

Uncovering Europe's Largest Hailstones:

A cross-national hail size comparison using ESWD reports

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12th European Conference on Severe Storms, Utrecht, Netherlands - 17 to 21 November 2025



Motivation: Every year, some devastating hailstorms sweep across Europe. While the national weather services receive hail reports in the form of photos or descriptions, it is important to compare these large hail events with past reports. This investigation should enable meteorologists in Europe to better classify their reports the next time exceptionally large hail occurs in their country. It should also inspire the public to discover previously undiscovered hail events from the past. The following is a ranking of the largest hailstones ever documented in European countries.



Fig. 1

On July 24, 2023, a hailstone with an estimated diameter of **19 cm** fell in Azzano Decino (Italy). This makes it the **European hail record**.



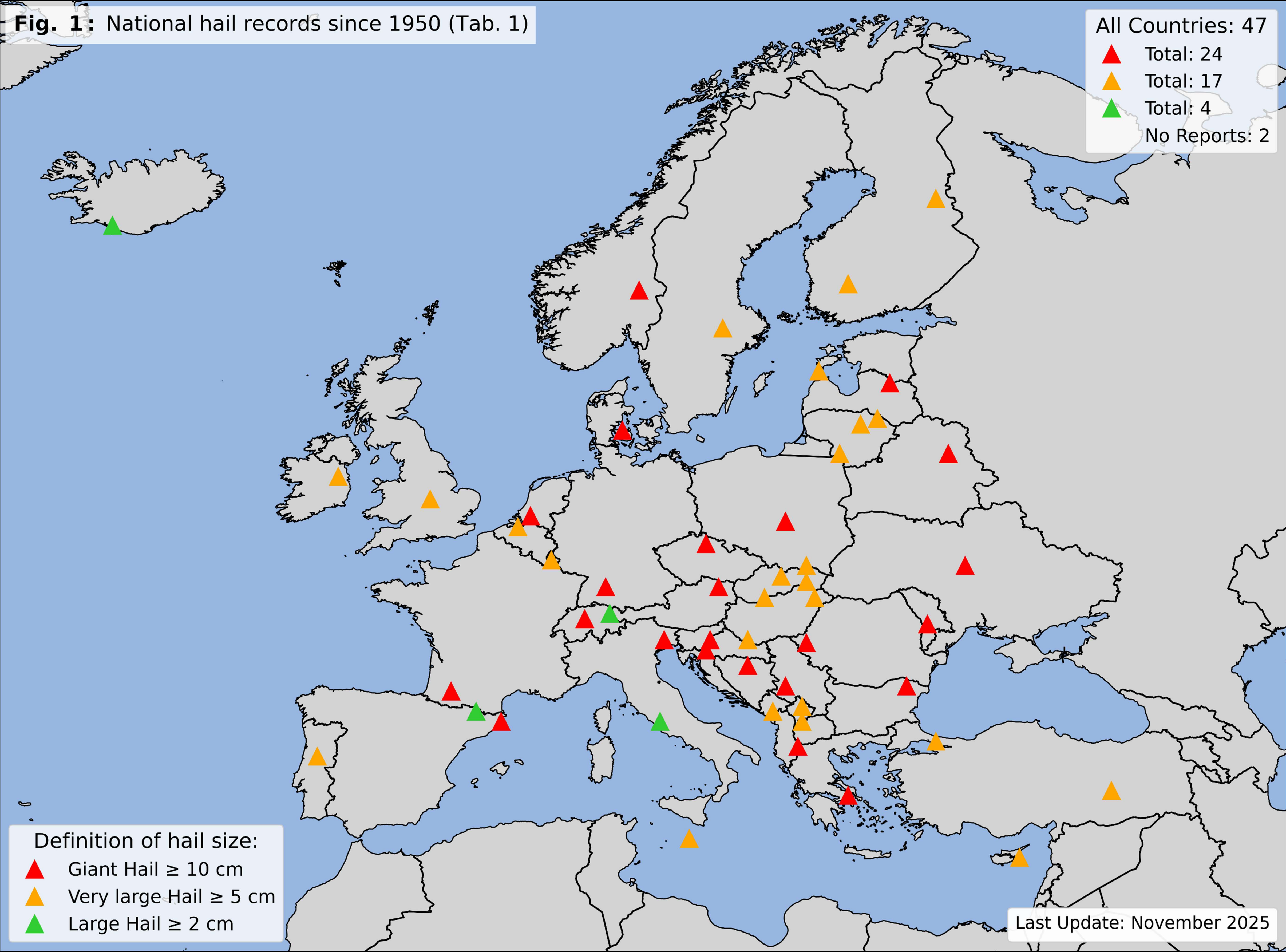
Fig. 2

On June 20, 2016, a hailstone with an estimated diameter of **15 cm** fell in Sânnandrei (Romania).



Fig. 3

On June 24, 2021, a hailstone with an estimated diameter of **14.5 cm** fell in Ziersdorf (Austria).



Tab. 2: Historical records before 1950 (based on literature)

Country	Max. Hailsize	Date	City/Village	QC Level
Spain	21 cm	16/08/1859	Albacete	QC0+
Czech Republic	15 cm	1672	Kolin	QC2
	15 cm	1574	Dolní Cerekev	QC1
Switzerland	13 cm	02/08/1927	Risch	QC1
Hungary	13 cm	19/08/1796	Csokonyavisonta	QC1
England	12 cm	15/07/1558	Sneinton	QC0+

Quality Control (QC):

QC0 as received
QC0+ plausibility checked
QC1 confirmed by reliable source
QC2 scientific case study

The **QC Level** can be used to verify the **reliability of ESWD reports**. For statistical studies, ESSL recommends using QC1 as a lower bound.

Tab. 1: National hail records since 1950 (ERA5 data available → QR Code)

Country	Max. Hailsize	Date	City/Village	QC Level
Italy	19 cm	24/07/2023	Azzano Decino	QC1
Romania	15 cm	20/06/2016	Sânnandrei	QC1
Austria	14.5 cm	24/06/2021	Ziersdorf	QC1
Germany	14.1 cm	28/07/2013	Udingen	QC1
Slovenia	13.8 cm	13/07/2023	Gorenja Lepa Vas	QC1
Poland	13.5 cm	24/06/2021	Tomaszów Mazowiecki	QC1
Serbia	13 cm	22/07/2023	Roge	QC1
France	13 cm	20/06/2022	Vic en Bigorre	QC1
Croatia	13 cm	19/07/2023	Ribnik	QC1
Bulgaria	13 cm	06/08/2023	Dulovo	QC1
Belarus	12 cm	13/07/2016	Talachyn	QC1
Spain	12 cm	30/08/2022	Forallac	QC1
Ukraine	12 cm	18/08/1969	Kivshovata	QC1
Latvia	11.5 cm	11/07/2025	Palsmane	QC1
Russia*	11 cm	25/06/2019	Cheryomukhovo	QC1
Netherlands	11 cm	06/06/1998	Alblasserdam	QC1
Czech Republic	11 cm	01/07/2022	Rovensko pod Troskami	QC1
Bosnia & Herzegovina	11 cm	21/07/2023	Prnjavor	QC0+
	11 cm	22/06/2024	Prnjavor	QC1
Greece	11 cm	04/10/2019	Markópoulon Oropoù	QC1
Moldova	11 cm	26/07/2023	Orac	QC1
Denmark	10.5 cm	06/07/2024	Gyngstrup	QC1
Switzerland	10 cm	28/06/2021	Wolhusen	QC1
Albania	10 cm	19/05/2015	Maliq, Symiz, Vlogisht, Vashtëmi	QC1
Norway	10 cm	04/08/2014	Rena	QC1
Belgium	9.2 cm	26/05/2009	Verrebroek	QC1
Portugal	9 cm	12/06/2021	Tábua	QC1
Finland	9 cm	31/07/2014	Suomussalmi	QC1
	9 cm	08/08/2010	Tampere	QC1
England	9 cm	28/06/2012	Burbage	QC1
Hungary	9 cm	21/07/2023	Marócsa	QC1
	9 cm	09/07/2021	Ipolytölgyes	QC1
	9 cm	07/06/2009	Nyírbogdány, Nyírtura	QC1
Lithuania	9 cm	30/08/2023	Karkliniai	QC1
	9 cm	07/08/2023	Naujikai	QC1
	9 cm	30/07/2005	Rokiskis	QC0+
Kosovo	8.5 cm	24/06/2024	Graboc të Epërm	QC1
Estonia	8 cm	07/08/2023	Torgu	QC1
Slovakia	8 cm	26/08/2023	Jarabá	QC1
	8 cm	24/07/2023	Smilno	QC1
	8 cm	27/06/2019	Košice	QC1
Sweden	8 cm	04/07/1953	Ramnäs	QC1
Turkey*	8 cm	27/07/2017	Istanbul	QC1
	8 cm	09/04/2012	Dutpinar	QC1
Luxembourg	7 cm	19/06/2021	Steinfort, Kleinbellingen, Useldange	QC1
North Macedonia	7 cm	26/06/2024	Tetovo	QC1
Montenegro	5.5 cm	23/06/2022	Podgorica	QC1
Ireland	5 cm	17/03/1995	Summerhill	QC1
Cyprus*	5 cm	20/10/2019	Phrenaros	QC1
Malta	5 cm	09/11/2019	Mellieha	QC1
Andorra	3.5 cm	02/08/2024	Andorra la Vella	QC1
Liechtenstein	3 cm	18/07/2023	Vaduz, Triesen	QC1
Vatican	3 cm	25/02/1984	Vatican-City	QC1
Iceland	2.2 cm	10/12/2013	Hvolsvöllur	QC1
San Marino	No reports	N/A	N/A	N/A
Monaco	No reports	N/A	N/A	N/A

* Countries partially or mainly located in Asia, but also documented in the ESWD.

Keep in mind: The ESSL always determines the **maximum diameter** of a hailstone.

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- 5th European Hail Workshop, Karlsruhe, Germany - 0 to 00 Month 200? Oder
- **Tab. 2: Records before 1950** (based on historical sources)
- National hail records since 1950 (Tab. 1)
- Last Update: November 2025