



## 20 years of ESSL – monthly jubilee topic

As part of the celebrations of **20 years of ESSL**, we are publishing a series of monthly jubilee topics highlighting different aspects of our work and community. Each month, we briefly revisit a historical high-impact event featured as the “topic of the month” in the ESSL calendar. This time, we focus on the **severe wind report from Jihlava in February 1526** and look back at how the **European Severe Weather Database (ESWD)** itself came into being.

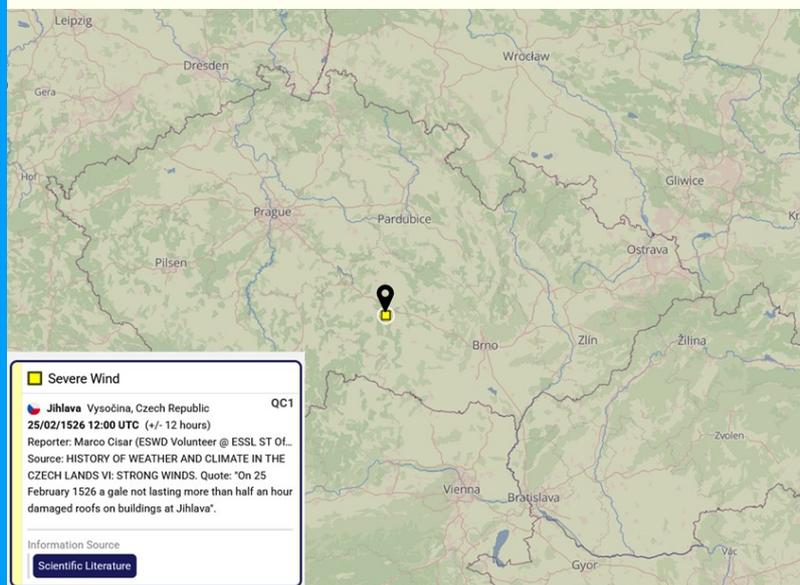
### Severe wind in Jihlava, Czech Republic

**Date: 25 February 1526**

On **25 February 1526**, a gale not lasting more than half an hour damaged roofs on buildings in Jihlava (Vysočina Region).

The event was recorded by **Martin Leupold von Löwenthal** and **Franz Setzenschragen**. What makes this entry remarkable is not the scale of the damage, but the precision of the observation: nearly five centuries ago, someone thought to note not just *what* happened, but *how long it lasted*. Such details are the raw material of historical climatology.

This event is documented in *History of Weather and Climate in the Czech Lands VI: Strong Winds* by Rudolf Brázdil, Petr Dobrovolný, Josef Štekl, Oldřich Kotyza, Hubert Valášek, and Jaroslav Jež (Masaryk University, Brno, 2004, 380 pp.). The book is the sixth volume in a series reconstructing the climate history of the Czech Lands over the past millennium using documentary evidence (annals, chronicles, memoirs, legal records, and newspapers) combined with instrumental measurements. It catalogues hundreds of strong wind events from the earliest recorded gale through to the 20th century, making it one of the most comprehensive historical wind climatologies in Europe.



Location of the 25 February 1526 severe wind event in Jihlava, Czech Republic (yellow square; source: ESWD).

## How it all started: The European Severe Weather Database in ESSL history

ESSL was founded in 2002 as an informal network led by **Dr. Nikolai Dotzek**, aiming to coordinate the study of extreme weather across Europe. A pivotal moment was the conference on European tornadoes and severe storms, organized by **Dr. Jean Dessens**, **Dr. Gérard de Moor**, and **Dr. John Snow**. Researchers realized that while severe convective events like tornadoes and large hail were rare in individual countries, they were far more common at the European scale requiring a pan-European approach. **Dotzek**, **Holzer**, and

**Schmid** had already recognized this and launched the **TorDACH** network in 1997 to collect data from Germany, Austria, and Switzerland.

Parallel initiatives emerged around that time, including online databases by Climent Ramis and Victor Homar (University of the Balearic Islands) and Fulvio Stel and Dario Giaiotti (OSMER, Italy). A similar effort was the **European Severe Weather Database (ESWD)**, launched by **Dr. Pieter Groenemeijer** after a 2004 coordination meeting among researchers that established the data format requirements. The ESWD was linked to the **European Storm Forecast Experiment (ESTOFEX)**, which explored Europe-wide thunderstorm predictability. The ESWD was publicly accessible, allowing any visitor of its web interface to submit and access reports.

Initially sparse, the database gained value, in particular through the efforts of **Thilo Kühne**, its most prolific volunteer contributor. By 2005, Dotzek integrated the ESWD as a core asset into ESSL, which officially formed in 2006. With funding from the **German Weather Service (DWD)**, **Zhongjian Liang** redesigned the database, which with some additions and modification has remained operational until its 2025 update.

Over the years, the ESWD has become an extremely valuable resource used in approximately **400 formal scientific publications** on topics ranging from hail detection by radar or satellite to the impact of severe weather on people's attitude towards natural disasters. In addition, ESSL's institutional members make widespread use of the ESWD to conduct risk assessments and verify weather forecasts. Their respective membership fees sustain the operation of the database. At ESSL, the ESWD is an essential data set for the development of its suite of **Additive Regression Convective Hazard Models (AR-CHaMo)** and for the **ESSL Testbed** and other scientific studies.





ESWD map showing all severe weather reports in 2009 (n = 4,432; source: ESWD, requested on 6 September 2010).

## Upcoming ESSL events and training

### ESSL–EUMETSAT Annual Forecaster Event 2026

*Online, 19 March 2026, 09:00–11:00 UTC*

A great opportunity for forecasters to get the latest MTG-related updates – from launch and commissioning status to lessons learned from the 2025 Forecaster Testbed and a revisit of interesting thunderstorm cases. Register [here](#).

**ESSL-EUMETSAT Annual Forecaster Event**  
 Online: 19 March 2026, 09:00 – 11:00 UTC

We present MTG-related information relevant to forecasters:

- The status of the MTG launches and commissioning (Natasa Strelec Mahovic, EUMETSAT)
- The Forecaster Testbed 2025 in retrospect and lessons learned from expert workshops (Alois Holzer, ESSL)
- Testimonial from forecasters who participated in the Forecaster Testbed 2025
- Information on how to register for the upcoming Forecaster Testbeds (Natasa Strelec Mahovic, EUMETSAT)
- Interesting thunderstorm cases from 2025 revisited (Tomas Pucik, ESSL)

Registration page:  
<https://events.teams.microsoft.com/event/96eeb2af-46e-42b9-a3ae-7490cc675570@d7e8a07-a3fd-42a8-b745-17a352648828>

### Forecasting Severe Convection (FSC1)

In spring 2026, ESSL will again offer its cornerstone course, [Forecasting Severe Convection \(FSC1\)](#) at the ESSL Research and Training Centre in Wiener Neustadt. Learn

everything from the basic ingredients of severe convection to how tornadoes and hail form – and how to forecast them.

## 2-day online refresher

We offer [a two-day online refresher course](#), aimed especially at those who wish to refresh and update their knowledge of forecasting severe storms. The course focuses on recent high-impact cases and new research findings and provides an excellent opportunity to discuss challenging situations with ESSL lecturers and fellow forecasters.

## Aviation Forecasting of Severe Convection

If you want to learn how leading-edge research translates into real-world aviation forecasting, apply for our [Aviation Forecasting of Severe Convection](#) course. The course combines expert lectures with hands-on case exercises led by **Dr. Tomáš Púčik** and colleagues, focusing on convective hazards relevant to aviation operations.

## EUMETSAT-ESSL Testbeds

There are still free places for the **EUMETSAT-ESSL Testbeds** this year starting in May, and interested forecasters and forecaster trainers can apply here to be included in these EUMETSAT-funded activities: <https://classroom.eumetsat.int/mod/feedback/view.php?id=19160>

You can find details about all events and registration at

<https://www.events.essl.org/>

Date	Activity
9 – 13 March 2026	<b>NEW</b> Course: Optimal use of radar data in severe storm nowcasting
19 March 2026	ESSL-EUMETSAT Annual Online Forecaster Event 09:00 – 11:00 UTC. Registration free of cost.
23 – 27 March 2026	Course: Forecasting Severe Convection (FSC1)
13 – 17 April 2026	Course: Aviation Forecasting of Severe Convection
4 – 8 May and 18 – 22 May 2026	ESSL-EUMETSAT Forecaster Testbed weeks
1 – 2 June 2026	<b>NEW</b> 2-day ONLINE refresher on forecasting severe convection (qualification: at least one prior ESSL course or testbed <a href="#">week</a> )
15 – 19 June 2026	ESSL Testbed 2025 – regular week (focus on radar and NWP)
22 – 26 June 2026	ESSL Testbed 2025 – expert week
7 – 11 September 2026	EMS Annual Meeting (co-sponsored by ESSL)

14 – 18 September 2026	ESSL-EUMETSAT Forecaster Testbed week
29 September – 1 October 2026	IF Scale and wind damage assessment workshop
5 – 9 October 2026	ESSL-EUMETSAT Forecaster Testbed week

Unsure which course to attend? Try our [online quiz!](#)

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

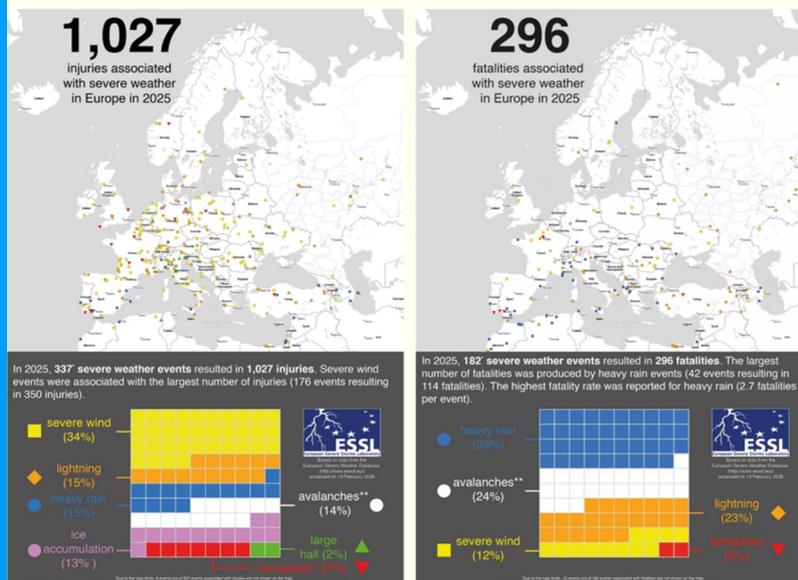
Or approach us for tailored trainings or forecaster training on-the-job.

## ESWD summary of 2025

As at the beginning of every year, we present an annual overview of reports from the **European Severe Weather Database (ESWD)** on severe weather events.

In 2025, **337 severe weather events resulted in 1,027 injuries**. Severe wind events were again associated with the largest number of injuries, with **176 events causing 350 injuries**.

Unfortunately, **296 fatalities** were reported as a result of **182 weather events**. Heavy rain was the predominant cause of fatalities, with the highest fatality rate—**114 deaths across 42 events**, averaging **2.7 fatalities per event**.



**Heavy rain** – A total of **5,737 heavy rain** events were reported in the ESWD for Europe. This is the **fifth largest** number of heavy rain events reported in one year since 2006. Heavy rain was associated with **114 fatalities** and **153 injuries**.

**Large hail** – A total of **6,342 large hail** events were reported in Europe. This is the **fourth largest** number of hail events reported in one year since 2006. Large hail was associated with **25 injuries** in 2025. Hail with a maximum diameter greater than **10 cm** was reported for **16 events**.

**Severe wind** – There were **17,630 severe wind** events reported in the ESWD. This is the **fourth largest** number of severe wind events reported in one year since 2006. Severe wind events were associated with **36 fatalities** and **350 injuries**.

**Tornadoes** – In 2025, a total of **1,184 tornadoes** were reported in Europe, the majority of which (794 or 67%) were waterspouts. Among the tornado reports classified using the [International Fujita \(IF\) scale](#), **20** were rated IF0, **63** IF0.5, **85** IF1, **63** IF1.5 and **30** IF2. Tornadoes were associated with **7 fatalities** and **65 injuries**.

