



ECRA: Knowledge for climate action

Newsletter Autumn 2020

Dear Readers,

Welcome to the Autumn 2020 ECRA newsletter, bringing updates from the Climate Research to you in those challenging times of COVID-19.

In this issue we are highlighting the recent activities and publications of the ECRA partners and participants, but also other contributions – for more information please see the table of contents on the next page.

In March 2021, we wanted to organise the ECRA General Assembly (GA), however, COVID-19 made us re-organise: mark your calendars for **10 March 2021 14:30-17:00 CET** for a high-level ECRA online event. The GA will take place in **March 2022**. We welcome your contributions and interactions for both events!

Kind regards, and see you soon!

Prof. Peter Braesicke, Chair of ECRA
Prof. Len Sheffrey, Co-Chair of ECRA



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ASTERISKS



Call: H2020-LC-CLA-2018-2019-2020

Topic: **LC-CLA-12-2020**

Proposal title:

Artificial Intelligence for Climate Services To Enhance Adaptation towards RISKS of Extremes

ECRA has joined a consortium led by the Finnish Meteorological Institute (FMI).

We have **submitted the second stage proposal** and are currently waiting for the decision of the European Commission.



ECRA-endorsed Project

PolarProC

Polar processes to global implications:
Constraining uncertainty in a changing climate

Call: H2020-LC-CLA-17-2020: Polar climate: understanding the polar processes in a global context in the Arctic and Antarctic Regions.

The overall objective of PolarProC is to "Improve projections of Polar climate by better understanding the key physical and chemical processes and feedbacks in the atmosphere-ice-ocean and carbon cycle systems that control Polar climate change and its global implications, enabling robust policy and decision making".

ECRA endorses this project.



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ECRA General Assembly and ECRA 10 year event

Update

COVID-19 made us reconsider our planning of our General Assembly, but finally we know what we can offer for March 2021 and the following time.

We originally planned to host the ECRA General Assembly on 10-11 March 2021, physically, in Brussels. However, we now announce to you that we will **postpone our General Assembly to March 2022**. The agenda and outline of the GA will stay the same, or similar to the original format: a two day event, with high-level discussions on Day 1 and scientific talks and break-out groups on Day 2.

So, tentatively, feel free to earmark **8-9 March 2022 for the ECRA GA**.

The ECRA Executive Committee has started the planning and leans towards the topic of **Extreme Events** within the

context of **climate change**, and how **decision making and risk management** could be tackled.

For **10 March 2021**, the original dates of the GA, we would like to invite you to a **high-level ECRA event** moderated by Peter **Gibbs**, which will take place online. The original first day will be compressed into max. 2,5 h of a virtual meeting, including Mr. Jean-Eric **Paquet**, Director-General of the European Commission, DG RTD; Connie **Hedegaard**, Former European Commissioner for Climate Action and current Mission Board Chair (Climate Adaptation); Michel **Rixen**, WCRP, WMO; Carlo **Buontempo**, ECMWF/Copernicus; Rob **McSweeney**, CarbonBrief (tbd); and of course our Chair Peter **Braesicke**.

10 March 2021, 14:30-17:00: high level ECRA online event

Sign up for updates: 10y@ecra-climate.eu

Register: ecra-climate.eu/10y-register

8-9 March 2022: ECRA General Assembly

For any question, approach the Secretariat via info@ecra-climate.eu.

International conference

Climate change and water

Extreme events, water and environments

RÉSEAU
MiDi

May 25-27th
2021

Auditorium Theleme
Tours, France



ccw2021.sciencesconf.org

Upcoming events

The **MiDi network** with **Isabelle LaJeunesse**, University of Tours, France, will organise the event “**Extreme events, water and environments**” in May 2021.

Due to COVID-19, the meeting will take place as a **webinar** (online) on **25-27 May 2021**.

To facilitate an open forum of exchange, another event will be organised in **2022**, with the original format and place (France).

More information to be found at the **event website** and during the conference:

<https://ccw2021.sciencesconf.org/>





EP Intergroup Climate Change,
Biodiversity & Sustainable Development

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BLUE ACTION

Tipping points, extreme events and uncertainty: How can studying the Arctic help us predict future European climate beyond the mean?

ECRA, the BlueAction project, and the European Parliament Intergroup on "Climate Change, Biodiversity and Sustainable Development" organised this web-conference on 14 October 2020. Target audience were policy-makers, MEPs and stakeholders. Researchers leading on this topic (from Horizon 2020 climate research project Blue-Action) presented the current state of knowledge. The event included a panel discussion with MEPs and Blue-Action scientists, and was open to all.

Lars H. Smedsrud represented ECRA and the polar research perspective (see picture), further speakers and topics were: **Steffen M. Olsen**, Blue-Action Coordinator,

DMI; **Sigi Gruber**, Head of Marine Resources Unit, European Commission; Didier Swingedouw; Helene R. Langehaug; and many others. More information: ecra-climate.eu/BlueAction-ECRA-IG-event including a **recording** of the event..

Arctic Sea Ice Summer Loss: estimates

One soccer field lost every 0.8 seconds

In September 1980 we had about 7.5 mill km²
(about 2 meters thick)
In September 2020 we had about 3.9 mill km²
(about 1 meter thick)

Loss of 9000 m³ / second

Area of soccer field: 105 m * 68 m = 7140 m²

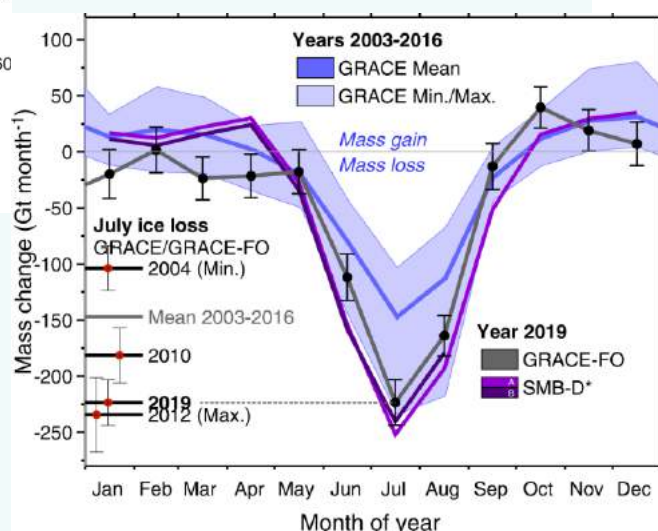
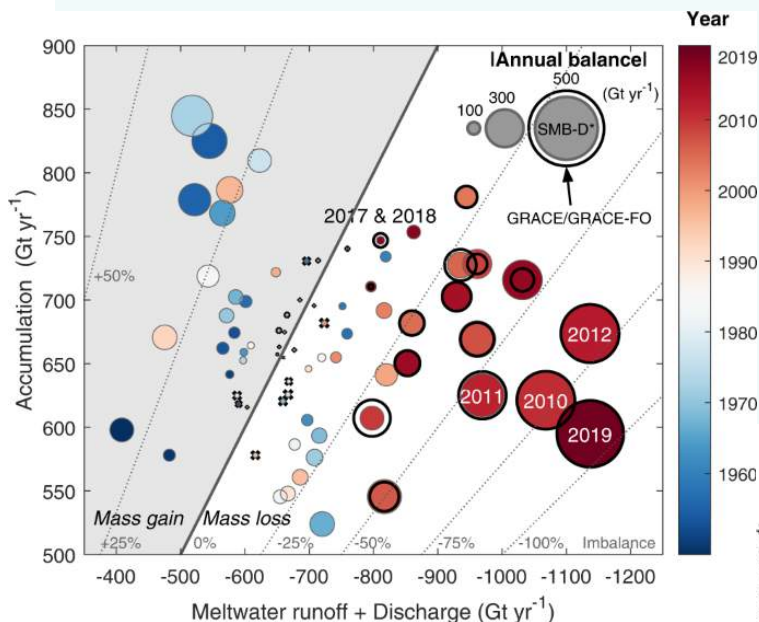
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13/10/2020

Return to rapid ice loss in Greenland and record loss in 2019 detected by the GRACE-FO satellites

[Sasgen, I.](#), Wouters, B., Gardner, A.S. et al. Return to rapid ice loss in Greenland and record loss in 2019 detected by the GRACE-FO satellites. *Commun Earth Environ* 1, 8 (2020). <https://doi.org/10.1038/s43247-020-0010-1>
[Press release](#) (AWI/GFZ)

Abstract Between 2003-2016, the Greenland ice sheet (GrIS) was one of the largest contributors to sea level rise, as it lost about 255 Gt of ice per year. This mass loss slowed in 2017 and 2018 to about 100 Gt yr⁻¹. Here we examine further changes in rate of GrIS mass loss, by analyzing data from the GRACE-FO (Gravity Recovery and Climate Experiment – Follow On) satellite mission, launched in May 2018. Using simulations with regional climate models we show that the mass losses observed in 2017 and 2018 by the GRACE and GRACE-FO missions are lower than in any other two year period between 2003 and 2019, the combined period of the two missions. We find that this reduced ice loss results from two anomalous cold summers in western Greenland, compounded by snow-rich autumn and winter conditions in the east. For 2019, GRACE-FO reveals a return to high melt rates leading to a mass loss of 223 ± 12 Gt month⁻¹ during the month of July alone, and a record annual mass loss of 532 ± 58 Gt yr⁻¹.



Airborne LiDAR and spectroscopic techniques to explore coastal erosion, protection and management

Taramelli, A., Valentini, E., Cappucci, S., Filipponi, F., Nguyen Xuan, A., Lisi I., Rossi L.

doi: <https://www.mdpi.com/2072-4292/12/7/1053> (sand bars)

doi: <https://www.mdpi.com/2072-4292/12/8/1229> (sand dunes)

Abstract Two recent publications of ENEA, ISPRA, CNR, IUSS, published on Remote Sensing (MDPI), contribute to deliver quantitative products along coastal areas. Emerged and submerged sand dunes have been studied by using LiDAR topo-bathymetric Digital Surface Model (DSM), Bathymetric Position Index (BPI) along the coastal stretch. Thanks to airborne hyperspectral dataset and field spectral libraries, a correlation model is applied to describe the continuum of dune cover typologies, and landscape ecology and morphology. The methodology provide the harmonization procedure of coastal morphological dataset definition at the national scale and results have been used by the authorities to adopt a novel beach management technique. Their implication to mitigation and adaptation of littorals to erosive phenomena and the medium-long term effects of climate change through Mediterranean coastal areas protection is relevant.

Enhanced water supply and management strategies on small islands

Cappucci, S., De Cassan, M., Grillini, M., Proposito, M., Screpanti, A.

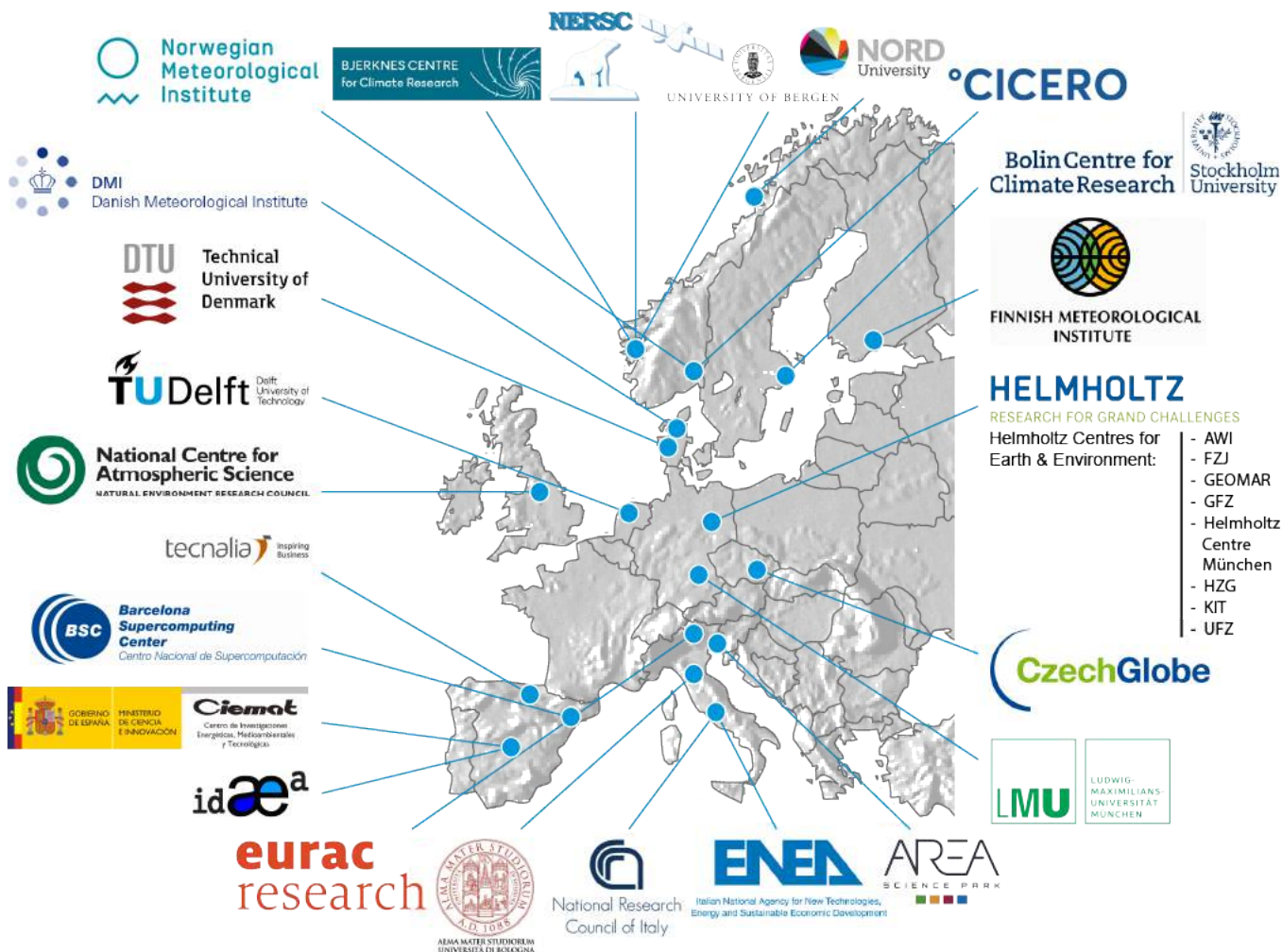
doi: <https://doi.org/10.1007/s10040-020-02138-6>

Abstract A recent paper on the evaluation of the quantity and quality of groundwater in small islands, ready to be exploitable in a sustainable way by the population during droughts or in case of great tourist pressure. Thanks to a study conducted by ENEA (published in the Hydrogeology Journal), a multidisciplinary team opens new and interesting scenarios that may globally affect the isolated communities of small islands and their potential development related to natural freshwater reserves in relation to global climate change.

More information:

<https://www.enea.it/en/news-enea/news/environment-enea-finds-fresh-water-in-small-islands-to-limit-tankers>





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For any questions...

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