ECRA
European Climate Research Alliance

Newsletter April 2019

Dear Readers

Welcome to our first ECRA newsletter in 2019.

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.

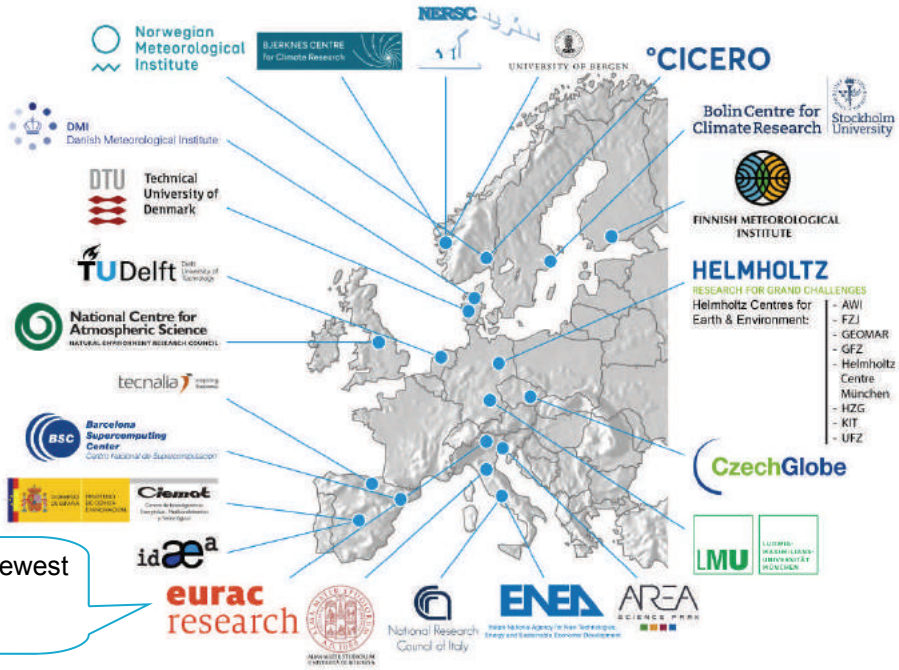
In this issue we are documenting our **General Assembly**, which took place on 27 and 28 February in Brussels, Belgium. The scientific progress on our four Collaborative Programmes was presented and debated. Alongside, we also discussed current high-level topics of ECRA research, as well as news from other institutions and organisations.

Furthermore, we would like to invite you to join our experts at the General Assembly of the European Geophysical Union (7-12 April), or in other meetings. See below for a list of our upcoming activities.

Kind regards, and see you soon!

Prof. Peter Braesicke
Chair of ECRA

Prof. Len Sheffrey
Co-Chair of ECRA



Welcome to our newest member: EURAC

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The European Climate Research Alliance (ECRA) is an association of 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.

European Climate Research Alliance

ECRA General Assembly 2019

27-28 February 2019

Climate Change and Actionable Information

(Theme of the conference)

Conference Documentation

The first day's afternoon and evening, scientists, decision-makers and experts from a variety of fields joined in Brussels for presentations and panel discussions.

The second day focused on science and ECRA's Collaborative Programmes:

- Sea-Level Change and Coastal Impacts,
- Arctic ECRA,
- Changes in the Hydrological Cycle,
- High-Impact Events and Climate Change; and
- the future of the ECRA and these focus areas.

Feedback to the event or to ECRA is still possible via an online survey bit.ly/ECRA_GA19_FB or via Winfried.Hoke@ecra-climate.eu.

The conference was well visited by

- more than 100 people
- from various levels: from student to Deputy Director-General
- from 18 countries

The agenda comprised one keynote presentation, one panel discussion, 16 presentations and many discussions.

Keynote presentation

Keynote presentation by

Patrick **Child**
Deputy Director-General
Directorate-General Research & Innovation (DG RTD),
European Commission

The European Commission highlighted the need for more research and innovation to achieve Europe's climate goals. The new Financial Framework Programme '*Horizon Europe*' is currently in preparation, following Horizon 2020. The current Commission proposal places climate change related research questions centrally in the agenda and will devote 35% of the total budget – so a third of around 100 billion Euro – to climate related actions.

Some relevant topics of the new framework programme include climate change and health, climate change and renewable energies, the improved use of Copernicus services and the role of European science in supporting the work of the Intergovernmental Panel on Climate Change (IPCC), as well as the addressing of societal challenges.

The Commission will be organising the Research and Innovation Days in September 2019, to disseminate and engage with stakeholders and researchers.

Panel Discussion

The panelists:

Yvon **Slingenberg**
European Commission, DG Climate Action

John **Christensen**
Director at UNEP DTU, Denmark

Peter **Braesicke**
Chair of ECRA;
Karlsruhe Institute of Technology, DE

Isabelle **La Jeunesse**
University of Tours
MIDI Network, France

Claudia **Traidl-Hoffmann**
Director Institute for Environmental Medicine, TUM;
HMGU, Germany

The panel of the five participants discussed the following topics:

- following the conference's title, 'Climate Change and Actionable Information', research needs to be translated into concrete solutions to tackle climate change
- research questions of ECRA and the scientific community overall need to be translated to be understandable relevant to stakeholders and the public
- collaboration on different levels needs to be strengthened: mechanisms to document the impacts of the research projects and a common definition of different time scales (short-term, medium-term, long-term, future), so that an aligned message can be passed to the users of this research.

Peter Braesicke
Chair of ECRA;
Karlsruhe Institute of Technology, Germany

Since January 2018, Peter Braesicke is the chair of ECRA from his position of Professor for Theoretical Atmospheric Physics at KIT

Yvon **Slingenberg**
European Commission,
DG Climate Action

Yvon Slingenberg is Director in DG Climate Action of the European Commission, responsible for Inter-national climate negotiations and mainstreaming of climate issues in EU policies.

Claudia **Traidl-Hoffmann**
Director Institute for Environmental Medicine, TUM; HMGU, Germany

Claudia Traidl-Hoffmann was invited to the General Assembly to introduce a new dimension in the debate: Health.
Health and environment, including allergies, are her speciality – and have many overlapping topics with ECRA. One possible area of collaboration could be to determine clear numbers how many additional costs within the health system can be attributed to Climate Change (changes in temperature, extreme events).

Isabelle **La Jeunesse**
University of Tours;
MIDI Network, France

Isabelle La Jeunesse is active in the area of water resources management in the context of Climate Change. She stressed the importance of a clear long-term vision for ECRA, which is needed to have a strong position and to be able to affect decision-makers.

John **Christensen**
Director at UNEP DTU, Denmark

John Christensen is the director of the Partnership Programme between the United Nations Environment Programme (UNEP) and the Technical University of Denmark (DTU). He has been active in writing and reviewing within the IPCC.

Break-Out Groups

Break-Out Group 1

CP Sea Level Change and Coastal Impacts
&
CP Arctic ECRA

Moderators and speakers:
Gianmaria Sannino
Lars Smedsrud

Polar?
Should we change the focus and scope of the CP Arctic Climate Stability and Change to *CP Polar* (to include Arctic and Antarctic research), to make the CP more attractive for new participants.

The scope of the CP Sea Level Change is still up-to-date and will not be changed.

Leads are still being sought for both CPs.

The CP Arctic ECRA could broaden its scope towards, mostly i.e. towards a bi-polar approach to make the CP more attractive for new participants.

Break-Out Group 2

CP High Impact Events and Climate Change
&
CP Changes in the Hydrological Cycles

Moderators and speakers:
Birte Jørgensen
Elisa Palazzi

The topic of Health was introduced as possible new dimension of ECRA.

Maybe a new cross-dimensional CP including social/health/or another dimension could complete the four existing CPs?

The current scope of both CPs of High Impact Events and Hydrological Cycles is currently up-to-date and also does not need to be changed. Download slides

General Discussion

The four current CPs should not merge or change, but rather continue with emphasis on **collaborations** or co-ordinated meetings as was already done in the past.
For example, HIE and SLC have not yet co-organised, but could in the future.

A new CP?

The possibility for a new CP has been discussed. Many topics could be combined within a new CP, for example a collaboration with EERA, the European Energy Research Alliance or any of the topics mentioned below. A collaboration could be beneficial for ECRA to play a role within the upcoming Horizon Europe framework.

A cross-cutting CP across the other four CPs could be a neutral venue for one or several of the following disciplines: Meteorology, Artificial Intelligence or Machine Learning, Social science (Isabelle La Jeunesse as potential lead or initiator), Health (Claudia Traidl-Hoffmann as potential lead), or combined topics of Social Science and Health.

A start for this could be a joint workshop to see how the group develops, and whether it should be cross-cutting.

Scientific presentations

(Day 2)

Collaborative Programme
Sea Level Change & Coastal Impacts

Michail Vousdoukas

vousdoukas.com/

Disaster Risk Management Unit, Institute of Environment and Sustainability, Joint European Research Center,
European Commission

His research interests cover different aspects of Coastal Oceanography/Engineering, focusing mostly on nearshore morphodynamic processes i.e. sediment dynamics, beach morpho-dynamics, swash zone processes and climate change impacts.

Coastal flooding risk in view of climate change-Adaptation analysis

Rising extreme sea levels and their global impacts (title of Agenda)

Managing the risk in Coastal zones involves of understanding of exposure, vulnerability, and weather and climate events. LISCoAsT, the Large scale Integrated Sea-level and Coastal Assessment Tool, is presented to project e.g. tropical cyclones, Sea Level Change, Tides, Climate Extremes.

Download the presentation here.

Sally Brown

southampton.ac.uk/

Division of Resource Economics, Albrecht Daniel Thaer-Institute and Berlin Workshop in Institutional Analysis of Social-Ecological Systems (WINS, Humboldt-University, Berlin, Germany);
Faculty of Engineering and the Environment,
University of Southampton, UK

Sally Brown is Senior Research Fellow specialising in coasts and sea-level rise. She is interested in coastal geomorphology, the impacts of sea-level rise on a range of settings and climate change adaptation at local to global scales, plus the long-term sustainability of coastal zones.

Implications of a projected 1.5°C rise in temperatures: What does this mean for sea-level and coasts?

Topics of the presentation were climate projections and the connected sea-level rise projections, and how the following impacts of sea-level rise have to be met by adaptation.
Download the presentation of Sally Brown here.

Gianmaria Sannino, lead of the CP Sea Level Change and Coastal Impacts, presented an overview of this CP on Sea-Level Change and Coastal Impacts. He reported on regional aspects of sea-level rise and the CP's aim is to move towards a sea-level rise climate service. A workshop on "Sea-level rise and impacts on European coasts: from global to local assessments" will take place in Rome, in November 2019.

ECRA CP-CHC
European Climate Research Alliance
Collaborative Programme Changes in the Hydrological Cycle

Collaborative Programme
Changes in the Hydrological Cycle

Klaus Goergen

researchgate.net/

Institute of Bio- and Geosciences, Forschungszentrum Jülich, Germany

Klaus Goergen currently works at the Institute of Bio- and Geosciences (Agrosphere, IBG-3), Research Centre Jülich (FZJ), Germany. Klaus does research in high-resolution (coupled) regional climate modelling and climate change impact assessments. Important aspects are high performance computing and big data. Projects are, e.g., EURO-CORDEX.

Integrated simulation of the European water cycle including human water use

The topic of the presentation were the terrestrial water cycle and groundwater-to-atmosphere (G2A) interactions and feedbacks as well as the intensification of the hydrological cycle under climate change. An integrated groundwater-to-atmosphere simulation is needed, namely the 'Terrestrial Systems Modelling Platform' (TSMP) model system.
Download the presentation here.

Marc Zebisch

eurac.edu

Head of Institute for Earth Observation, EURAC research, Italy

Marc Zebisch currently works on the impact of Climate Change, Landscape Dynamics, Remote Sensing of Alpine Ecosystems, and on linking Remote Sensing with other Monitoring techniques.

Earth Observation of cryosphere and mountain hydrology

With EURAC based in the alpine area, Marc Zebisch presented on remote sensing by satellite imagery and combining this data with other and in-site observations to create improved models for the forecasting of water availability, energy production, tourism, forest- and agriculture management, and disaster risk reduction. Examples in the presentation: Monitoring Glacier outline and mass balance; Snow cover and run-off forecast; Snow cover variability with optical and radar data, and Surface soil moisture with Sentinel-1.
Download the presentation here.

ECRA CP-HIE
European Climate Research Alliance
Collaborative Programme High Impact Events & Climate Change

Collaborative Programme
High Impact Events & Climate Change

Rasmus Benestad
emetsoc.org

Senior Scientist, Division for Model and Climate Analysis, Norwegian Meteorological Institute, Norway

Rasmus Benestad is active in the areas of climate analysis, empirical-statistical down-scaling, Climate Change, (ensemble) models, the communication of Climate related information to the community, etc.

A new factor explaining more extreme rain - the reduction in global area with rainfall

The presentation describes the patterns of global and local water cycles within the context of Climate Change and how the rainfall changes correlate with higher chance for extreme events.
Download the presentation here.

Nicole van Lipzig
ees.kuleuven.be

Department Earth and Environmental Sciences, Division of Geography and Tourism, Katholieke Universiteit Leuven, Belgium

Nicole van Lipzig's is active in the areas of Belgian or international climatological systems, their modeling and interaction with larger systems, as well as climate services. Some recent publications are on the topics of 'Estimating the effect of rainfall on the surface temperature of a tropical

lake', 'The CORDEX.be initiative as a foundation for climate services in Belgium', or 'A network of networks to improve science of urban climate'.

High Impact weather events in a changing climate in different regions of the world

Nicole van Lipzig took the audience to a journey to three different locations: Antarctica is facing ice mass loss, but regional accumulation, which implies extreme snowfall events. Examples from East-Africa and the city of Brussels highlighted the increase of extreme events and changed precipitation patterns, with implications for e.g. health.
Download the presentation here.

Collaborative Programme
Arctic Climate Stability and Change

Thomas Jung
awi.de

Alfred Wegener Institute (AWI) Helmholtz Centre for Polar and Marine Research;
Professor for Physics of the Climate System (Theory and Modelling), Germany

Thomas Jung is specialist in Analysis, modelling, and prediction of the climate system. He chairs the Polar Prediction Project (PPP), APPLICATE, and ESM project.

APPLICATE—Advancing Prediction in Polar regions and beyond: modelling, observing system design and LInkages associated with a Changing Arctic Climate

APPLICATE's mission is to develop enhanced predictive capacity for weather and climate in the Arctic and beyond and to determine the influence of Arctic climate change on Northern Hemisphere mid-latitudes, for the benefit of policy makers, businesses and society; by bringing together researchers and projects, and better understanding the Arctic-midlatitude linkages.
Download the presentation here.

Marius Årthun

uib.no/

Geophysical Institute, University of Bergen;
Bjerknes Centre for Climate Research
Norway

Marius Årthun's research focuses on basin-scale ocean circulation and air-sea interaction in the Arctic-Atlantic region, and whether associated climate and sea ice variations are predictable on interannual-to-decadal time scales.

Blue Action: Quantify the role of a changing Arctic in predictive capability of weather and climate of the Northern Hemisphere

Blue-Action brings together expert from over 40 organisations in 17 countries to develop new methods to characterise climate conditions where hazardous weather system forms across the Northern Hemisphere and establish their link to Arctic climate change; deliver an improved representation of Arctic warming; and enable robust and reliable forecasting to deliver better predictions at sub-seasonal to decadal scales.
Download the presentation here.

Our event website lists the agenda and all available presentations.
The introductory presentation by our CP leads are also available: CP CHC, CP HIE, CP ARC.
All files in one zip file are available here.

ECRA Publication

The ECRA team has published an article about the administrative and managerial background of ECRA.
Read the abstract here:

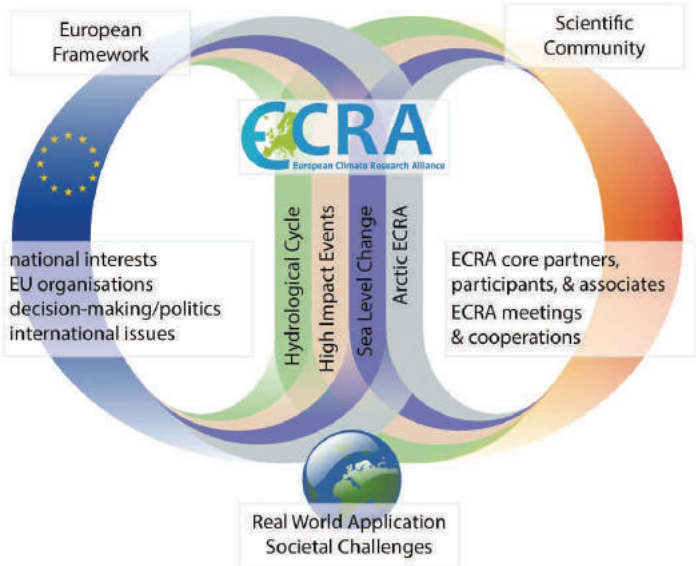
The European Climate Research Alliance (ECRA) is an association of leading European research institutions in the field of climate research (http://www.ecra-climate.eu/, last access: 6 December 2018). ECRA is a bottom-up initiative and helps to facilitate the development of climate change research, combining the capacities of national research institutions, and inducing closer ties between existing national research initiatives, projects and infrastructures. ECRA works as an open platform to bring together climate researchers, providing excellent scientific expertise for policy makers and of societal relevance. The ECRA Board consists of representatives of ECRA partners and decides on governance, scientific priorities, and organisational matters.

Currently organized into four Collaborative Programmes, climate scientists share their knowledge, experience and expertise to identify the most important research requirements for the future, thus developing a foresight approach. The CPs cover the topics: (1) Arctic variability and change, (2) Sea level changes and coastal impacts, (3) Changes in the hydrological cycle and (4) High impact events. The CP activities are planned in workshops and participation is open to all interested scientists from the relevant research fields. In particular, young researchers are actively encouraged to join the network. Each CP develops its joint research priorities for shaping European research into the future. Because scientific themes are interconnected, the four Collaborative Programmes interact with each other, e.g. through the organization of common workshops or joint applications. In addition, the Collaborative Programme leads attend the Board meetings.

The different formats of ECRA meetings range from scientific workshops to briefing events and side events at conferences to involve different groups of interests. This facilitates the interaction of scientists, various stakeholder groups and politicians. A biennial open ECRA General Assembly that is organised in Brussels represents an umbrella event and acts as a platform for discussion and contact with stakeholders. This event is an excellent opportunity to jointly discuss research priorities of high societal relevance.

The European Climate Research Alliance (ECRA): Collaboration from bottom-up

Hoke, W., Swierczynski, T., Braesicke, P., Lochte, K., Shaffrey, L., Drews, M., Gregow, H., Ludwig, R., Nilsen, J. E. Ø., Palazzi, E., Sannino, G., Smedsrud, L. H., and ECRA network. IN: Adv. Geosci., 46, 1-10, https://doi.org/10.5194/adgeo-46-1-2019, 2019.



The interplay of ECRA, the European framework, and the scientific actorscape. ECRA's function is to connect the continuous activities of scientific research into the European Union and the other way around. Additionally, issues and criteria of real-world applications are included into the scientific agenda. See publication for more information and copyright information.

Upcoming events

EGU General Assembly 2019

European Geophysical Union

7-12 April 2019

Monday

10.45-12.30 **Effective research management – What does that mean?** (I) // EOS3.1 Convener: Sebastian Hettrich, W. Hoke co-convener. // Poster session at Hall X4

Tuesday

14:00–15:45 **[ECRA-CP-HIE] High Impact Events and Climate Change** (co-organized) (I) // Convener: Martin Drews, P. Braesicke, H. Gregow, K. Madsen // Orals: Room L7 (Posters: Wednesday 14:00–15:45 Hall X3)

14.00-15.45 **Oral session SMP1: Research Project Management - challenges and solutions.** (I) **//** Selected speakers from abstracts SMPI, W.Hoke co-convener // Room 0.15

Wednesday

08.30-10.15 **WINDSURFER: Wind and Wave for Forestry, Offshore Energy and Reinsurance** (I) // Convener: Len Shaffrey // Room 2.17

14.00-15.45 **Make sense of the mess: How to keep your research project on track** (I) **//** SC1.38 Project lecture Luisa Cristini (AWI), W. Hoke co-convener, Room Room -2.16

12:45-13:45 **How to apply for the Marie Skłodowska-Curie grants** Individual Fellowship and European Training Network (I) // SC3.10 Orals, Room 0.14

19:00–20:00 **[ECRA-CP-CHC] Changes in the Hydrological Cycle - a Collaborative Programme of the European Climate Research Alliance (ECRA) (I)** // Convener: Elisa Palazzi and Ralf Ludwig // on invitation

Thursday

08:30-12:30 **Advances in Understanding of the Multi-Disciplinary Dynamics of the Southern European Seas (Mediterranean and Black Sea)** (I) // Convener: Gianmaria Sannino et al. // Room 1.85 Orals (Posters Thu 14:00–15:45 Hall X4)

08.45-09.00 **The role of Atlantic heat transport in future Arctic winter sea ice loss** (I) // Marius Årthun, Tor Eldevik, and Lars H. Smedsrud // Room L4/5

Friday

08:30-10:15 **South-to-North: Variability and connectivity along the oceanic current systems from the South Atlantic to the North Atlantic and into the Arctic Ocean** (I) // OS1.4/CL2.05 Convener: Léon Chafik et al. // Orals Room 1.85 // Posters Fri 10:45-12:30 Hall X4

[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
The deadline for submissions is 31 May 2019; www.mdpi.com

Royal Meteorological Society: **Atmospheric Science Conference 2019** | Birmingham, UK, 02-03 July 2019| www.rmets.org

[ECRA-CP-SLC] A workshop on "Sea-level rise and impacts on European coasts: from global to local assessments" will take place in Rome, on November 2019. Contact us for more information.

Save the date:
General Assembly of ECRA:
10-11 March 2021

What is in it for you?

ECRA is a network of scientists.

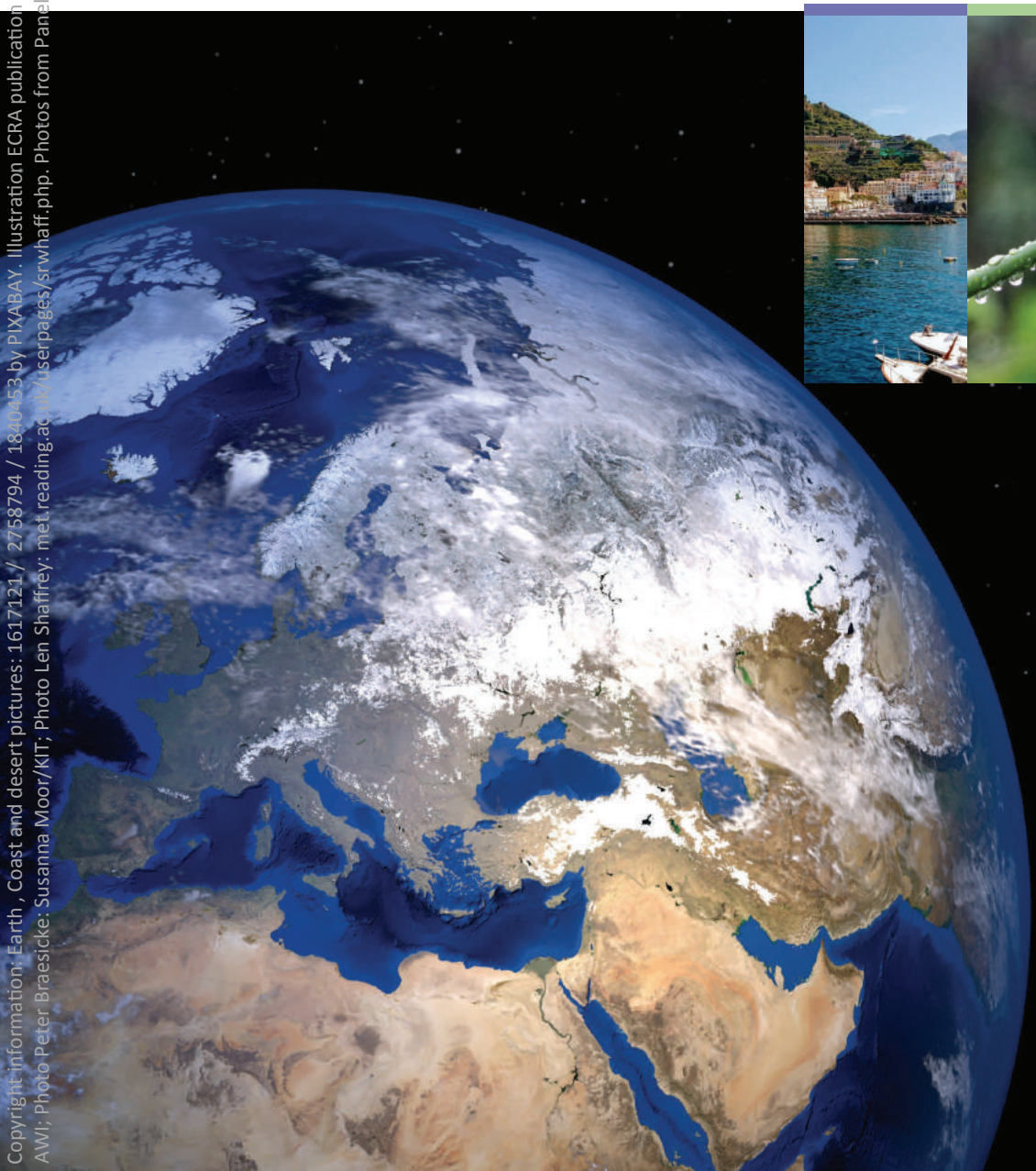
ECRA shapes emerging research topics through an efficient network of European research organisations and provides a knowledge base for future mitigation and adaptation measures.

ECRA Members

- collaborate in joint workshops,
- participate in joint actions (e.g. training, education 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)

Information on membership in ECRA

Contact the Secretariat if you want to be added to the general ECRA mailing list or the mailing list of a Collaborative Programme:
Winfried.Hoke@ecra-climate.eu



For any questions…

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