

## European Severe Storms Laboratory Newsletter 2019-2

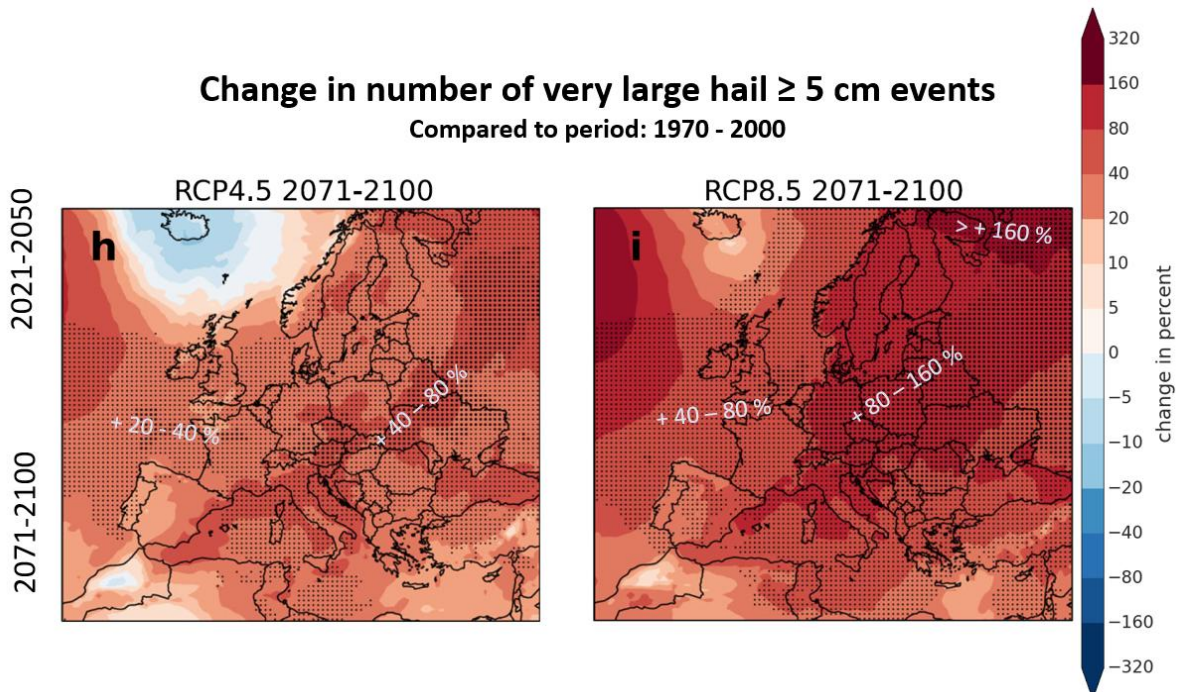
No. 20

September 2019

### New article on expected severe thunderstorm Increase over Europe within the 21<sup>st</sup> century

Dr. Anja Rädler, a long time researcher in the ESSL/Munich Re team, has published the latest findings of her PhD work as an open access article in Nature Climate and Atmospheric Science. She and her co-authors describe how the frequency of severe thunderstorms across Europe is expected to increase in the 21st century due to rising instability. She explains: “We apply a set of additive regression models to an ensemble of 14 regional climate simulations and find that convective instability will increase as a result of rising humidity near the earth’s surface. Even though a slight decrease in thunderstorm occurrence in southwestern and southeastern Europe is projected, the probability of severe weather will increase throughout Europe, in particular for very large hail.”

The following figure, adapted from Rädler et al. (2019), shows the relative increase of very large hail that is to be expected according to a consensus of 13 climate model runs under the aggressive RCP8.5 climate change scenario. Read the full article here: <https://doi.org/10.1038/s41612-019-0083-7>



## ESSL General Assembly 2019

Members will soon receive their formal invitation to the upcoming General Assembly of ESSL. The GA is scheduled on Sunday 3 November at 15:00 CET at the ECSS conference venue in Kraków.

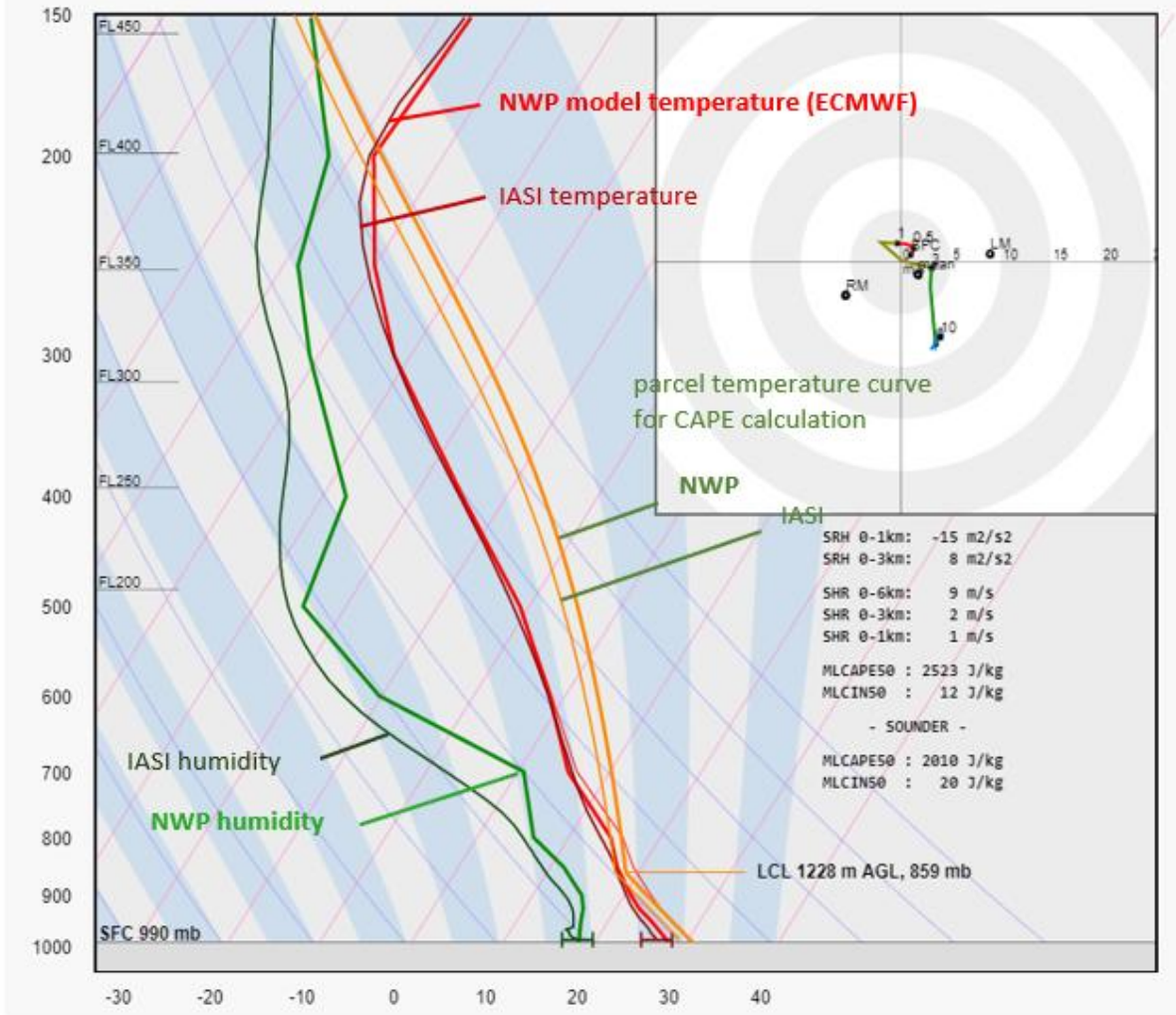


## ESSL Testbed 2019

At the ESSL Testbed 2019, 40 participants from 11 countries have evaluated new forecast-supporting products in June and July at the ESSL Centre in Wiener Neustadt. As in previous years, the participants did so by using these products for their experimental forecasts and nowcasts, most of them to be issued in real-time so as to emulate an operational forecasting environment.



This year, there was particular attention to the use of vertical temperature and humidity profiles of the IASI hyperspectral sounder as part of a larger study by ESSL for EUMETSAT. These profiles were compared to model forecasts (see figure below). In addition, new nowcasting products by DWD were evaluated, and the various ways CAPE and CIN can be computed were tested in cooperation with ECMWF.





## ESSL Event calendar

Date(s)	Event (click on the respective link for more information)	
23 – 27 Sep 2019	<b>Course: <a href="#">Aviation Forecasting of Severe Convection</a></b> by Dr. Tomáš Púčik (ESSL/ESTOFEX)	
7 – 11 Oct 2019	<b>Course: <a href="#">Forecasting Severe Convection (FSC I)</a></b> by Dr. Tomáš Púčik (ESSL/ESTOFEX)	
21 – 25 Oct 2019	<b>On site training: Forecasting of Severe Convection – closed event (non-public) at ARPAL in Genova, IT</b> by Dr. Tomáš Púčik (ESSL/ESTOFEX)	
4 – 8 Nov 2019	<b><a href="#">ECSS 2019 - 10th European Conference on Severe Storms</a></b> in Kraków, Poland Local Organizing Partner: <a href="#">IMGW</a>	
9 – 13 Mar 2020	<b>Course: <a href="#">Dynamics and Prediction of Severe Convection (FSC II)</a></b> by Prof. Dr. Jeff Trapp, University of Illinois, USA	Early bird fee until 31 Dec 2019.
30 Mar – 3 Apr 2020	<b>Course: <a href="#">Aviation Forecasting of Severe Convection</a></b> by Dr. Tomáš Púčik (ESSL/ESTOFEX)	Early bird fee until 31 Dec 2019.
20 – 24 Apr 2020	<b>Course: <a href="#">Forecasting Severe Convection (FSC I)</a></b> by Dr. Tomáš Púčik (ESSL/ESTOFEX)	Early bird fee until 31 Dec 2019.
15 – 19 Jun 22 – 26 Jun (Expert Week) 6 – 10 Jul 13 – 17 Jul 2020	<b><a href="#">ESSL Testbed 2020</a></b>	Early bird fee until 28 Feb 2020.
24 – 27 Aug 2020	<b><a href="#">4th ESSL Workshop on Tornado and Windstorm Damage Assessment</a></b> by ESSL staff and expert guests.	Early bird fee until 30 April 2020.
7 – 11 Sep 2020	<b><a href="#">EMS Annual Meeting: European Conference for Applied Meteorology and Climatology</a></b> co-sponsored by ESSL, in Bratislava, Slovakia	
21 – 25 Sep 2020	<b>Course: <a href="#">Aviation Forecasting of Severe Convection</a></b> by Dr. Tomáš Púčik (ESSL/ESTOFEX)	Early bird fee until 30 April 2020.
2 – 6 Nov 2020	<b>Course: <a href="#">Flash Flood Forecasting</a></b> by ESSL staff and expert guests.	Early bird fee until 30 June 2020.
9 – 13 Nov 2020	<b>Course: Optimal Use of Satellite Data in Forecasting Severe Convection</b> by ESSL staff and expert guests. <b>NEW!</b>	Early bird fee until 30 June 2020.
24 – 26 Nov 2020	<b>Workshop: Convective Storm Risk</b> by ESSL staff and expert guests.	Early bird fee until 30 June

	<i><b>NEW!</b></i>	2020.
<b>6 – 10 Sep 2021</b>	<a href="#"><u>EMS Annual Meeting: European Conference for Applied Meteorology and Climatology</u></a> co-sponsored by ESSL, in Barcelona, Spain	
<b>Autumn 2021</b>	<b>ECSS2021 – 11th European Conference on Severe Storms</b> open for local partnership proposals	

**Unsure which seminar to attend? [Try out our Quiz!](#)**

For further information about the registration for these events, please contact us at:  
email: [events@essl.org](mailto:events@essl.org)

In addition please approach us for tailored trainings or forecaster training on-the-job.