry and energy production, which imposes risks for civil security.

Impact-oriented research aims at effectively responding to crucial societal challenges resulting from changes in different components the hydrological cycle and to support adaptation and risk mitigation strategies.

Visit [bit.ly/ECRA-CP-CHC](http://bit.ly/ECRA-CP-CHC) for more information on the CP structure and tasks, and a factsheet summarizing the CP. A White paper delineating activities and presenting the *grand challenges* is in preparation and will be published in early 2019.

Ralf Ludwig, LMU, Germany; and Lisa Palazzi, CNR, Italy, are the leads of this CP.



## News from Brussels

### Membership of ECRA

On 01 July 2018, CzechGlobe (Czech Republic) joined ECRA — welcome to the ECRA network!

As of 01 March 2018, Tina Swierczynski has been replaced by Winfried Hoke in the ECRA Secretariat. Many **thanks to Tina** for her excellent contributions to promote the ECRA network.

The location of the Secretariat in Brussels remains unchanged. Its Brussels location enables networking with several European institutions, projects and bodies such as the European Commission.

### Horizon Europe

Horizon 2020 is still active, but already the following ninth Financial Framework Programme with the planned name ‘Horizon Europe’ is currently under development by the European Commission, Council and Parliament. So far, ECRA has lobbied for a stronger representation

of Climate Research, e.g. by supplying suggestions for missions. ECRA is in close contact with its members to represent the interests of the European Climate Research community.

### JPI Climate

The European network of Climate Funders, JPI Climate, has the same age as ECRA. ECRA has observer status and follows JPI Climate’s activities.

The ECRA Secretariat is active in a **range of activities** in Brussels and represents the interests of Climate Research within the European Commission, the European Parliament and other events and meetings in Brussels and Europe.

For an overview of other events, please see below or visit our website <http://ecra-climate.eu/activities-events>.



# Marketplace

The ECRA CPs are open to new participants.

**Currently, ECRA is also looking for leads: one or two positions for the CP Arctic ECRA, and one position for the CP-SLC (Sea-Level Change and Coastal Impacts).** Contact the ECRA [Secretariat](#) for more information, or the current leads:

for the Arctic CP, Lars H. Smedsrud, Bjerknes Centre for Climate Research, NO, [Lars.Smedsrud@uib.no](mailto:Lars.Smedsrud@uib.no);

for the CP SLC: Gianmaria Sannino, ENEA, IT, [gianmaria.sannino@enea.it](mailto:gianmaria.sannino@enea.it).



Session ITS4.7/NH1.26/AS4.48/CL2.08/HS4.3.3/NP9.9

**High Impact Events and Climate Change** (co-organized)

Convener: Martin Drews | Co-conveners: Peter Braesicke, Hilppa Gregow, Kristine S. Madsen

[Abstract submission](#)

Session EOS3.1

**Effective research management – What does that mean?**

Convener: Sebastian Hettrich | Co-conveners: Luisa Cristini, Winfried Hoke, Laura Morillas, Sylvia Walter

[Abstract submission](#) / [Flyer and more information](#)

Session: OS2.5

**Advances in Understanding of the Multi-Disciplinary Dynamics of the Southern European Seas**

Convener: Gianmaria Sannino | Co-conveners: Arthur Capet, Alexander Mikaelyan, Katrin Schroeder, Emil Stanev

[More information](#), [Abstract submission](#)

Session SC1.38

**Make sense of the mess: How to keep your research project on track**

Convener: Luisa Cristini | Co-conveners: Daniela Henkel, Sebastian Hettrich, Winfried Hoke, Sylvia Walter

We have received a request looking for an **agricultural economist** or someone working on **environmental services**, ideally from FR, ES, GR or IT. Please contact the ECRA Secretariat for more information.

**MOSAIC Expedition** Applications are now accepted to participate in the **MOSAIC**



**School 2019.** The school is jointly organized by the project 'Multidisciplinary drifting Observatory for the Study of Arctic Climate' (MOSAIC) and the Association of Polar Early Career Scientists (APECS). The Year of Polar Prediction is one of the partners for the school (see also [the Polar Prediction Website](#)). [www.apecs.is/events/upcoming-event-highlights/mosaic-school-2019.html](http://www.apecs.is/events/upcoming-event-highlights/mosaic-school-2019.html) (Application deadline 22 January).

Organised by the Polar Prediction Project, the International Arctic Science Committee (IASC), and the Finnish Meteorological Institute: **Arctic Science Workshop**, 14-16 January, Helsinki. [www.polarprediction.net/meetings-calendar/science-workshops/yopp-arctic-science-workshop/](http://www.polarprediction.net/meetings-calendar/science-workshops/yopp-arctic-science-workshop/)

Check [here](#) for lectures and Climate courses, supplied by the German DKK (Consortia for Climate; Deutsches Klima-Konsortium). The videos and texts are available in English and in German.

A website for cities within the Covenant of Mayors framework to find possible ways to funding. "Access to financing is key for transforming ambitious Sustainable Energy and Climate Action Plans into projects. The funding page supports the Covenant of Mayors community with clear and practical information on funding and financing opportunities." [www.covenantofmayors.eu/support/funding.html](http://www.covenantofmayors.eu/support/funding.html)

Any other things to add? [Let us know](#) if you want to share information with the community.



## Upcoming events

- **[ECRA-CP-CHC]** AGU 2018 | Washington, DC, USA, 10-14 December 2018 | GC039: Large Ensemble Climate Model Simulations: Exploring Natural Variability, Climate Change Signal, Extremes and Compounds at various Spatio-Temporal Scales (Ralf Ludwig)
- **ECRA GENERAL ASSEMBLY ECRA\_GA19** | **Brussels, BE, 27-28 February 2019**
- 17th ECRA Executive Committee Meeting | Brussels, BE, 28 February 2019 (internal event)
- **[ECRA-CP-CHC]** ECRA Special Issue in the journal "Sustainability" on High Impact Events & Climate Change (guest editing & editorial: Martin Drews & Hilppa Gregow | May 2019)
- **[ECRA-CP-CHC]/[ECRA-Secretariat]** European Geophysical (EGU) Union General Assembly | Vienna, AT, 07-12 April 2019 | CP-HIE: Martin Drews, Hilppa Gregow, Peter Braesicke: ITS session on High Impact Events and Climate Change; Project-management-session (Winfried Hoke co-convening), see marketplace.

## For any questions...

European Climate  
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ECRA Secretariat

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## Membership?!

In case you are interested in becoming a member at the ECRA network, contact us for more information. Please also see [bit.ly/ECRA\\_membership](http://bit.ly/ECRA_membership).

### Who can become ECRA Member?

- European research institutions can become officially an ECRA Member (Partner, Participant, or Associate)
- Scientists working in climate related fields, who are once active in ECRA can become ECRA fellows. Collaboration in ECRA best works for scientists whose research institution is already officially involved in ECRA and ECRA member.

### Why become an ECRA Member?

*ECRA Members* collaborate in joint workshops, participate in joint actions (e.g. training, edu-

cation for young scientists, and outreach-activities), are presented at external conferences, workshop with ECRA umbrella, receive early information via newsletters (working programmes, upcoming calls), appear in the list of ECRA network will be presented on the ECRA website (Member portfolio) - in one word: synergies;

*ECRA scientists* participate in ECRA Collaborative Programmes, receive newsletter and mailing lists, with information on current calls, European project and network updates, cooperate in scientific publications and projects.