

# Wind Damage Catalogue of Romania

## 2013-2022



**Ileana Calotescu**  
**Adriana-Silviana Chitez**

CONSPRESS



BUCUREȘTI

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# **Wind Damage Catalogue of Romania 2013-2022**

**Ileana Calotescu**

**Adriana-Silviana Chitez**

**EDITURA**



**CONSPRESS**

**2022**

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**is officially recognized by**  
**the National Scientific Research Council of the Romanian**  
**Ministry of Education and Research**

**Descrierea CIP a Bibliotecii Naționale a României**

**CALOTESCU, ILEANA**

**Wind Damage Catalogue of Romania, 2013-2022** / Ileana Calotescu, Adriana-Silviana Chitez. - București: Conspress, 2022

Conține bibliografie

ISBN 978-973-100-543-0

I. Chitez, Adriana-Silviana

624.042.41

**Number of pages: 250**

**Digital version**

**Acknowledgement** The research presented in this Catalogue was carried out under the “HAZCON” research grant (<https://hazcon.utcb.ro/>), code UTCB-CDI-2022-014 financed according to the provisions of the Methodology for granting the financing of university scientific research to research-development-innovation projects in the Technical University of Civil Engineering Bucharest, Romania, according to the provisions of the Order of the Ministry of Education no. 3, 126 / 11.02.2022, published in the Official Gazette of Romania no. 179 / 23.02.2022.

**CONSPRESS**

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cod 020396, București**

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*In loving memory of my mother,  
Clara, my precious promoter and protector.*

**Adriana-Silviana Chitez**

## Scope

In the past decade, severe convective storms, or thunderstorms, accounted for more than half of accumulated global insured losses according to Swiss Re Institute. Moreover, thunderstorms account for the second largest losses generated by low to medium magnitude natural catastrophes in Europe, after flooding.

Thunderstorms are generally localized phenomena which evolve on a few kilometres and for 10 to 30 minutes producing strong winds. They are associated with particular atmospheric conditions which are generally met during summer months and are characterized by an air downdraft impinging on the ground that gives rise to radial outflows. Visually, they may be identified by the formation of Cumulonimbus clouds, presence of lightning and thunder, by the sudden drop of temperature as well as the sudden increase in wind speed and finally by the heavy precipitation. Severe thunderstorms may produce hail and floods as well as damaging winds and even tornados.

The *Wind Damage Catalogue of Romania 2013-2022* is intended to provide an overview on the wind-induced and wind-related damage produced in Romania from 2013 to 2022, with focus on extreme weather events such as thunderstorms. As information on wind-induced and wind-related damage in Romania is scarce and poorly documented, the main source of information for this book was represented by the mass-media reports published in the aftermath of each windstorm. The data presented in this book was collected by means of an extensive review of national and local mass-media. As the main focus was to document thunderstorm-induced damage, the time-frame considered in this work corresponds to months March to September of the years 2013 up to 2022.

The collected data refers to: location of damage, type of structural and non-structural damage caused by wind and wind-related phenomena such as hail, destruction of forests, crops and agricultural lands as well as witnesses' reports on the event. This information is gathered into *Damage Data Sheets*, each identified by an *Event ID* in the format *YYYY\_MM\_DD\_(CA)\_Location* where:

- YYYY\_MM\_DD* represents the year, month and day of occurrence of the damage event
- (CA)* represents the County abbreviation corresponding to each County in Romania
- Location* represents the city, town or village where damage has occurred.

If a particular windstorm produced damage to several locations distanced at least 20 km apart, than for each location a *Damage Data Sheet* was created. Each *Damage*

*Data Sheet* contains the event narrative section with information about the damage type as described by the mass-media reports, images on damage or cloud formations as well as corresponding references. In total, 218 windstorms were identified within the analysed time frame.

Based on the locations of the identified damage events, a map of damaging winds corresponding to 2013-2022 was elaborated. The map emphasizes that during the studied time interval, most wind-induced and wind-related damage occurred in the the western part of the country.

The authors are hopeful that the data presented within this catalogue will be useful as a first step in the design of safer structures to thunderstorm winds.

December 6<sup>th</sup>, 2022

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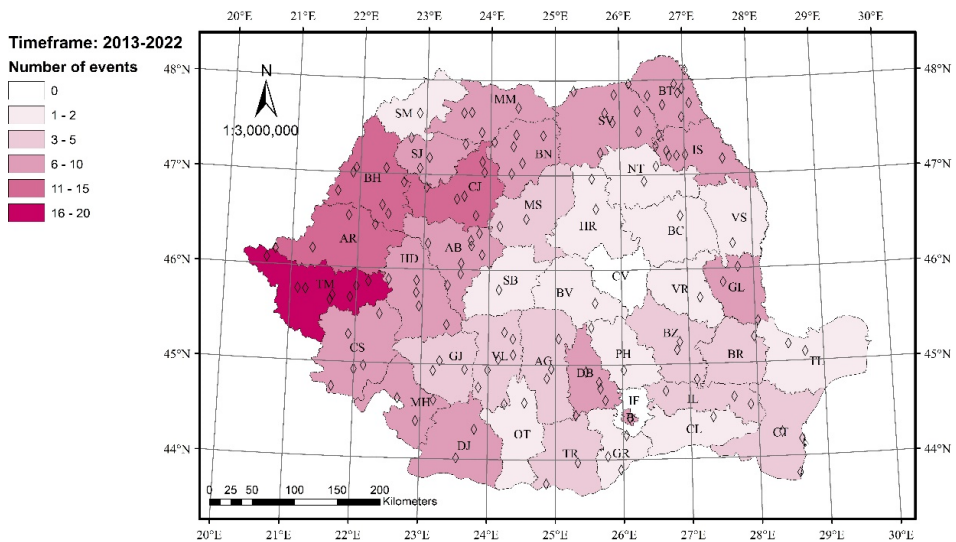
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# Map of damaging winds 2013-2022

Strong winds induced by thunderstorm and their induced forces on structures are not currently introduced as a separate loading case within the Romanian wind code (CR1-1-4, 2012). The primary reason lies in the lack of measured data which would allow to develop a thunderstorm hazard map. As such, structures are not designed to withstand the large forces induced by thunderstorms.

The work presented in this Catalogue is a first step in the identification of the regions that are most prone to thunderstorm damage in Romania. Based on ten years of damage data collected from national and local mass-media, a map of damaging winds of Romania has been elaborated (Fig. 1). Previous versions of the map which were based on a reduced number of years are provided by (Calotescu, 2019; Chitez et. al, 2022).



**Figure 1.** Map of damaging winds 2013-2022

The map does not show the intensity of thunderstorms but rather the number of identified events within each county. Timiș was the most affected one, with 20 damaging winds within 10 years, followed by Cluj, Arad, and Bihor. The northern part of Romania was also affected, with 6-10 windstorms causing damage in the studied time interval. In this regions, forest windthrow was often reported. It is also important to notice that there are several counties where less than 2 windstorms have been reported between 2013-2022. This may arise the question if different mean recurrence intervals for thunderstorm wind velocity should be employed when designing structures in different parts of the country.

The results presented within this Catalogue will hopefully be the basis for the elaboration of a thunderstorm hazard map of Romania in the near future.

# Wind Damage: 2013

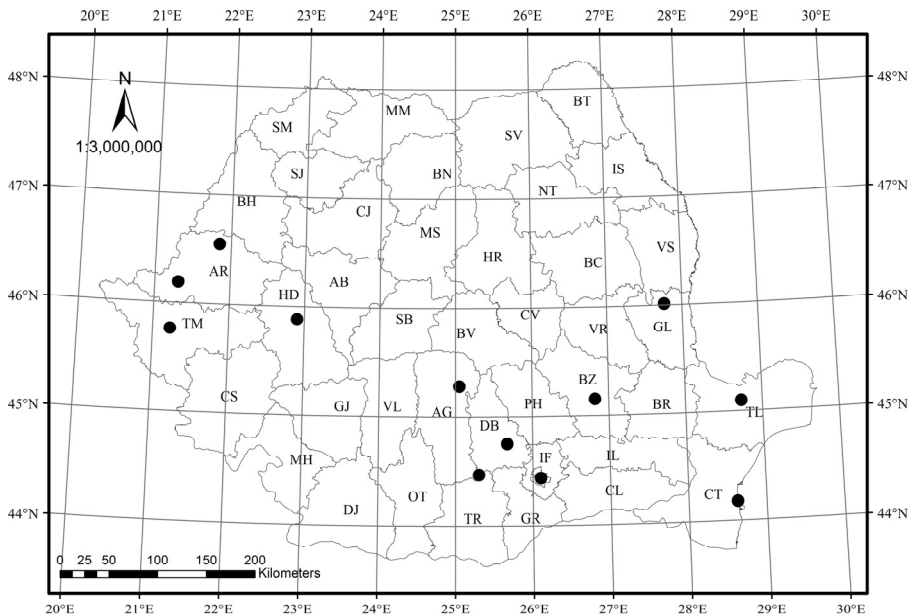
In 2013, a total number of 13 damage events have been identified, their spatial distribution being presented in Figure 2.

*Structural damage* was reported in 76% of events.

Wind produced roof damage to blocks of flats and family houses in 30% and 46% of cases respectively, whereas hail produced cladding damage on one occasion. Collapsed electricity poles were reported after three events, whereas scaffoldings were reported to have collapsed during two events.

*Non-structural damage* was reported in 86% of events.

Broken or uprooted trees were reported in 75% of cases, whereas cars damaged by debris were reported 70% of cases. An overturned truck was mentioned in one event. Finally, one windstorm was accompanied by hail which produced crop damage.



**Figure 2.** Location of wind damage events identified in 2013

**Narrative**

A scaffolding of 25m (height) by 50m (length) collapsed; several trees were broken; the reported wind velocity in mass media was 70 km/h; the storm continued the next day.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://stirileprotv.ro/stiri/actualitate/si-au-vazut-moartea-cu-ochii-dupa-ce-o-schela-s-a-prabusit-in-fata-lor-din-cauza-vantului.html>

**Narrative**

High winds caused the collapse of 5 tents (Baba Novac), 3 billboards (Unirii square), 21 temporary structures and 3 electricity poles; one roof of a family house completely uplifted (Colentina); 140 trees were broken or uprooted and 26 cars were damaged; 17 people were wounded and 1 was killed. Estimated wind speed in mass-media was 80 km/h.



R1\_01



R1\_02



R2\_01

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R1 <http://www.mediafax.ro/social/furtuna-puternica-in-bucuresti-18-oameni-raniti-si-26-de-masini-avariate-45-de-localitati-din-ilfov-si-giurgiu-fara-curent-electric-foto-10897093>

R2 <https://stirileprotv.ro/stiri/actualitate/cod-galben-de-furtuna-cu-grindina-pana-la-ora-17-00-care-sunt-zonele-vizate.html>

R3 <https://www.youtube.com/watch?v=xzcS1vROIJk>



## Narrative

In Cornățelu commune (Bolovani village) 10 houses were damaged at roof level, both tiles as well as steel sheeting roofs were uplifted partially or completely. Tree damage was also reported. Witnesses mentioned seeing black clouds and loss of visibility and assimilated the event to a tornado. The storm lasted for a few minutes. In Tărgoviște several streets were flooded. In Moreni a car was damaged by a tree.



R1\_01



R1\_02



R1\_03

## References

R1 <http://www.ziardambovita.ro/video-comuna-cornatelu-lovita-de-vijelie-copaci-rupti-si-acoperisuri-smulse-de-vant/>

R2 <https://www.youtube.com/watch?v=fmWIVS1cdig>

**Narrative**

In Ghinghești 30 family houses were damaged by the strong wind that whiteness characterized as a tornado; 16 trees were broken or uprooted.



R1\_01



R2\_01



R2\_03

**References**

R1 <https://www.libertatea.ro/stiri/stiri-interne/acoperis-aruncat-la-6-km-o-furtuna-puternica-a-facut-ravagii-in-doua-sate-din-galati-foto-883928>

R2 <https://www.viata-libera.ro/eveniment/42490-furtuna-a-facut-ravagii-si-in-judetul-galati-viata-libera>

**Narrative**

In Câmpulung Muscel, the roof of a 4 stories block of flats was lifted off by the strong wind damaging several cars. An electricity pole collapsed. Estimation of wind speed in mass-media was 80 km/h.



R1\_01



R2\_01

N/A

**References**

R1 <http://stirileprotv.ro/stiri/actualitate/imagini-vijeliei-de-azi-din-romania-care-a-afectat-mai-multe-zone-ale-tarii-galerie-foto.html#photo=13>

R2 <https://epitesti.ro/stiri/stiri-diverse/acoperiul-unui-bloc-a-fost-smuls-de-furtun-la-campulung>

**Narrative**

In Cermei, 20 family houses were affected at roof level (tiles) by a storm that lasted for approximately 5 minutes.



R1\_01

N/A

N/A

**References**

R1 <http://glsa.ro/arad/105163-acoperisurile-de-pe-20-de-case-din-cermei-au-fost-stricate-de-furtuna.html>

**Narrative**

A scaffolding of 4m (height) by 200m (length) collapsed in Arad damaging 5 cars.



R1\_01

N/A

N/A

**References**

R1 <https://stirileprotv.ro/stiri/actualitate/furtuni-si-ploi-torentiale-in-mai-multe-zone-ale-tarii-suvoaiele-au-inundat-cartiere-si-un-spital.html>

**Narrative**

One roof was uplifted in Bucharest (Titan), 11 trees were broken or uprooted and several cars got damaged; the storm also produced flooding.



R1\_01



R2\_01



R2\_02

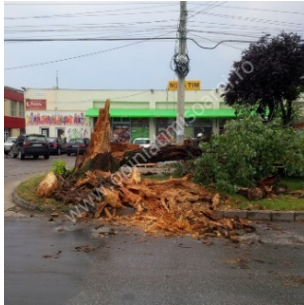
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R1 <http://www.ziare.com/stiri/cod-portocaliu/furtuna-a-facut-ravagii-in-bucuresti-strazi-inundate-copaci-rupti-masini-avariate-1244816>

R2 <http://www.mediafax.ro/social/urmarile-furtunii-din-bucuresti-11-copaci-cazuti-si-mai-multe-masini-avariate-galerie-foto-11101228>

**Narrative**

Tree damage was reported in Timișoara after this storm. Debris damaged several cars.



R1\_01



R1\_02



R1\_03

**References**

R1 <http://www.opiniatimisoarei.ro/furtuna-puternica-la-timisoara-mai-multi-copaci-au-fost-daramati-de-vantul-puternic/06/07/2013>

**Narrative**

The violent storm was accompanied by hail and produced flooding in Buzău. The roof of a block of flats (200 sqm) was uplifted and was thrown into a building across the street at 20m distance. Debris from the roof damaged 5 cars. A tent was destroyed by the strong winds. Also, a truck was overturned injuring the driver. The storm lasted approximately 10 minutes.



R3\_01



R3\_02



R3\_03

**References**

R1 [https://adevarul.ro/locale/buzau/buzau-furtuna-prapad-strazi-inundate-copaci-doborati-1\\_51f28019c7b855ff5676a055/index.html](https://adevarul.ro/locale/buzau/buzau-furtuna-prapad-strazi-inundate-copaci-doborati-1_51f28019c7b855ff5676a055/index.html)

R2 <https://stiridebuzau.ro/reportaj/o-vijelie-venita-din-senin-a-facut-prapad-in-municipiul-buzau-2607.html>

R3 <https://www.youtube.com/watch?v=RjtaTEax4D4>

R4 <https://www.youtube.com/watch?v=kEAA-Yr1J9U>

R5 <https://www.youtube.com/watch?v=Tumt1jpd2ZY>



**Narrative**

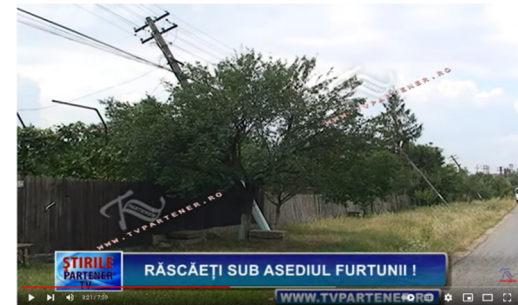
The storm that hit Șelaru and Râscăieți villages in Dâmbovița County lasted for less than 10 minutes. In Râscăieți, the roofs of 2 houses were completely uplifted, whereas as for 4 houses only the steel sheeting was uplifted. The roofs of 34 other houses suffered damage in various percentages. In Șelaru, 25 houses were affected out of which 3 roofs were completely destroyed. The other 22 roofs were 60% damaged. Five electricity poles were overturned. Tree damage was also reported. Sunflower and corn crops were damaged by hail. The estimated wind velocity in mass-media was 90 km/hr.



R3\_01



R3\_02



R3\_03

**References**

R1 [http://www.jurnaldedambovita.ro/jdb\\_articol--natura-dezlantuita-in-dambovita,17026.html](http://www.jurnaldedambovita.ro/jdb_articol--natura-dezlantuita-in-dambovita,17026.html)

R2 <http://www.ziardambovita.ro/video-rascaieti-si-selaru-sub-asediul-furtunii/>

R3 <http://incomod-media.ro/ziar/prapad-la-selaru-si-rascaieti-furtuna-a-produs-pagube-materiale-insemnate-in-sudul-judetului/>

R4 <https://www.youtube.com/watch?v=v6N44F8srfq&t=22s>

**Narrative**

The storm produced considerable damage in Deva (NW part of the city): 7 steel sheeting roofs of blocks of were uplifted, claddings were affected by roof debris of buildings across the street (approx. 60m), 11 cars were damaged by debris or trees. In the zoo approximately 15-20 fir trees of 30 cm diameters were broken at midlevel. The storm lasted for approximately 5-10 minutes.



R3\_01



R1\_02



R1\_03

**References**

R1 <http://stirileprotv.ro/stiri/actualitate/vreme-de-toamna-in-vestul-tarii-o-furtuna-puternica-a-facut-ravagii-la-deva.html>

R2 <https://www.libertatea.ro/stiri/stiri-interne/o-vijelie-puternica-a-facut-prapad-la-deva-copaci-cazuti-pesto-masini-acoperisuri-luate-de-vant-si-strazi-inundate-foto-918276>

R3 [http://www.servuspress.ro/dezastrul-de-dupa-furtuna-care-maturat-deva-luni-dupa-amiaza\\_75598.html](http://www.servuspress.ro/dezastrul-de-dupa-furtuna-care-maturat-deva-luni-dupa-amiaza_75598.html)

R4 <https://www.youtube.com/watch?v=jRZTcd9JMUU>

**Narrative**

A tornado hit Cataloi village and damaged the roofs of 40 houses. Several trees were broken or uprooted. The storm lasted for 40 seconds, the estimated wind velocity in mass-media being 100 k/h.



R1\_01



R1\_02



R1\_03

**References**

- R1 <http://stirileprotv.ro/stiri/actualitate/furtuna-puternica-in-judetul-tulcea-autoritatile-spun-ca-ar-fi-vorba-despre-o-tornada.html>  
R2 <https://www.digi24.ro/stiri/actualitate/evenimente/video-viituri-si-tornade-in-judetul-tulcea-118414>  
R3 <http://www.ziuconstanta.ro/clienti/litoral-tv/litoral-tv-o-tornada-a-maturat-un-sat-din-judetul-tulcea-469797.html>

# Wind Damage: 2014

In 2014, a total number of 25 damage events have been identified, their spatial distribution being presented in Figure 3.

*Structural damage* was reported in 72% of events.

Damage to blocks of flats was reported in 28% of cases, whereas damage for family houses was reported for approximately 35% of events. Collapsed electricity poles were reported after 5 events, whereas telecommunication or transmission towers were damaged on 2 occasions.

*Non-structural damage* was reported in 96% of events.

Broken or uprooted trees were reported in 76% of cases, whereas cars damaged by debris were reported 48% of events. Forest windthrow was reported after 2 windstorms, whereas crop damage resulted after 3 windstorms, 2 being produced by hail.

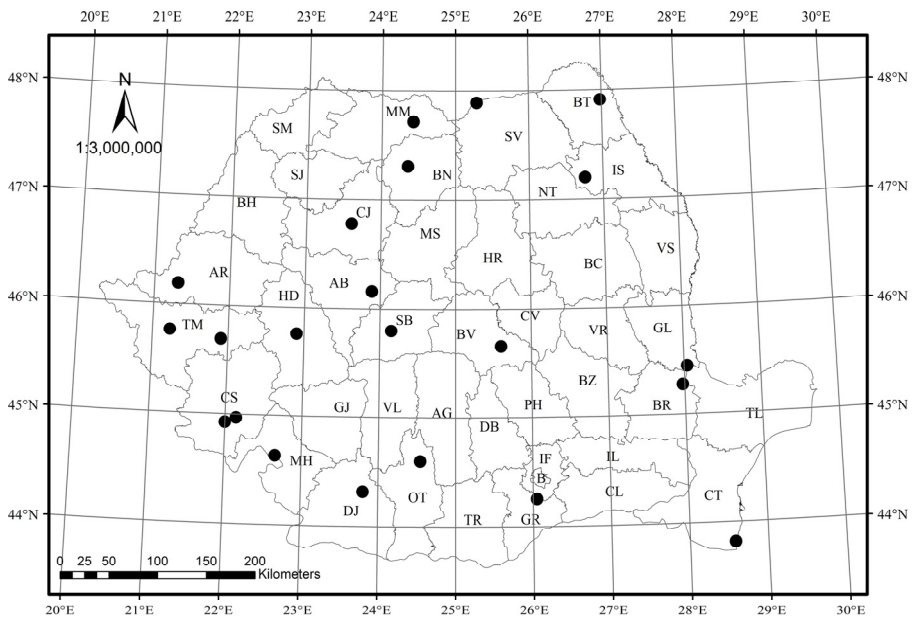


Figure 3 Location of wind damage events identified in 2014

**Narrative**

The roof of a block of flats was uplifted and landed on a nearby house in Timișoara. Three people were injured. Cladding of two blocks of flats was dislocated by the strong wind. Tree damage was also reported.



R2\_01



R2\_01



R2\_03

**References**

R1 <http://www.tion.ro/furtuna-puternica-la-timisoara-acoperisul-unui-bloc-a-zburat-pesto-o-casa/1394956>

R2 <https://www.pressalert.ro/2014/03/doi-copii-si-o-femeie-au-fost-raniti-dupa-ce-acoperisul-unui-bloc-fost-smuls-de-vantul-puternic/>

R3 [https://www.youtube.com/watch?v=PDwfWWTp-\\_ws](https://www.youtube.com/watch?v=PDwfWWTp-_ws)

**Narrative**

The roof of an industrial building was uplifted by wind and landed on two cars. Debris from the roof broke the windows of two appartements in a nearby block of flats. An antennae tower located on top of a building was damaged. The roof of a block of flats was uplifted and landed on four cars. Tree uprooting and windthrow was also reported causing damage to nearby parked cars. The cladding of a block of flats (thermal insulation) was ripped off by the strong wind. Two billboards collapsed.



R1\_01



R2\_01



R2\_02

**References**

R1 <http://newsbv.ro/2014/03/16/vantul-face-prapad-brasov/>

**Narrative**

The storm produced damage in Lugoj where the roof of a family house was detached and thrown on a nearby parked car by the strong wind. Trees were broken. Torrential rain accompanied the storm.



R1\_01

N/A

N/A

**References**

R1 <https://www.opiniatimisoarei.ro/furtuna-a-facut-ravagii-la-lugoj-acoperisuri-smulse-copaci-rupti-strazi-inundate-si-pana-de-curent-electric/25/05/2014>

**Narrative**

The storm caused the collapse of an electricity pole and several trees in Cluj-Napoca. Two cars were damaged by trees.



R1\_01



R2\_01



R2\_02

**References**

R1 <https://someseanul.ro/furtuna-a-facut-ravagii-la-cluj-un-stalp-si-un-copac-doborati-pesto-masini/>



**Narrative**

The main damage recorded after this storm in Brăila was tree damage, one of which fell on the roof of a family house.



R1\_01

N/A

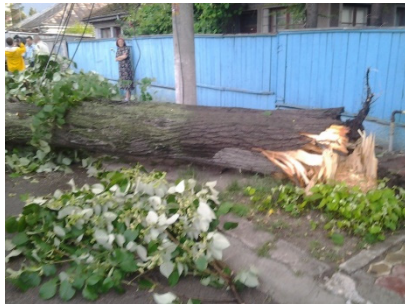
N/A

**References**

R1 [https://adevarul.ro/locale/braila/furtuna-marti-seara-doborat-mai-copaci-braila-nu-s-au-inregistrat-pagube-majore-1\\_539869af0d133766a87d6192/index.html](https://adevarul.ro/locale/braila/furtuna-marti-seara-doborat-mai-copaci-braila-nu-s-au-inregistrat-pagube-majore-1_539869af0d133766a87d6192/index.html)

**Narrative**

Tree damage was recorded after this storm in Galați. One tree fell on the electricity lines and produced the collapse of a pole.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.viata-libera.ro/eveniment/55257-galati-viata-libera-cotidian-stalp-de-analta-tensiune-cazut-din-cauza-furtunii-vezi-unde-au-mai-fost-probleme-in-ora%C8%99>

**Narrative**

The storm produced damage in Hunedoara where several trees were uprooted damaging nearby parked cars. The roof (steel sheeting) of a four-story block of flats was uplifted. Another roof (asbestos cement tiles) of a block of flats was also detached damaging nearby cars.



R1\_01



R1\_02



R1\_03

**References**

R1 [http://adevarul.ro/locale/hunedoara/foto-video-furtuna-violenta-facut-ravagii-strazile-hunedoara-1\\_539757280d133766a876d9c8/index.html](http://adevarul.ro/locale/hunedoara/foto-video-furtuna-violenta-facut-ravagii-strazile-hunedoara-1_539757280d133766a876d9c8/index.html)

R2 [https://adevarul.ro/locale/hunedoara/copaci-prabusiti-cauza-vijeliei-abatute-hunedoara-1\\_5324cb5e0d133766a8ef43fa/index.html](https://adevarul.ro/locale/hunedoara/copaci-prabusiti-cauza-vijeliei-abatute-hunedoara-1_5324cb5e0d133766a8ef43fa/index.html)

**Narrative**

The roof of a 8 story block of flats was detached by the strong wind in Drobeta Turnu Severin during a storm that lasted for less than 10 minutes. Two trees were broken.



R1\_01

N/A

N/A

**References**

R1 <http://www.b1.ro/stiri/eveniment/acoperisul-unui-bloc-din-drobeta-turnu-severin-spulberat-de-o-furtuna-care-a-durat-zece-minute-84668.html>

**Narrative**

Two people were injured after a tree fell on their car during the storm that affected Sibiu. The storm produced damage to several billboards.



R1\_01

N/A

N/A

**References**

R1 <https://sibiu100.ro/eveniment/10883-furtuna-in-sibiu-doua-persoane-au-ajuns-la-spital-dupa-ce-un-copac-a-cazut-pesto-masina-in-care-se-aflau/>

**Narrative**

The storm occurred in the afternoon. Several trees were broken falling on parked cars. The roof of a block of flats was almost uplifted by the strong wind.



R2\_01



R2\_01



R2\_02

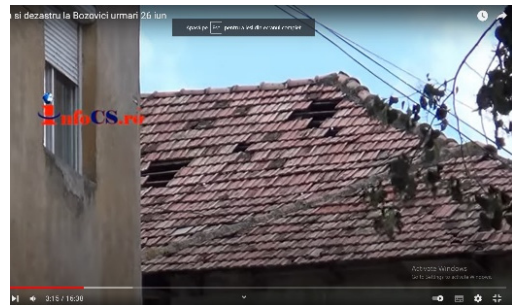
**References**

R1 <https://cvlpress.ro/24.06.2014/craiova-copaci-doborati-de-furtuna-si-masini-avariate/>

R2 <https://www.gds.ro/Local/2014-06-24/Craiova:-Copaci-prabusiti-in-urma-furtunii-din-aceasta-dupa-amiaza/>

**Narrative**

The roofs of approximately 600 houses were damaged by hail in Bozovici. Cladding damage was also reported. Other damage included crops affected by hail, broken trees, collapse of electricity poles. The size of the hail was compared to ping-pong balls.



R2\_01



R3\_01



R3\_02

**References**

R1 <https://www.mediafax.ro/social/furtuna-in-caras-severin-600-de-case-au-ramas-fara-acoperisuri-si-ferestre-12837345>

R2 <https://www.youtube.com/watch?v=7HF2BNbHakI>

R3 <https://www.youtube.com/watch?v=CSrcinpBEew>

**Narrative**

The storm that lasted for less than 20 minutes (22:00 local time) induced collapse of 6 medium voltage transmission towers in Mogoșești. Roofs of 40 houses were partially or completely uplifted by the strong wind in Varlaam and Mogoșești villages. Both greenhouses as well as gardens were affected. The Comana forest was affected by the strong winds, damage being reported to hundreds of square meters. People compared this storm with an earthquake.



R1\_01



R1\_02



R3\_01

**References**

R1 <https://www.facebook.com/media/set/?set=a.249967501869956.1073742156.100005701234007&type=1&l=aea4687ca6>

R2 <http://stirileprotv.ro/stiri/actualitate/40-de-case-distruse-si-un-sat-intreg-in-bezna-oamenii-din-giurgiu-cred-ca-au-fost-loviti-de-o-tornada-a-luat-tot.html>

R3 <http://www.giurgiuveanul.ro/stiri/foto-padurea-comana-afectata-de-furtuna-de-aseara-imaginea-este-una-de-cosmar/#more-14119>



### Narrative

The roof of a block of flats was uplifted by the strong wind in Drobeta Turnu Severin.



R1\_01



R1\_02



R2\_01

### References

R1 <https://www.mediafaxfoto.ro/Preview.aspx?Id=6847525>

**Narrative**

The storm lasted for approximately 10 minutes and produced the collapse of an electricity pole and several trees in Timișoara. Car damage was reported.



R2\_01



R2\_02



R2\_03

**References**

R1 <http://www.tion.ro/furtuna-in-timisoara-masini-distruse-un-copac-si-un-stalp-doborati-de-vant/1432386>

R2 <http://www.opiniatimisoarei.ro/furtuna-abatuta-pest-timisoara-a-prabusit-copaci-pe-masini-sau-pe-strazi-foto/25/06/2014>

### Narrative

The roof of a block of flats was detached by the strong wind in Arad. Several trees were broken falling on cars.



R1\_01



R1\_02



R1\_03

### References

R1 <https://www.aradon.ro/aradon-stirile-judetului-arad/furtuna-de-proportii-la-arad-259548/>

Event ID: 2014-07-09\_(BN)Salva

Date: July 9<sup>th</sup> 2014

### Narrative

The roofs of 15 family houses (mainly clay tiles) were damaged by the strong wind in Salva. Cars damaged by debris were also reported. The storm lasted for approximately 10-15 minutes.

N/A

N/A

N/A

### References

R1 <https://timponline.ro/mai-multe-case-din-salva-au-ramas-fara-acoperisuri-in-urma-unei-vijelii-onul-a-fost-un-ciclon/>

R2 <http://arhiva.bistriteanu.ro/2018/furtuna-a-facut-prapad-la-salva-mai-multe-acoperisuri-au-fost-luate-de-vant-1404920496123.html>

**Narrative**

The storm that affected Vişeu de Sus produced damage to the roof of a family house. Tree damage was also reported with one tree killing a person. A house was set on fire by lightning.



R1\_01



R2\_01



R2\_02

**References**

R1 <http://jurnalul.ro/stiri/observator/o-batrana-din-maramures-a-murit-strivita-de-un-copac-smuls-din-radacini-de-furtuna-672574.html>

R2 <https://www.sighet247.ro/s/foto-video-viseu-de-sus-o-femeie-a-murit-fiind-strivita-de-un-copac-doborat-de-furtuna-iar-o-casa-a-fost-lovita-de-fulger/>

### Narrative

Mainly tree damage was reported after the storm which subsequently damaged several cars.



R1\_01



R2\_01



R2\_02

### References

R1 <http://www.opiniatimisoarei.ro/se-prabusesc-copaci-pe-banda-rulanta-la-timisoara-si-provoaca-distrugeri-cum-arata-orasul-dupa-ultima-ploaie-foto/09/07/2014>

**Narrative**

Tens of houses in Hănești village were affected by what people described as a tornado. Two houses were completely destroyed, whereas 37 houses were partially damaged. People recount that roofs of houses were lifted by the strong wind and thrown over 200 m away. The storm took place at approximately 13:00 local time and lasted for approximately 20 minutes. Tree damage was also reported.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.ziaruldeiasi.ro/stiri/video-sat-din-romania-distrus-de-o-tornada-imagini-de-dupa-furtuna--61739.html>

R2 <https://www.botosaninews.ro/201337/eveniment/dezastru-la-hanesti-zeci-de-case-distruse-de-o-tornada/>

R3 [https://www.youtube.com/watch?v=Y1c\\_4\\_e8H-4](https://www.youtube.com/watch?v=Y1c_4_e8H-4)

**Narrative**

A tornado hit Mangalia with winds of over 100 km/h in velocity as reported by mass-media. The storm started at approximately 19:00 local time and lasted for 10 minutes. It was accompanied by heavy rain which caused flooding. Tree damages as well as damaged produced on the temporary beach structures was reported.



R1\_01



R2\_02



R2\_03

**References**

R1 <https://www.digi24.ro/stiri/actualitate/evenimente/furtuna-cu-aspect-de-tornada-pe-litoral-in-mangalia-vantul-a-suflat-aseara-cu-100-de-kilometri-la-ora-268251>

R2 <http://www.gherlainfo.ro/cititorii-in-actiune-e-haos-pe-plaja-la-saturn-asa-ceva-nu-am-mai-vazut-o-furtuna-puternica-a-distrus-totul-in-cale/>



**Narrative**

The storm that affected Stolniceni-Prăjescu commune was accompanied by hail as large as hen eggs. The hail produced damage to tens of houses both roofs as well as cladding being affected. Other damage was reported for greenhouses (glass roofs), gates as well as hundreds of hectares of crop fields. One person was injured by hail.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.7iasi.ro/foto-iadul-s-a-dezlantuit-aseara-in-comuna-ieseana-stolniceni-prajescu/>

R2 <https://arhiva.bzi.ro/furtuna-dezlantuita-a-facut-ravagii-in-judetul-iasi-sute-de-gospodarii-sunt-afectate-445039>

R3 <https://bittv.info/inundatii-la-pascani-din-cauza-unor-pompe-nefunctionale-furtuna-a-facut-prapad-in-gospodariile-oamenilor/>

**Narrative**

Approximately 55 hectares of forest (mainly fir trees) were affected by the storm that occurred around 22:00 local time.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://evz.ro/55-de-hectare-de-padure-distruse-o-tornada.html>

R2 [https://www.romaniatv.net/o-furtuna-cu-aspect-de-tornada-a-doborat-o-padure-intreaga-din-suceava-video\\_159867.html](https://www.romaniatv.net/o-furtuna-cu-aspect-de-tornada-a-doborat-o-padure-intreaga-din-suceava-video_159867.html)

R3 <https://arhiva.bzi.ro/zeci-de-hectare-de-padure-distruse-de-o-furtuna-cu-aspect-de-tornada-foto-446572>

R4 <https://stirileprotv.ro/stiri/actualitate/o-furtuna-cu-aspect-de-tornada-a-doborat-o-padure-intreaga-in-suceava.html>

**Narrative**

The storm caused the collapse of a traffic light pole in Alba Iulia as well as 3 electricity poles in Tiur. In Blaj, tree damage was reported after the storm.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://alba24.ro/foto-video-furtuna-a-pus-la-pamant-un-semafor-la-alba-iulia-si-trei-stalpi-de-telefonie-la-intarea-in-localitatea-tiur-trafficul-in-zona-a-fost-restrictionat-337248.html>

**Narrative**

The strong storm started at approximately 23:00 local time. The strong wind caused damage to 100 houses in Borlovenii Noi and 150 houses in Cornea, the damage being localized mainly at roof level (both tile roofs as well as steel sheeting roofs). Tree damage was also reported.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.infocs.ro/exclusiv-video-furtuna-transformata-tornada-la-borlovenii-noi-caras-severin/>

R2 <https://www.youtube.com/watch?v=iRNZT8x-DnI>

**Narrative**

The strong storm started at approximately 23:00 local time. The strong wind caused damage to 100 houses in Borlovenii Noi and 150 houses in Cornea, the damage being localized mainly at roof level (both tile roofs as well as steel sheeting roofs). Tree damage was also reported.



R1\_01



R1\_02



R1\_03

**References**

R1 [https://adevarul.ro/locale/slatina/fotovideo--bloc-scornicestilasat-acoperis-furtuna-1\\_53fa2aec0d133766a88b9923/index.html#gallery\\_currentImage](https://adevarul.ro/locale/slatina/fotovideo--bloc-scornicestilasat-acoperis-furtuna-1_53fa2aec0d133766a88b9923/index.html#gallery_currentImage)

R2 <https://www.youtube.com/watch?v=LSGFZ8AnD1w>

# Wind Damage: 2015

In 2015, a total number of 17 damage events have been identified, their spatial distribution being presented in Figure 4.

*Structural damage* was reported in 70% of events.

Wind produced roof damage to blocks of flats and family houses in 35% and 23% of events respectively, whereas hail produced cladding damage on three occasions. The collapse of a transmission tower was reported in one event, whereas electricity poles were damaged in two events. Structures such as an industrial building, a billboard as well as a greenhouse were also reported to have suffered damage.

*Non-structural damage* was reported in 88% of events.

Broken or uprooted trees were reported in 41% of events, whereas cars damaged by debris were reported 58% of cases. An overturned truck was mentioned in one event. Finally, one windstorm was accompanied by hail which produced crop damage after 5 windstorms.

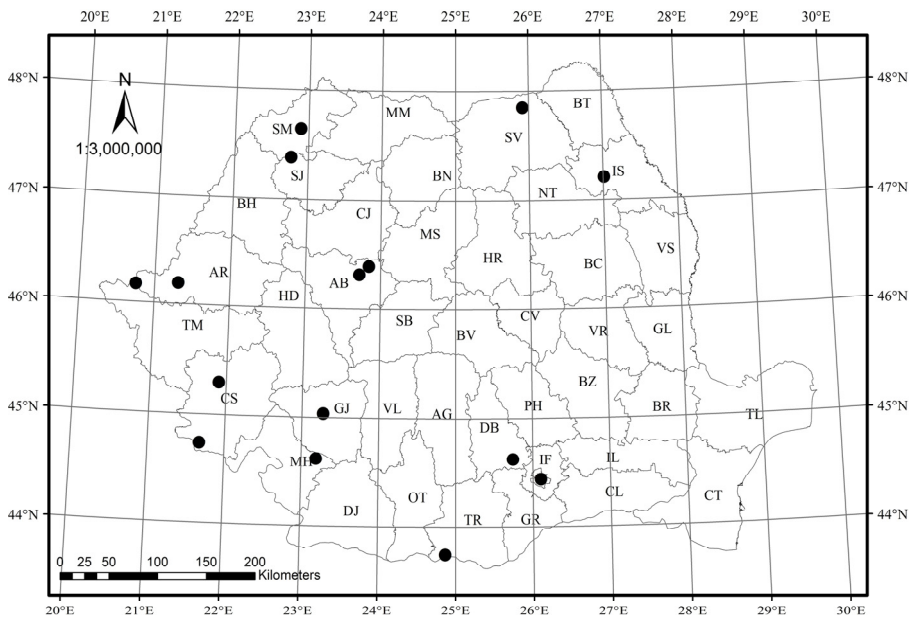


Figure 4. Location of wind damage events identified in 2015

Event ID: 2015-04-20(AB)Aiud

Date: April 20<sup>th</sup> 2014

**Narrative**

The roof (asbestos cement) of a block of flats was uplifted and landed on eight nearby parked cars in Aiud.

N/A

N/A

N/A

**References**

R1 <http://romanioliberal.ro/actualitate/eveniment/furtuna-in-aiud-si-ocna-mures--autoturisme-avariate-si-acoperisuri-smulse-de-vant-375566>

**Narrative**

The roof (asbestos cement) of a block of flats was uplifted and landed on eight nearby parked cars in Ocna Mureş.



R1\_01

N/A

N/A

**References**

R1 <https://www.ocnamuresinfo.ro/mai-multe-masini-din-ocna-mures-au-fost-avariate-dupa-ce-o-parte-din-acoperisul-unui-bloc-s-a-prabusit-din-cauza-vantului-2399.html>

R2 <http://romanalibera.ro/actualitate/eveniment/furtuna-in-aiud-si-ocna-mures--autoturisme-avariate-si-acoperisuri-smulse-de-vant-375566>



### Narrative

The roof (steel sheeting) of a four-story block of flats was uplifted by the strong wind in Nădlac.



R1\_01



R1\_02



R1\_03

### References

R1 <http://www.aradon.ro/furtuna-de-azi-noapte-a-luat-pe-sus-acoperisul-unui-bloc-din-nadlac/1534261>

**Narrative**

Hail as large as a dove's egg damaged crops and gardens in Caraș Severin County, Moldova Nouă. Broken windows as well as damaged cars were also reported. The layer of hail reached half a meter in thickness in some places. Flooding was reported after the event.



R2\_01



R2\_02



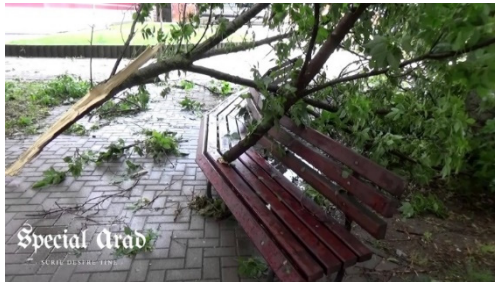
R2\_03

**References**

- R1 <https://stirileprotv.ro/stiri/actualitate/gradini-distruse-si-masini-avariate-in-judetele-caras-severin-si-mures-a-plouat-cu-gheata-de-marimea-oulor-de-porumbel.html>
- R2 <https://www.radioresita.ro/actualitate/ploaia-abundenta-a-inundat-gospodarii-din-zona-moldova-noua-oravita>
- R3 <https://evz.ro/inundatii-si-avarii-la-reteaua-electrica-cum-au-trecut-noaptea-banatenii-aflati-sub-cod-portocaliu-de-intemperii.html>
- R4 <https://www.banatulmeu.ro/furtuna-a-facut-ravagii-in-banat-noaptea-trecuta/>

**Narrative**

Tree damage was reported in Arad following the storm.



R2\_01



SR3\_01

N/A

**References**

R1 <https://www.gandul.ro/stiri/furtuna-a-facut-prapad-la-arad-mai-multe-locuinte-au-fost-inundate-si-copacii-au-cazut-pest-masini-14328499>

R2 <https://click.ro/actualitate/national/locuinte-inundate-si-masini-avariate-la-arad-in-153451.html>

R3 <https://www.businessmagazin.ro/actualitate/arad-locuinte-inundate-si-masini-avariate-de-crengi-si-copaci-in-urma-unei-furtuni-14328497>

**Narrative**

The storm that lasted a for a few minutes was accompanied by extremely large hail (compared to a goose egg) that produced damage to claddings of houses in Derșida, cars and crops. The strong wind produced roof damage as well collapse to several high voltage transmission towers. In Bobota the hail was smaller in size but affected gardens and crops.



R1\_01



R1\_02



R1\_03

**References**

R1 [https://adevarul.ro/locale/zalau/foto-scene-apocaliptice-intr-o-comuna-salaj-bucati-uriase-grindina-distrus-intalnit-cale-1\\_556418b1cfbe376e359a3a11/index.html#photo-head](https://adevarul.ro/locale/zalau/foto-scene-apocaliptice-intr-o-comuna-salaj-bucati-uriase-grindina-distrus-intalnit-cale-1_556418b1cfbe376e359a3a11/index.html#photo-head)

**Narrative**

In Ardud, 600 houses were damaged by hail as large as a hen's egg (52mm) in less than 5 minutes. Over 400 hectares of strawberry fields were damaged. In Cionchești 10 low voltage poles collapse. Hail damage to cars was produced in Satu Mare.



R2\_01



R1\_02



R4\_05

**References**

R1 <https://www.digi24.ro/regional/digi24-oradea/ploaie-de-gheata-in-satu-mare-sute-de-case-au-fost-distruse-de-grindina-in-ardud-396338>

R2 <https://www.hotnews.ro/stiri-esential-20187479-video-furtuna-grindina-satu-mare.htm>

R3 <https://www.informatia-zilei.ro/sm/sedinta-la-prefectura-pentru-evaluarea-pagubelor-produse-de-furtuna/>

R4 [https://www.satumareonline.ro/cp/7/16445/Grindina-de-marimea-oului-de-gaina-in-furtuna-anului-la-Satu-Mare,](https://www.satumareonline.ro/cp/7/16445/Grindina-de-marimea-oului-de-gaina-in-furtuna-anului-la-Satu-Mare)

Event ID: 2015-06-10\_(B)București

Date: June 10<sup>th</sup> 2015

### Narrative

The event was accompanied by hail. Several trees were broken or uprooted damaging cars. A billboard collapsed.



R1\_01

N/A

N/A

### References

R1 <http://m.ziare.com/social/furtuna-in-bucuresti-masini-distruse-copaci-doborati-1367725>

R2 <http://www.aktual24.ro/furtuna-in-bucuresti-bucati-uriase-de-grindina/>

R3 <https://www.youtube.com/watch?v=v4wPT3f4oLY>

### Narrative

Hundreds of cars were damaged by hail in Reșița due to this event.



R1\_01



R1\_02



R1\_03

### References

R1 <https://www.infocs.ro/video-grindina-a-ciuruit-masinile-resitenilor-pagube-de-zeci-de-mii-de-lei/>

R2 <https://stirileprotv.ro/stiri/actualitate/vin-furtunile-si-grindina-vremea-se-mentine-calda-insa-vor-cadea-si-ploi-torentiale-prognoza-pana-sambata-13-iunie.html>

R3 [https://www.youtube.com/watch?v=J\\_nzZyEJRQ0&t=9s](https://www.youtube.com/watch?v=J_nzZyEJRQ0&t=9s)

**Narrative**

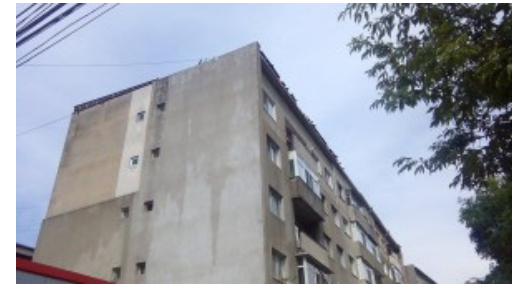
The storm that affected Turnu Măgurele was accompanied by hail as large as a dove's egg. The wind uplifted the roofs of a block of flats and produced tree damage. An electricity pole collapsed.



R1\_01



R1\_02



R2\_01

**References**

R1 <http://m.turnucustiri.ro/stiri-locale/9048-o-furtuna-puternica-a-facut-ravagii-la-turnu-magurele-galerie-foto>

R2 <http://www.stirideturnu.ro/furtuna-a-facut-ravagii-in-turnu-masini-avariate-de-acoperisul-unui-bloc-si-cabluri-electrice-la-pamant/>



**Narrative**

In Tîrgu Frumos, the roofs of 8 houses were uplifted by the strong wind. Hail produced damage to greenhouses and crops. Several trees were broken in Iași damaging cars.



R1\_01



R2\_01



R3\_01

**References**

R1 [http://www.romania-actualitati.ro/furtuni\\_puternice\\_au\\_facut\\_ravagii\\_in\\_vaslui\\_si\\_iasi-78773](http://www.romania-actualitati.ro/furtuni_puternice_au_facut_ravagii_in_vaslui_si_iasi-78773)

R2 <https://arhiva.bzi.ro/dezastru-doliu-in-zeci-de-familii-din-iasi-daca-privesti-aceste-imagini-nu-vei-mai-avea-liniste-foto-video-506631>

R3 <https://arhiva.bzi.ro/prapad-la-iasi-masini-distruse-de-copacii-doborati-de-furtuna-foto-506249>

**Narrative**

The storm that lasted for approximately 10 minutes was accompanied by hail which damaged crops and gardens. Moreover, the roofs of several family houses were uplifted.



R2\_01



R2\_02



R2\_03

**References**

R1 <http://incomod-media.ro/ziar/dambovita-grindina-a-distrus-culturile-agricole-pe-zeci-de-hectare-in-zona-racari-foto/>

R2 <http://dambovita24.ro/ravagii-in-racaridupa-o-furtuna-cu-grindina/>

R3 <http://stirileprotv.ro/stiri/actualitate/grindina-pana-la-glezne-in-judetul-dambovita-o-furtuna-puternica-a-distrus-zeci-de-hectare-de-recolta-in-doar-10-minute.html>

**Narrative**

Tree damage was reported in Târgu Jiu after this storm. A fire was produced by lightning at a warehouse.



R1\_01

N/A

N/A

**References**

R1 <http://www.gorjeanul.ro/actualitate/furtuna-a-facut-pagube-la-targu-jiu>

R2 <https://gorjeanul.ro/incendiu-provocat-de-trasnet/>

**Narrative**

The strong wind produced by the storm uplifted the roof of a dormitory (approximately 675 sqm). Part of the debris was carried 100 m by the wind and hid the cladding of a nearby block of flats (80 sqm damage). Tree uprooting was also reported.



R3\_01



R3\_02



R3\_03

**References**

R1 <https://www.crainou.ro/2015/07/21/furtuna-de-duminica-a-smuls-intreg-acoperisul-internatului-colegiului-agricol-andronic-motrescu-din-radauti/>

R2 <https://evz.ro/tornada-in-zona-radauti-mama-si-fiu-loviti-de-trasnet-foto.html>

R3 <https://suceavanews.ro/177010/general/stirea-zilei/acoperisul-internatului-liceului-agricol-din-radauti-smuls-de-vijelie/>

**Narrative**

Damage reported by the mass media include damage to the roof (steel sheeting) of an apartment building, tree damage, flooding and an overturned truck.



R1\_01



R1\_02

N/A

**References**

R1 <https://renasterea.ro/o-furtuna-de-vara-a-facut-ravagii-in-arad/>

R2 <https://specialarad.ro/prapad-in-60-de-minute-la-arad-masini-inecate-strazi-inundate-copaci-rupti-foto/>

**Narrative**

The roof of a factory was uplifted by the strong wind (100 sqm).



R1\_01

N/A

N/A

**References**

R1 <http://www.radiocraiova.ro/mehedintiul-lovit-de-furtuna/>

R2 <https://ziare.com/severin/stiri-actualitate/o-furtuna-puternica-a-spulberat-acoperisul-unei-fabrici-de-confectii-din-strehaia-5628697>

**Narrative**

Damage occurred on the Arad-Nădlac highway where anti-glare poles were uplifted.



R1\_01

N/A

N/A

**References**

- R1 <https://ziare.com/stiri/trafic/furtuna-in-vestul-tarii-stalpii-de-pe-autostrada-arad-nadlac-spulberati-de-vant-circulatie-ingreunata-1378014>
- R2 <https://www.aradon.ro/aradon-stirile-judetului-arad/ecourile-balizelor-zburatoare-de-pe-autostrada-193263/>
- R3 <https://stirileprotv.ro/stiri/actualitate/furtuna-pe-autostrada-a-l-zeci-de-soferi-au-facut-pana-dupa-ce-panourile-reflectorizante-au-fost-rupte-de-vantul-puternic.html>

# Wind Damage: 2016

In 2016, a total number of 18 damage events have been identified, their spatial distribution being presented in Figure 5.

*Structural damage* was reported in 83% of events.

Block of flats sustained damage in 30% of cases, whereas damage to family house was reported in 50% of the cases. Other type of buildings that were reported to have been damaged include churches, a hospital and two schools. Damage to transmission towers was reported in 2 cases and collapsed electricity poles in 4 out of the 18 events.

*Non-structural damage* was reported in 86% of events.

It was produced both by wind as well as by hail and consisted mainly of uprooted or broken trees (44%), crop damage (16%) as well as damage caused to cars by debris (33%). A truck was overturned by the strong wind in one of the reported windstorms.

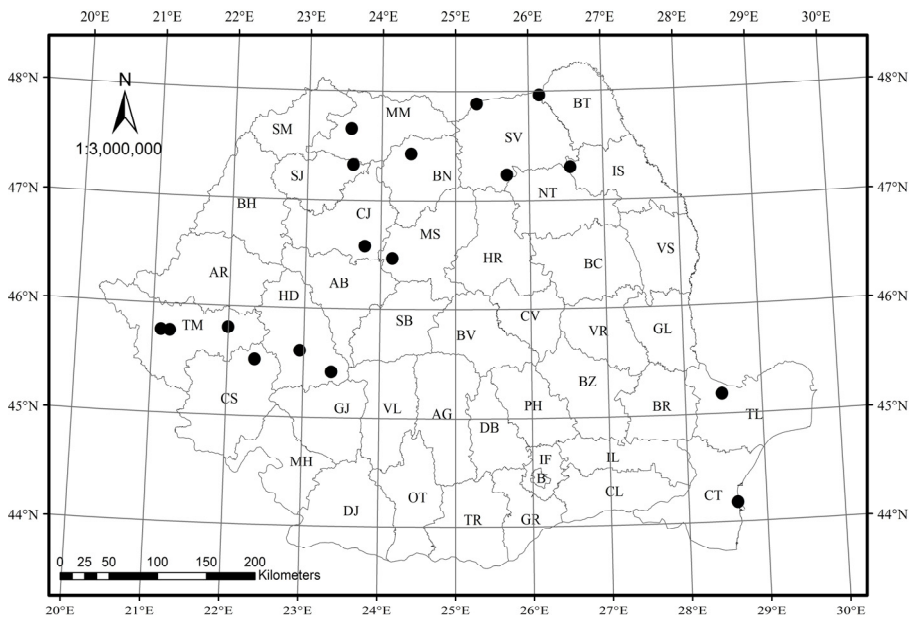


Figure 5. Location of wind damage events identified in 2016



**Narrative**

A phenomenon described as a tornado has damaged 12 houses in Niculițel. Tree damage was also reported.



R2\_01



R3\_02



R3\_02

**References**

R1 <https://stirileprotv.ro/stiri/actualitate/o-tornada-violenta-a-maturat-o-comuna-din-judetul-tulcea-in-5-minute-furtuna-a-distrus-case-si-a-smuls-copacii-din-radacini.html>

R2 <https://www.ziuaconstantina.ro/diverse/stiri-calde/fenomen-meteorologic-deosebit-la-tulcea-soldat-cu-pagube-materiale-595661.html>

R3 <https://www.dobrogeanews.ro/fenomen-meteo-de-tip-tornada-la-niculitel/>

### Narrative

Hail as large as hen's eggs produce damage to buildings, cars and crops.



R1\_01



R1\_02



R1\_03

### References

R1 <https://www.pressalert.ro/2016/06/vremea-nebuna-de-cod-portocaliu-aduce-grindina-cat-oul-de-gaina-timis-ce-zone-au-fost-afectate-foto/>

R2 <https://stirileprotv.ro/stiri/actualitate/dezastrul-lasat-in-urma-de-furtunile-si-bucatile-de-gheata-cazute-din-cer-codul-portocaliu-de-inundatii-a-fost-prelungit.html>

**Narrative**

Three roofs of over 200 houses were damaged in Telciu by the strong wind.



R1\_01

N/A

N/A

**References**

R1 Mateescu, E. (coord). Revista științifică a Administrației Naționale de Meteorologie, București 2018

Event ID: 2016-06-17\_(SJ)Ileanda

Date: June 17<sup>th</sup> 2016

### Narrative

Six high voltage transmission towers and 10 medium tension reinforced concrete poles collapsed due to the strong wind. Hail damaging crops nearby Ileanda commune was also reported.



N/A

N/A

R1\_01

### References

R1 <https://salaj.transilvania-tv.ro/fenomene-meteo-extreme-in-salaj-video-galerie-foto>

R2 Mateescu, E. (coord). Revista științifică a Administrației Naționale de Meteorologie, București 2018

**Narrative**

The storm produced hail and flooding damaging several cars and roofs (hail damage) of family houses in Victoria village near Iași.



R2\_01



R2\_02



R3\_01

**References**

R1 <https://www.ziaruldeiasi.ro/stiri/noi-imagini-cu-furtuna-de-sambata-seara-care-s-a-abatut-asupra-iasului--131171.html>

R2 <https://www.ziaruldeiasi.ro/stiri/zeci-de-rachete-antigrindina-lansate-sambata-seara-i-noaptea-in-judetul-ia-i--131161.html?m=0>

R3 <https://www.youtube.com/watch?v=W8usVVNKTHU&t=4s>

R4 <https://www.youtube.com/watch?v=MolEqX3P6i0&t=57s>

**Narrative**

Hail as large as hen eggs have damage hundreds of cars and roofs in Petroșani and Lupeni. Tens of hectares of agricultural land were affected.



R3\_01



R3\_02



R3\_03

**References**

R1 <https://www.banatulazi.ro/furtuna-cu-gheata-in-valea-jiului-masini-avariate-acoperisuri-luate-de-vant-si-gospodarii-inundate/>

R2 <https://www.rador.ro/2016/06/19/furtuna-din-valea-jiului-a-avariat-masini-si-acoperisuri/>

R3 <https://www.opiniatimisoarei.ro/imagini-apocaliptice-in-vestul-tarii-grindina-a-distrus-zeci-de-masini-a-fost-cea-mai-puternica-vijelie-din-acest-an/19/06/2016>

**Narrative**

In Cuci, 153 houses have been partially affected at roof level, whereas 7 houses were completely destroyed. The bell towers of two churches were lifted off. One person died and other four had minor contusions. In Dătășeni, the roofs of 150 houses were partially affected,, whereas the roofs of 2 houses were completely destroyed. Damage to transmission towers was reported: 6 towers of 400kV, 4 of 220kV and 18 of 100kV collapsed. One car was overturned. Several electricity concrete poles collapsed and trees were uprooted.



R1\_01



R2\_01



R3\_01

**References**

- R1 <https://www.radiomures.ro/stiri/update-imagini-in-exclusivitate-cu-tornada-care-s-a-format-in-apropiere-de-targumures-tornada-in-mures-pest-300-de-case-afectate-si-o-fetita-de-2-ani-decedata.html>
- R2 <https://www.aktual24.ro/ce-fel-de-furtuna-a-fost-asta-iata-ce-a-facut-cu-stalpii-imensi-de-electricitate-din-mures/>
- R3 <https://stirileprotv.ro/stiri/actualitate/prapad-in-judetul-mures-sute-de-case-au-ramas-fara-acoperisuri-in-urma-unei-tornade-spun-localnicii.html>

**Narrative**

In Broșteni, windthrow on an area of 400-600 hectares of forest was reported, an estimated number of 500000 fir trees being affected.



R1\_01



R2\_01

N/A

**References**

R1 <https://www.monitorulsv.ro/foto/BQbPJxyR/1#galerie>

R2 <https://evz.ro/mai-mult-de-400-de-hectare-de-padure-au-fost-rase-de-pe-fata-pamantului-in-judetul-suceava.html>

R3 <https://www.youtube.com/watch?v=6Mpw51n-QrY>



**Narrative**

In Timișoara, 9 trees were damaged by the strong wind.



R1\_01

N/A

N/A

**References**

R1 <https://www.tion.ro/stirile-judetului-timis/furtuna-a-facut-prapad-in-timis-487689/>

**Narrative**

A total number of 15 houses were affected by the strong wind, mainly at roof level, in Sinăuți village. Five transmission towers collapsed and several trees were broken. People described the phenomenon as a tornado.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://stiri.botosani.ro/stiri/actualitate/spaima-si-lacrimi-la-mihaileni-oamenii-din-satul-sinauti-incearca-sa-si-revina-dupa-tornada-quotnu-iesi-afara-ca-o-sa-fii-moarta-foto-video.html>

Event ID: 2016-06-20\_(MM)BaiaMare

Date: June 20<sup>th</sup> 2016

### Narrative

The roof (steel sheeting) of a boarding school for girls was uplifted by the wind in Baia Mare.

N/A

N/A

N/A

### References

R1 <https://stirileprotv.ro/stiri/actualitate/dezastrul-lasat-in-urma-de-furtunile-si-bucatile-de-gheata-cazute-din-cer-codul-portocaliu-de-inundatii-a-fost-prelungit.html>

**Narrative**

The roofs of 10 blocks of flats and of a secondary school and a policlinic were uplifted in Oțelul Roșu. Moreover, the cladding of 2 blocks of flats were ripped from the buildings. Over 40 houses were damaged at roof level (clay tiles). Broken trees damaged several cars.



R1\_01



R2\_01



R2\_02

**References**

R1 <https://expressdebanat.ro/un-oras-distrus-de-furtuna-in-40-de-minute/>

R2 <https://www.infocs.ro/video-acoperisuri-luate-de-vant-la-otelu-rosu-inundatii-la-caransebes-si-circulatia-cfr-oprita/>

R3 <https://www.youtube.com/watch?v=c6zphNhiJZg>

R4 <https://www.youtube.com/watch?v=ovmKT2snT0w>

**Narrative**

Three blocks of flats were damaged by the strong wind (uplifted roofs – steel sheeting) and other 10 roofs sustained damage in Hațeg. Five cars were damaged by debris and by the broken and uprooted trees (approximately 30).



R1\_01



R1\_02



R2\_01

**References**

R1 <https://stirileprotv.ro/stiri/vremea/imagini-de-groaza-filmate-in-orasul-hateg-o-furtuna-a-smuls-acoperisurile-de-pe-blocuri-si-copacii-din-radacini.html#photo=7>

R2 <http://www.opiniatimisoarei.ro/acoperisuri-spulberate-si-pomi-rupti-furtuna-a-facut-ravagii-in-vestul-tarii/03/07/2016>

R3 [https://adevarul.ro/locale/hunedoara/video-tornada-hateg-provocat-dezastru-masini-ingropate-distruse-copacii-smulsi-radacini-1\\_57795d175ab6550cb8861473/index.html](https://adevarul.ro/locale/hunedoara/video-tornada-hateg-provocat-dezastru-masini-ingropate-distruse-copacii-smulsi-radacini-1_57795d175ab6550cb8861473/index.html)

### Narrative

Windthrow on an area of 55 hectares was reported after this storm. Most of the trees were uprooted.



R1\_01



R1\_02



R1\_03

### References

R1 <https://www.mediafax.ro/social/furtuna-puternica-in-judetul-suceava-copacii-dintr-o-padure-doborati-de-vant-pe-o-suprafata-de-aproximativ-55-de-hectare-ce-spune-prefectul-despre-fenomen-foto-si-video-12956911>

R2 <https://www.digi24.ro/stiri/actualitate/evenimente/o-alta-padure-secerata-de-furtuna-35-de-hectare-de-arbori-au-fost-doborati-de-vartej-540293>

**Narrative**

This storm produced damage to several blocks of flats at roof level. Debris further damaged parked cars and cladding of nearby buildings. Tree damage and flooding were also reported in Baia Mare. A reinforced concrete electricity pole was broken by the strong wind.



R1\_01



R1\_02

N/A

**References**

R1 [https://adevarul.ro/locale/baia-mare/furtunile-facut-prapad-baia-mare-acoperisuri-smulse-aruncatepeste-masini-vai-colmatate-ultimele-zile-1\\_5799e90c5ab6550cb845dddb/index.html](https://adevarul.ro/locale/baia-mare/furtunile-facut-prapad-baia-mare-acoperisuri-smulse-aruncatepeste-masini-vai-colmatate-ultimele-zile-1_5799e90c5ab6550cb845dddb/index.html)

R2 <https://actualmm.ro/actualizare-baia-mare-masini-distruse-de-un-acoperis-doborat-de-vant/>

R3 <https://www.youtube.com/watch?v=h7ZOxVRPqKY&t=3s>

**Narrative**

Tree damage was reported in Câmpia Turzii, 10 fir trees being uprooted. In Turda, the roof of a block of flats was uplifted and a billboard collapsed due to the strong wind. A car and a truck were hit by the flying debris of the roof that collapsed. One person was slightly injured.



R1\_01



R2\_01



R2\_02

**References**

R1 <https://campia-express.ro/stiri/din-oras/efectele-furtunii-din-1-august-2016-la-campia-turzii-o-persoana-usor-ranita-pesto-10-copaci-cazuti>

R2 <https://turdanews.net/natura-s-a-dezlantuit-la-turda-din-nou-case-strazi-si-culturi-sub-ape-video-foto/>

R3 <https://www.youtube.com/watch?v=-RhmnFfCH0w&t=3s>



**Narrative**

In Susani, approximately 50 houses and a church were damaged by the strong wind that lasted less than 20 minutes. Damage was located at roof level (clay tiles). One reinforced concrete electricity pole collapsed and several trees were broken or uprooted.



R1\_01



R2\_01



R2\_02

**References**

R1 [https://adevarul.ro/locale/timisoara/mai-multe-localitati-timis-fost-maturate-furtuna-copaci-smulsi-radacini-case-lasate-acoperis-1\\_57b4acdf5ab6550cb8d8c4ab/index.html#photo-head](https://adevarul.ro/locale/timisoara/mai-multe-localitati-timis-fost-maturate-furtuna-copaci-smulsi-radacini-case-lasate-acoperis-1_57b4acdf5ab6550cb8d8c4ab/index.html#photo-head)

R2 <http://www.radiotimisoara.ro/2016/08/17/%f0%9f%93%b7%f0%9f%8e%a5-furtuna-a-facut-prapad-in-timis-zeci-de-acoperisuri-si-turla-unei-biserici-smulse-de-vant/>

**Narrative**

In Constanța, tens of trees were uprooted by the strong wind. The roof of a block of flats was uplifted, damaging nearby parked cars. One electricity pole collapsed and a billboard was blown away.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.aktual24.ro/furtuna-cumplita-la-constant-a-cea-mai-puternica-din-ultimii-ani-imagini-teribile-a-fost-prapad/>

R2 <https://evz.ro/judetul-constant-a-dat-pestea-cap-de-codul-portocaliu-cu-ploi-si-furtuna.html>

## Wind Damage: 2017

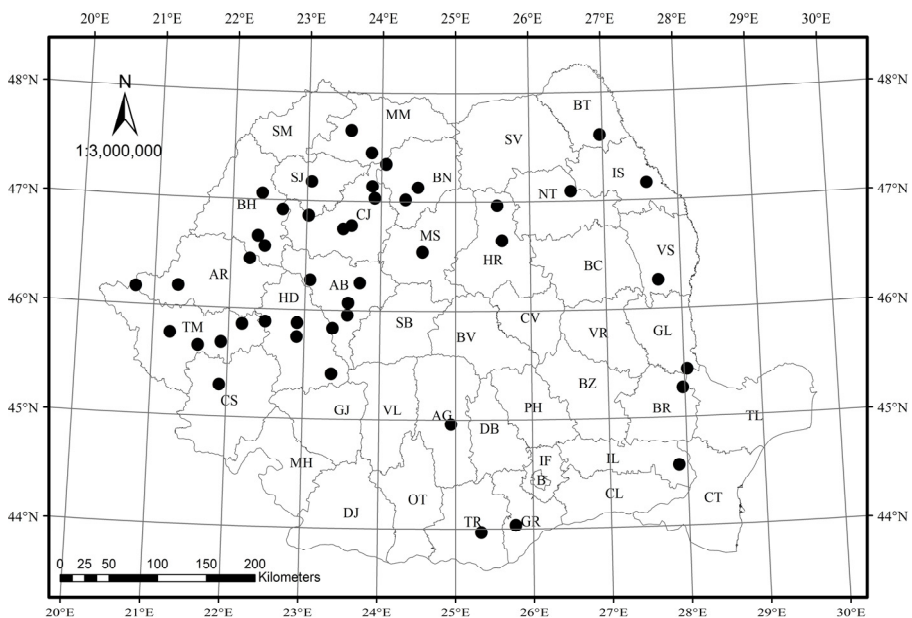
In 2017, 59 damage events have been identified, their spatial distribution being presented in Figure 6. Of the 59 events, 27 were reported on September 17<sup>th</sup>, the strongest thunderstorm that has occurred within the 10 years presented in this catalogue.

*Structural damage* was reported in 86% of events.

Block of flats sustained damage in 50% of cases and family houses in 15% of cases. Damage to churches was reported in 5 cases, whereas damage to schools and hospitals was reported in 6 cases each. Three industrial buildings were damaged. Transmission towers were damaged in 2 events, whereas collapse to electricity poles was reported in 11 cases. Finally, billboards or traffic signs were damaged in 4 out of the 59 events.

*Non-structural damage* was reported in 90% of events.

It consisted of uprooted or broken trees (76%), forest windthrow (5 events), crop damage (2 events) as well as damage caused to cars by debris (54%). Trucks were overturned by the strong wind in two of the reported windstorms.



**Figure 6.** Location of wind damage events identified in 2017

**Narrative**

Hundreds (280) of electricity poles collapsed due to the strong wind in Galați county. Flooding that followed the storm produced damage to several houses.



R1\_01



R3\_01

N/A

**References**

R1 <https://www.mediafax.ro/social/foto-zeci-de-localitati-din-judetul-galati-fara-curent-de-aproape-o-saptamana-16245497>

R2 <https://www.agerpres.ro/social/2017/04/24/galati-alunecarea-de-teren-de-la-izvoarele-se-apropie-de-sat-10-12-25>

R3 <https://www.hotnews.ro/stiri-esential-21730139-galati-alunecarea-teren-izvoarele-inaintat-30-apropie-sat.htm>

**Narrative**

The strong wind together with the snow produced the collapse of 24 high tension transmission towers. Tree damage was also reported.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.vremeanoua.ro/judetul-vaslui-sub-teroarea-unei-ierni-de-aprilie-foto/>

R2 [https://adevarul.ro/locale/vaslui/mii-familii-judetul-vaslui-curent-electric-patru-zile-500-stalpi-distrusi-1\\_58fe37985ab6550cb884fc3c/index.html](https://adevarul.ro/locale/vaslui/mii-familii-judetul-vaslui-curent-electric-patru-zile-500-stalpi-distrusi-1_58fe37985ab6550cb884fc3c/index.html)

R3 [https://www.romaniatv.net/electrica-pagubele-cauzate-de-vreme-trebuie-recunoscute-in-tarifele-consumatorilor-dar-nu-sunt-sume-spectaculoase\\_352469.html](https://www.romaniatv.net/electrica-pagubele-cauzate-de-vreme-trebuie-recunoscute-in-tarifele-consumatorilor-dar-nu-sunt-sume-spectaculoase_352469.html)

**Narrative**

The roof of a block of flats was uplifted by the strong wind in Mioveni damaging one car. Tree damage was also reported.



R2\_01



R3\_01

**References**

R1 <https://epitesti.ro/stiri/acoperis-smuls-de-vant-mioveni>

R2 [https://www.romaniatv.net/furtuna-a-facut-ravagii-la-mioveni-acoperisul-unui-bloc-a-fost-luat-de-vant-video\\_357189.html](https://www.romaniatv.net/furtuna-a-facut-ravagii-la-mioveni-acoperisul-unui-bloc-a-fost-luat-de-vant-video_357189.html)

R3 <https://arges-stiri.ro/2020/05/20/furtuna-la-mioveni-acoperisul-unui-bloc-distrus/>

**Narrative**

The strong wind damaged the roofs of 15 houses and broke 30 trees from a nearby forest.



R1\_01



R2\_01



R3\_01

**References**

R1 <https://observatornews.ro/social/o-furtuna-puternica-a-facut-prapad-in-facaeni-ialomita-210899.html>

R2 [http://stiri.tvr.ro/furtuna-puternica-in-localitatea-ialomi-eana-facaeni-acoperi-uri-smulse-copaci-rup-i-o-sta-ie-de-autobuz-distrusa\\_817989.html#view](http://stiri.tvr.ro/furtuna-puternica-in-localitatea-ialomi-eana-facaeni-acoperi-uri-smulse-copaci-rup-i-o-sta-ie-de-autobuz-distrusa_817989.html#view)

R3 <https://www.youtube.com/watch?v=19DipfstN0A>

**Narrative**

The strong wind uplifted the roof of a dormitory (4 story building).



R1\_01



R1\_02



R1\_03

**References**

R1 <https://stirileprotv.ro/stiri/actualitate/oameni-raniti-si-pagube-importante-dupa-furtunile-violente-de-vineri-11-muncitori-din-arad-loviti-de-o-usa-smulsa-de-vant.html>

R2 <https://lugojinfo.ro/social/2753-vantul-a-smuls-pomii-din-radacini-si-a-luat-acoperisurile-oameni-in-stare-de-soc-si-pagube-de-sute-de-mii-de-lei-la-lugoj-dupa-o-furtuna-violenta>

R3 <https://redesteptarea.ro/mica-si-rea-cateva-minute-de-furtuna-au-creat-pagube-de-mii-de-lei/>



**Narrative**

Both structural as well as non-structural damage was reported after this storm: the roof of the Ceala research center for cattle was destroyed, reinforced concrete electricity poles collapsed, 300 hectares of wheat were affected, at least 30 trees were broken in Arad damaging cars and thousands of trees were broken in the Ceala forest (estimated 3000 m<sup>3</sup>) and 2 TIR trucks were overturned on the A1 highway. Eleven people were wounded by debris at the Ceala research center.



R2\_01



R2\_01



R3\_01

**References**

R1 <https://arad24.net/2017/06/23/video-uragan-campia-de-vest-dezastru-la-statiunea-de-cercetare-bovinelor-ceala/>

R2 <https://stirileprotv.ro/stiri/actualitate/oameni-raniti-si-pagube-importante-dupa-furtunile-violente-de-vineri-11-muncitori-din-arad-loviti-de-o-usa-smulsa-de-vant.html>

R3 <https://www.youtube.com/watch?v=cn9YkZEN2d8>

### Narrative

Tree and car damage was reported after this storm.



R1\_01



R1\_02



R1\_03

### References

R1 <https://www.observatorbn.ro/2017/06/23/furtuna-a-facut-ravagii-in-bistrita-o-masina-a-fost-distrusa-mai-multi-copaci-au-fost-rupti-de-vant-foto-video/>

R2 <https://stirileprotv.ro/stiri/actualitate/oameni-raniti-si-pagube-importante-dupa-furtunile-violente-de-vineri-11-muncitori-din-arad-loviti-de-o-usa-smulsa-de-vant.html>

**Narrative**

The roof of a building was lifted off in Iasi damaging nearby cars. Car damage was also reported due to broken trees. Four persons were wounded. The storm lasted for less than 10 minutes.



R1\_01



R1\_02



R1\_03

**References**

R1 <http://www.radioiasi.ro/stiri/regional/galerie-foto-iasi-furtuna-din-aceasta-dupa-amiaza-a-afectat-mai-multe-zone-din-oras/>

R2 [https://adevarul.ro/locale/iasi/natura-s-a-dezlantuit-iasi-arbori-cazuti-tramvaie-cort-festivalului-afterhills-luat-foc-1\\_594cffc35ab6550cb8738239/index.html](https://adevarul.ro/locale/iasi/natura-s-a-dezlantuit-iasi-arbori-cazuti-tramvaie-cort-festivalului-afterhills-luat-foc-1_594cffc35ab6550cb8738239/index.html)

R3 <https://stirileprotv.ro/stiri/actualitate/oameni-raniti-si-pagube-importante-dupa-furtunile-violente-de-vineri-11-muncitori-din-arad-loviti-de-o-usa-smulsa-de-vant.html>

**Narrative**

The roof of a block of flats was uplifted by the strong wind damaging 10 cars and an electricity pole. The storm producing the damage was reported to have occurred in the morning.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.digi24.ro/regional/digi24-oradea/furtuna-pesto-baia-mare-mai-multi-copaci-au-fost-smulsi-din-radacini-748363>

R2 <https://stirileprotv.ro/stiri/actualitate/oameni-raniti-si-pagube-importante-dupa-furtunile-violente-de-vineri-11-muncitori-din-arad-loviti-de-o-usa-smulsa-de-vant.html>

**Narrative**

The storm that lasted for approximately 10 minutes was accompanied by hail as large as dove's eggs which damaged crops and gardens. Roof damage was reported in the nearby village Mărișelu.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://timponline.ro/furtuna-facut-ravagii-lechinta-romeo-florian-vazut-ceva-foto/>

**Narrative**

The roofs of tens of buildings were partially or totally damaged by the strong wind. Tree damage was also reported. One person was injured by the debris.



R2\_01



R2\_02



R2\_03

**References**

R1 [https://www.dcnews.ro/arad-furtuna-puternica-oameni-rani-i-acoperi-uri-distruse\\_548262.html](https://www.dcnews.ro/arad-furtuna-puternica-oameni-rani-i-acoperi-uri-distruse_548262.html)

R2 <https://www.aradon.ro/aradon-stirile-judetului-arad/furtuna-a-ravasit-nadlacul-629158/>

R3 <https://www.mediafax.ro/social/galerie-foto-furtunile-fac-ravagii-tara-pest-100-brazi-statiunea-borsec-au-doborati-vant-part-oras-fiind-curent-bistrita-nasaud-localitati-energie-electrica-acoperisuri-luate-vant-dupa-vijelie-16532423/gallery-16534762/8>

**Narrative**

The hail that accompanied this storm was as large as dove's eggs; it wounded 3 persons and damaged several cars. Tree damage was also reported.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.digi24.ro/regional/digi24-oradea/video-furtuna-pesto-bihor-trei-persoane-au-fost-ranite-mai-multi-copaci-smulsi-de-vant-751922>

R2 <https://jurnalul.ro/stiri/locale/bihor-grindina-cat-oul-de-gaina-mai-multe-persoane-au-avut-nevoie-de-ingrijiri-medicale-746251.html>

**Narrative**

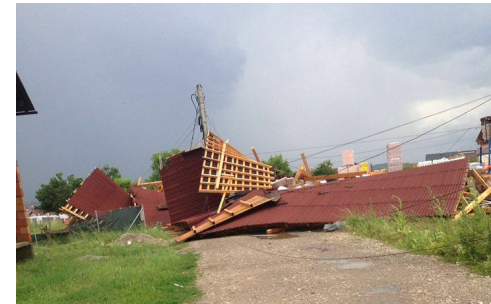
Tree damage was reported in Bistrița. Also, an electricity pole collapsed due to the strong wind. The roofs of several houses were damaged in Zagra.



R1\_01



R1\_02



R2\_01

**References**

R1 <https://timponline.ro/furtuna-bistrita-vijelia-rupt-copac-stalp-descoperit-blocurile-zona-nord/>

R2 <https://www.observatorbn.ro/2017/06/29/furtuna-a-facut-din-nou-ravagii-in-bistrita-nasaud-acoperisuri-ramase-fara-tigle-copaci-cazuti-drumuri-blocate/>

R3 <https://www.mediafax.ro/social/galerie-foto-furtunile-fac-ravagii-tara-pest-100-brazi-statiunea-borsec-au-doborati-vant-partea-oras-fiind-curent-bistrita-nasaud-localitati-energie-electrica-acoperisuri-luate-vant-dupa-vijelie-16532423/gallery-16534762/8>



Event ID: 2017-06-29\_(CJ)Cluj-Napoca.Florești

Date: June 29<sup>th</sup> 2017

### Narrative

The roof of a building was uplifted in Cluj and wounded one person. Tree damage was also reported which in turn damaged parked cars. In Florești, the roof of an industrial building was uplifted and damaged a telecommunication tower.

N/A

N/A

N/A

### References

R1 <http://www.radiocluj.ro/2017/06/29/furtuni-puternice-in-bihor-si-salaj/>

R2 <https://www.monitorulej.ro/actualitate/58907-cod-portocaliu-de-ploi-%C5%9Fi-vijelii-in-jude%C5%A3ul-cluj>

**Narrative**

The roofs of several blocks of flats were uplifted by the strong wind damaging nearby parked cars in Dej. Also, an electricity pole collapsed. Tree damage was reported in Gherla.



R1\_01



R1\_02



R2\_01

**References**

R1 <https://dej24.ro/furtuna-face-ravagii-in-dej-acoperisul-unui-bloc-s-a-prabusit-la-pamant-fotovideo/>

R2 <https://www.dejeanul.ro/content/cimitirul-mare-din-dej-devastat-de-furtuna-copacii-rupti-nu-au-fost-ridicati-nici-la-10-zile-de-la-furtuna-foto/>

R4 <https://www.youtube.com/watch?v=v9vLPav-PAU>

Event ID: 2017-06-29\_(HR)Borsec

Date: June 29<sup>th</sup> 2017

### Narrative

Over 100 fir trees were windthrown in Borsec. An electricity pole collapsed.

N/A

N/A

N/A

### References

R1 <https://www.mediafax.ro/social/galerie-foto-furtunile-fac-ravagii-tara-pesto-100-brazi-statiunea-borsec-au-doborati-vant-partea-oras-fiind-curent-bistrita-nasaud-localitati-energie-electrica-acoperisuri-luate-vant-dupa-vijelie-16532423/gallery-16534762/8>

R2 <https://jurnalul.ro/stiri/locale/statiunea-borsec-fara-energie-electrica-din-cauza-unei-furtuni-violente-746286.html>

**Narrative**

The roof of a family house (200 m<sup>2</sup>) was uplifted by the strong wind and collapsed on a nearby road blocking the traffic. Tree damage was also reported in Stroiești.



R1\_01



R1\_02

N/A

**References**

R1 <https://www.monitorulsv.ro/Ultima-ora-local/2017-06-29/O-rafala-de-vant-a-smuls-si-aruncat-in-strada-acoperisul-unei-case-blocand-DN-17-la-Stroiesti>

**Narrative**

Approximately 25 trees were broken in Timișoara, damaging several cars. În Cenad, the roofs of 3 buildings were damaged.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.mediafax.ro/social/galerie-foto-furtunile-fac-ravagii-tara-pesto-100-brazi-statiunea-borsec-au-doborati-vant-parte-oras-fiind-curent-bistrita-nasaud-localitati-energie-electrica-acoperisuri-luate-vant-dupa-vijelie-16532423/gallery-16534762/8>

R2 <https://www.tion.ro/stirile-judetului-timis/furtuna-a-lasat-ravagii-in-urma-ei-zeci-de-copaci-smulsi-din-pamant-masini-avariate-si-acoperisuri-zburate-de-vant-441101/>

**Narrative**

The roof of a family house was uplifted by the strong wind. Hail accompanied the storm.



R1\_01



R1\_02



R3\_01

**References**

R1 <https://alba24.ro/foto-furtuna-a-facut-prapad-in-comuna-leorint-tornada-a-luat-pe-sus-acoperisul-unei-case-582149.html>

R2 <https://www.aiudinfo.ro/o-furtuna-violenta-a-produs-pagube-majore-mai-multor-imobile-si-a-distrus-gradinile-din-leorint-12950.html>

R3 <http://proalba.ro/foto-o-furtuna-violenta-a-maturat-satul-mescreac-de-langa-radesti-grindina-de-mari-dimensiuni-si-cantitati-semnificative-de-precipitatii>

**Narrative**

The wind produced damage to the roofs of 15 family houses, 2 of them being completely lifted off. Tree damage was also reported.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://tvmneamt.ro/acoperisuri-smulse-de-vant-ieri-in-urma-unei-furtuni-care-a-afectat-mai-multe-localitati-foto/>

R2 [http://stiri.tvr.ro/neamt-acoperisuri-avariate-si-pesto-3-000-de-consumatori-fara-energie-electrica-in-urma-ploilor-torentiale-si-vijeliilor\\_819697.html#view](http://stiri.tvr.ro/neamt-acoperisuri-avariate-si-pesto-3-000-de-consumatori-fara-energie-electrica-in-urma-ploilor-torentiale-si-vijeliilor_819697.html#view)

R3 <https://www.antena3.ro/actualitate/social/sate-lovite-de-o-furtuna-puternica-zeci-de-acoperisuri-distruse-423162.html>

**Narrative**

Windthrow was reported after this storm with 15000 hectares of forest being destroyed (20000 m<sup>3</sup> of wood).



R1\_01



R1\_02



R1\_03

**References**

R1 [http://stiri.tvr.ro/copaci-dobora-i-de-vijelii-pe-15-mii-de-hectare-cele-mai-mari-pagube-din-ultimii-17-ani\\_819931.html#view](http://stiri.tvr.ro/copaci-dobora-i-de-vijelii-pe-15-mii-de-hectare-cele-mai-mari-pagube-din-ultimii-17-ani_819931.html#view)

R2 <http://informatiahr.ro/vijeliile-din-ultimele-saptamani-au-doborat-peste-130-000-metri-cubi-de-lemn-din-padirile-harghitene/>



**Narrative**

Tree damage was reported after this storm in Iași. Several cars were damaged by the broken trees.



R1\_01



R1\_02

N/A

**References**

R1 <https://www.ziaruldeiasi.ro/stiri/furtuna-face-iar-pagube-in-oras-copaci-doborati-de-vantul-puternic-perturba-circulatia-masinelor-164808.html>

## Narrative

Eleven poplar trees were uprooted during the strong storm in Bulz, killing 1 person and injuring other 16. The storm lasted for approximately 10 minutes and was accompanied by hail and lightning. Car damage was also reported.



R1\_01



R1\_02



R1\_03

## References

R1 <https://stirileprotv.ro/stiri/actualitate/o-persoana-a-murit-si-17-au-fost-ranite-in-urma-unei-furtuni-puternice-in-bihor-au-cazut-corturi-pe-corturi-pe-oameni.html>

R2 <https://www.hotnews.ro/stiri-esential-21920713-furtuna-violenta-bihor-cateva-persoane-ranite-fost-declansat-planul-ro-su-urgenta.htm>

**Narrative**

Two roofs and tree cars were damage by the strong wind in Deva. Tree damage was also reported.



R1\_01



R1\_02



R1\_03

**References**

R1 <http://glasul-hd.ro/dezastre-provocate-de-furtuna-mai-multe-zone-ale-judetului-galerie-foto/>

R2 <http://www.radiotimisoara.ro/2017/07/25/furtuna-violenta-in-hunedoara-masini-avariate-acoperisuri-smulse-copaci-rupti/>

**Narrative**

The storm that lasted for approximately 15 minutes produced considerable damage: 500 trees were broken in Brăila, tens of roofs were damaged, one person was killed in Lacul Sărat and several other persons were injured. Several cars were damaged by debris.



R1\_01



R2\_01



R2\_02

**References**

R1 <https://stirileprotv.ro/stiri/actualitate/o-femeie-a-murit-lovita-de-un-copac-doborat-de-furtuna-la-braila-pagube-majore-in-mai-multe-judete-provocate-de-vijelii.html>

R2 <https://obiectivbr.ro/content/furtuna-uciga%c5%9f%c4%83>

**Narrative**

This storm produced tree and car damage in Cluj-Napoca. One roof was damaged.



R1\_01



R2\_01

N/A

**References**

R1 <https://www.monitorulecj.ro/actualitate/59288-furtuna-continua-sa-faca-ravagii-in-cluj-vezi-care-sunt-strazile-afectate-de-vijelie>

R2 <https://muzicainstantelor.ro/index.php/2017/07/25/furtuna-violenta-cu-fulgere-la-cluj-copaci-rupti-pe-carosabil/>

R3 <https://www.youtube.com/watch?v=HqAfBcrZtac>

R4 <https://www.youtube.com/watch?v=VHUdWmPu1-M>

**Narrative**

Tens of roofs were affected in Galați due to the strong wind and 30 persons were wounded by fallen trees or debris. In total 100 trees were either broken or uprooted. An electricity pole collapsed.



R1\_01



R1\_02



R2\_01

**References**

R1 <https://stirileprotv.ro/stiri/actualitate/o-femeie-a-murit-lovita-de-un-copac-doborat-de-furtuna-la-braila-pagube-majore-in-mai-multe-judete-provocate-de-vijelii.html>

R2 <https://www.viata-libera.ro/prima-pagina/92671-furtuna-puternica-in-galati-zeci-de-copaci-cazuti>

R3 <https://www.youtube.com/watch?v=sg5Oct4r85M&t=18s>

**Narrative**

Two roofs were damaged and 6 trees were broken in Cluj-Napoca. Moreover, 5 electricity poles collapsed in Cluj-Napoca and 1 in Florești.



R1\_01



R1\_02

N/A

**References**

R1 <https://www.gherlainfo.ro/o-furtuna-nebuna-a-rupt-stalpi-si-copaci-la-cluj/>

R2 <https://zcej.ro/eveniment/--163168.html>

R3 <https://www.youtube.com/watch?v=lrytIBzMMtQ>

R4 <https://www.youtube.com/watch?v=iiwQoxpPsBM&t=41s>

**Narrative**

The roofs of five blocks of flats were uplifted by the strong wind in Dej damaging nearby parked cars. Tens of other roofs were affected. Tree damage was also reported. Roof and tree damage was also reported in Gherla. In Cășeiu, several houses were affected at roof level and hundreds of trees were either broken or uprooted. Windthrow on an area of 3 hectares was reported.



R1\_01



R2\_01



R2\_02

**References**

R1 <https://www.facebook.com/media/set/?set=a.1596419033754191.1073742409.467241263338646&type=3>

R2 <https://www.stiridecluj.ro/social/furtuna-de-la-cluj-a-ras-un-versant-de-padure-foto>

R3 [https://www.youtube.com/watch?v=ySwuH\\_f3lsg](https://www.youtube.com/watch?v=ySwuH_f3lsg)



**Narrative**

The strong wind uplifted the roof of a marked in Petroșani (1200 m<sup>2</sup>), the debris damaging 3 cars.



R2\_01

N/A

N/A

**References**

R1 <https://www.mediafax.ro/social/foto-furtunile-fac-ravagii-in-tara-vantul-puternic-a-smuls-acoperisul-pietei-din-petrosani-copaci-cazuti-pe-un-spital-din-targu-mures-pagube-majore-si-in-brasov-cluj-teleorman-si-arges-16715680>

R2 <https://www.mesagerulhunedorean.ro/acoperisul-pietei-centrale-petrosani-spulberat-de-vijelie/>

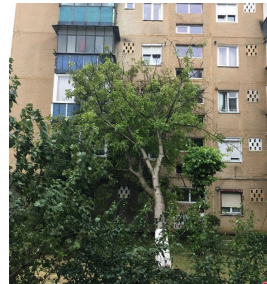
R3 <https://www.hotnews.ro/stiri-esential-21984373-furtuna-puternica-bucuresti-cateva-judete-ale-tarii-traffic-ingreunat-copaci-acoperisuri-smulse-vant.htm>

**Narrative**

At least 12 trees were either broken or uprooted by the strong wind damaging cars or cladding of buildings. The storm lasted for approximately 30 minutes.



R1\_01



R1\_02



R2\_01

**References**

R1 <https://www.mediafax.ro/social/foto-furtunile-fac-ravagii-in-tara-vantul-puternic-a-smuls-acoperisul-pietei-din-petrosani-copaci-cazuti-pe-un-spital-din-targu-mures-pagube-majore-si-in-brasov-cluj-teleorman-si-arges-16715680>

R2 <https://ardealnews.ro/2017/09/03/furtuna-ms-clinica-tbc-avariata-probleme-si-la-reghin-sangeorgiu-de-mures-miercurea-nirajului/>

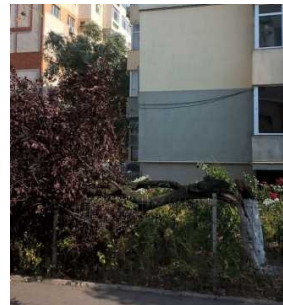
R3 <https://www.oradesibiu.ro/2017/09/03/foto-furtunile-au-facut-ravagii-in-tara-copaci-smulsi-din-radacini-si-acoperisuri-spulberate-de-vijelii/>

**Narrative**

The roof of a block of flats was uplifted by the strong wind. Tree damage was also reported (8 trees were broken).



R1\_01



R2\_01

N/A

**References**

R1 <https://www.digi24.ro/stiri/sci-tech/natura-si-mediu/furtuna-puternica-in-teleorman-acoperisurile-unor-blocuri-au-fost-smulse-787505>

R2 <http://ziarulteleormanul.ro/furtuna-puternica-teleorman-copaci-rupti-fire-electrice-deteriorate-acoperisuri-smulse-de-vant-numai-cateva-minute/>

**Narrative**

The roof (steel sheeting) of the hospital in Abrud was damaged by the strong wind.



R1\_01

N/A

N/A

**References**

R1 <https://www.abrudinfo.ro/o-parte-din-acoperisul-spitalului-orasenesc-din-abrud-a-fost-distrusa-de-furtuna-violenta-din-aceasta-dupa-amiaza-4232.html>

**Narrative**

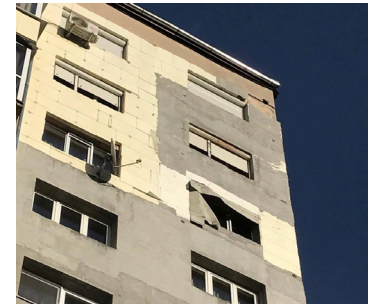
At least 10 roofs of blocks of flats were affected (totally or partially) by the strong wind with a duration of 15 minutes and 50 trees were broken. Several cars were damaged by debris and an electric pole collapsed. The wind velocity reported by the mass media was 90 km/h. Six persons were injured.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://alba24.ro/foto-video-toate-informatiile-despre-furtuna-care-a-maturat-judetul-alba-imaginile-vijeliei-si-urmarile-ei-la-alba-iulia-596036.html>

R3 <https://alba24.ro/foto-furtuna-violenta-in-alba-acoperisuri-smulse-de-vantul-puternic-si-alte-pagube-la-alba-iulia-sebes-cugir-595879.html>

**Narrative**

The roof of a block of flats (steel sheeting) was uplifted by the strong wind and tiles from some buildings were torn off. The tents that were set in place for a local festival were blown away. A secular willow was broken at the middle and damaged a gas pipe during its fall.



R1\_01



R2\_01



R2\_02

**References**

R1 <https://alba24.ro/foto-video-toate-informatiile-despre-furtuna-care-a-maturat-judetul-alba-imaginile-vijeliei-si-urmarile-ei-la-alba-iulia-596036.html>

R2 <https://alba24.ro/foto-furtuna-violenta-in-alba-acoperisuri-smulse-de-vantul-puternic-si-alte-pagube-la-alba-iulia-sebes-cugir-595879.html>

**Narrative**

Considerable damage was reported in Arad after this storm: 36 damaged buildings (roofs or claddings), 17 damaged cars, collapsed billboards and traffic signs, collapsed electricity poles and tree damage. Rainwater infiltrations damaged the large areas of plaster and paintings.



R1\_01



R2\_01



R2\_02

**References**

R1 <https://criticarad.ro/bilantul-infiurator-al-furtunii-din-17-septembrie-prezentat-intr-o-conferinta-de-presa-comuna-a-structurilor-m-a-i-la-prefectura-arad/>

R2 [https://www.ghidularadean.ro/stire/21824/furtuna\\_care\\_sa\\_abatut\\_pesto\\_arad\\_a\\_facut\\_prapad\\_in\\_oras.html](https://www.ghidularadean.ro/stire/21824/furtuna_care_sa_abatut_pesto_arad_a_facut_prapad_in_oras.html)

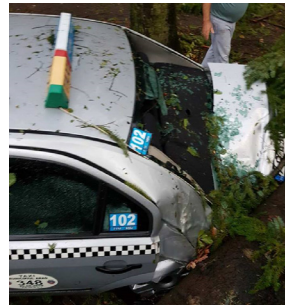
R3 <https://www.mediafax.ro/social/dezastru-pe-strazi-dupa-o-furtuna-violenta-in-timisoara-doua-persoane-au-murit-lovite-de-obiectele-smulse-de-vant-sunt-mai-multi-raniti-si-masini-rasturnate-foto-video-16731782/gallery-16732121/-1>

**Narrative**

The roof of the Moneasa police station was completely destroyed by the strong wind. Tree damage (fir trees) was reported in the local parc. Car damage was also reported. On person was killed and 15 other persons were injured.



R2\_01



R2\_02



R4\_01

**References**

R1 <http://www.radiotimisoara.ro/2017/09/25/parcul-din-statiunea-moneasa-devastat-de-furtuna-din-17-septembrie-primaria-va-taia-si-copacii-ramasi/>

R2 <https://www.livearad.ro/dezastru-la-moneasa-urma-furtunii-12-turisti-sunt-rataciti/>

R3 <https://www.aradon.ro/aradon-stirile-judetului-arad/17-septembrie-2017-ziua-in-care-s-a-rupt-cerul-pestea-arad-77540/>



### Narrative

The roof of a block of flats was uplifted in Aleșd. In its fall, it damaged several cars. Trees were uprooted and electric poles collapsed.



R1\_01



R1\_02



R1\_03

### References

R1 <https://www.alesdonline.ro/local/alesd/furtuna-a-facut-ravagii-la-alesd-acoperisul-unui-bloc-a-fost-luat-de-vant/>

**Narrative**

The storm lasted approximately 10 minutes. Part of the roof of the church located in the city center was uplifted. The roof of a block of flats was also damaged. Collapsed electricity poles and tree damage were also reported.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.digi24.ro/regional/digi24-oradea/vijelia-a-maturat-37-de-localitati-din-bihor-9-drumuri-au-fost-blocate-sute-de-case-au-fost-afectate-794989>

R2 <https://www.bihon.ro/stirile-judetului-bihor/furtuna-a-facut-prapad-la-beius-108010/>

**Narrative**

Windthrow (200 thousand cubic meters) was reported in Cooda Lacului after this storm. A reinforced concrete electricity pole was damaged.



R1\_01



R1\_02



R2\_01

**References**

R1 <https://www.ebihoreanul.ro/stiri/efectele-furtunii-in-bihor-satenii-din-rieni-se-grabesc-sa-si-repare-acoperisurile-in-vreme-ce-padurile-au-fost-puse-la-pamant-136776.html>

R2 [https://adevarul.ro/locale/oradea/sute-hectare-padure-puse-pamant-trebuie-luate-masuri-mai-urgente-exploatare-nu-deprecia-materialul-lemnos-1\\_59e4ba125ab6550cb82e7b84/index.html](https://adevarul.ro/locale/oradea/sute-hectare-padure-puse-pamant-trebuie-luate-masuri-mai-urgente-exploatare-nu-deprecia-materialul-lemnos-1_59e4ba125ab6550cb82e7b84/index.html)

**Narrative**

The storm affected 800 dwellings and public institutions in Rieni village (mostly at roof level – tiles) representing 80% of the total number of houses in the village. Tree damage was also reported in nearby forests (thousand broken or uprooted trees) and cars were hit by debris. Witnesses reported that the strongest gusts lasted less than 5 minutes. According to the statements provided by the National Meteorological Agency, the temperature dropped by 10-15 degrees.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.ebihoreanul.ro/stiri/efectele-furtunii-in-bihor-satenii-din-rieni-se-grabesc-sa-si-repare-acoperisurile-in-vreme-ce-padurile-au-fost-puse-la-pamant-136776.html>

R2 <https://www.ebihoreanul.ro/stiri/ciclon-de-bihor-judetul-nostru-a-suferit-cele-mai-mari-pagube-in-paduri-in-urma-furtunii-de-acum-o-saptamana-136865.html>

R3 <https://www.youtube.com/watch?v=IqTa-XcCWE0>

**Narrative**

Two people were killed by debris in Bistrița-Năsăud and other 17 people were injured. The roofs of several buildings were affected, including the local hospital. Tree and car damage were also reported.



R1\_01



R1\_02



R2\_01

**References**

R1 <https://timponline.ro/primul-bilant-dezastrului-dupa-furtuna-devastatoare-foto-video/>

R2 <https://timponline.ro/furtuna-puternica-bistrita/>

R3 <https://www.bistritaexpress.ro/2017/09/17/trecerea-furtunii-de-cosmar-prin-bistrita-nasaud-a-ucis-doi-oameni-si-a-ranit-alti-17-vezi-bilantul-provizoriu-al-pagubelor/>

R4 <https://www.youtube.com/watch?v=ZF2cxAzH5fo>

**Narrative**

Damage reported in Cluj-Napoca includes 20 broken trees, 6 damaged cars and 2 destroyed scaffoldings, whereas in Florești the roof of a block of flats was uplifted. Other 6 buildings suffered damage at roof level.



R1\_01



R3\_01



R5\_01

**References**

- R1 <https://cluju.ro/furtuna-puternica-cluj-napoca-20-de-copaci-doborati-de-vant-si-6-masini-avariate-foto/>  
R2 <https://www.stiridecluj.ro/social/uraganul-de-la-cluj-a-luat-acoperisurile-in-floresti-foto>  
R3 <https://actualdecluj.ro/foto-prapad-in-raiul-imobiliar-de-langa-cluj/>  
R4 <https://actualdecluj.ro/in-floresti-unele-mansarde-au-ramas-doar-cu-pardoseala-cum-intervine-primaria/>  
R5 <https://actualdecluj.ro/dezastru-dupa-furtuna-in-cluj/>

**Narrative**

In Mica village, 25 houses were damaged, mainly at roof level. Car damage was also reported. In Dej, 30 blocks of flats were affected and approximately 20 cars were damaged by debris. Tree damage was also reported.



R2\_01



R2\_02



R2\_03

**References**

R1 <https://dejulmeu.ro/index.php/2017/09/18/masuri-de-interventie-in-urma-furtunii-din-17-septembrie-2017/>

R2 <https://someseanul.ro/furtuna-provocat-ravagii-si-comuna-mica-pesto-20-de-gospodarii-au-fost-afectate-fotovideo/>

R3 <https://www.youtube.com/watch?v=r7vuMDruOX4>

R4 <https://www.youtube.com/watch?v=EH72ghKKIoU>

R5 <https://www.youtube.com/watch?v=gqGuENX9gVU>

**Narrative**

Roof damage was reported at the local church and high school. Several other buildings were affected at roof level. Tree and car damage were also reported.



R1\_01



R1\_02



R1\_03

**References**

s



Event ID: 2017-09-17\_(CJ)Huedin

Date: September 17<sup>th</sup> 2017

### Narrative

At least 6 buildings were affected by the strong wind in Huedin such as the local high school, hospital and city hall. Additionally, tens of cars were damaged and trees were uprooted.



R1\_01

N/A

N/A

### References

R1 <https://stiridinhuedin.ro/lista-pagubelor-inregistrate-in-huedin-dupa-furtuna-de-duminica/>

**Narrative**

The roof of a block of flats was uplifted by the strong wind and damaged several cars parked nearby. Tree and car damage was also reported. One person was injured.



R1\_01



R1\_02

N/A

**References**

R1 <https://www.banatulazi.ro/pagube-insemnate-si-o-persoana-ranita-in-caras-severin-dupa-furtuna-de-duminica/>

R2 <https://www.hotnews.ro/stiri-esential-22007012-furtuna-violenta-timisoara.htm>

R3 <http://caon.ro/furtuna-a-rupt-copaci-acoperisuri-si-stalpi/1899452/>

**Narrative**

In total 6 roofs of blocks of flats were affected by the strong wind. Several signboards and electricity poles collapsed during this storm. Tree damage was also reported. One person was wounded.



R1\_01



R1\_02



R1\_04

**References**

R1 [https://www.servuspress.ro/nu-s-a-mai-intamplat-asa-ceva-ce-spune-seful-statiei-meteo-deva-despre-furtuna-care-s-a-abatut-asupra-judetului\\_146155.html](https://www.servuspress.ro/nu-s-a-mai-intamplat-asa-ceva-ce-spune-seful-statiei-meteo-deva-despre-furtuna-care-s-a-abatut-asupra-judetului_146155.html)

R2 <https://www.accentmedia.ro/hunedoara-pesto-200-000-de-mii-de-lei-este-valoarea-pagubelor-produse-de-furtuna-de-duminica/>

**Narrative**

Three blocks of flats were affected in Hunedoara, their roofs being uplifted. Trees were also uprooted by the wind.



R1\_01



R1\_02

N/A

**References**

R1 [https://www.servuspress.ro/nu-s-a-mai-intamplat-asa-ceva-ce-spune-seful-statiei-meteo-deva-despre-furtuna-care-s-a-abatat-asupra-judetului\\_146155.html](https://www.servuspress.ro/nu-s-a-mai-intamplat-asa-ceva-ce-spune-seful-statiei-meteo-deva-despre-furtuna-care-s-a-abatat-asupra-judetului_146155.html)

**Narrative**

In total 60 houses were affected in Lăpugiu de Jos mainly at roof level. Roofs were mainly made of clay tiles. Tree damage was also reported in the village.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.pressalert.ro/2017/09/prapad-judetetele-hunedoara-si-caras-severin-urma-furtunii-puternice/>

R2 [https://servuspress.ro/la-lapugiu-de-jos-au-fost-evaluate-pagubele-produse-de-furtuna-de-luna-trecuta\\_147799.html](https://servuspress.ro/la-lapugiu-de-jos-au-fost-evaluate-pagubele-produse-de-furtuna-de-luna-trecuta_147799.html)

R3 [https://www.servuspress.ro/nu-s-a-mai-intamplat-asa-ceva-ce-spune-seful-statiei-meteo-deva-despre-furtuna-care-s-a-abatat-asupra-judetului\\_146155.html](https://www.servuspress.ro/nu-s-a-mai-intamplat-asa-ceva-ce-spune-seful-statiei-meteo-deva-despre-furtuna-care-s-a-abatat-asupra-judetului_146155.html)

R4 <https://www.accentmedia.ro/hunedoara-pesto-200-000-de-mii-de-lei-este-valoarea-pagubelor-produse-de-furtuna-de-duminica/>

**Narrative**

Based on a report written after the storm, 169 roofs of buildings and 207 cars were damaged, 20 signboards collapsed and several trees were broken or uprooted. Moreover 17 schools as well as 8 other buildings under the administration of the local authority were damaged.



R2\_01



R2\_02



R2\_03

**References**

R1 <http://www.graiul.ro/2017/09/22/primaria-baia-mare-va-primi-de-la-guvern-banii-necesari-pentru-reparatia-cladirilor-publice-afectate-de-furtuna-violenta/>

R2 <https://ziarmm.ro/pe-surse-doi-morti-baia-mare-dupa-furtuna-de-duminica-foto/>

R3 <https://vasiledale.ro/2017/09/17/prapad-furtuna-violenta-din-maramures-a-distrus-acoperisuri-masini-si-a-rupt-copaci-fotovideo/>

**Narrative**

Part of the roof of the local hospital was uplifted by the wind and several trees were broken in Târgu Lăpuș.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://vasiledale.ro/2017/09/17/prapad-o-parte-a-din-acoperisul-spitalului-din-tg-lapus-a-fost-luat-de-vijelie-la-fel-si-turla-bisericii-din-rogoz-galerie-foto/>

R2 <https://www.revistabiz.ro/groupama-daune-de- peste-1-mil-de-lei-dupa-furtuna-de-saptamana-trecuta/>

Event ID: 2017-09-17\_(MS)TârguMureş

Date: September 17<sup>th</sup> 2017

### Narrative

A number of 12 trees were broken in Târgu Mureş damaging cars. The roof of a medical clinic and of a block of flats were damaged. The storm lasted for approximately 30 minutes and was followed by considerable rain.

N/A

N/A

N/A

### References

R1 <https://www.tirnaveni.ro/furtuna-a-rupt-duminica-12-copaci-la-targu-mures/>



**Narrative**

The roof of the local hospital was damaged. A balcony window of a block of flats was dislocated and thrown on the nearby sidewalk. The roof of a cultural building was damaged on an area of 190 m<sup>2</sup> (clay tiles). Trees were broken and uprooted.



R1\_01



R1\_02



R1\_03

**References**

R1 [https://adevarul.ro/locale/zalau/foto-furtuna-violenta-salaj-zeci-acoperisuri-luate-vant-balcoane-distruse-copaci-smulsi-pamant-1\\_59bec4d55ab6550cb8446dd1/index.html](https://adevarul.ro/locale/zalau/foto-furtuna-violenta-salaj-zeci-acoperisuri-luate-vant-balcoane-distruse-copaci-smulsi-pamant-1_59bec4d55ab6550cb8446dd1/index.html)

R2 <https://salaj.transilvania-tv.ro/acoperisul-cladirii-transilvania-din-zalau-curs-de-refacere/>

R3 <https://www.ztv.ro/social/furtuna-a-rupt-acoperisul-spitalului-judetean-zalau/#>

**Narrative**

Three persons were killed by debris in Buziaș. The roof of the local high school was uplifted by the wind, whereas tens of trees were broken in the town parc.



R1\_01

N/A

N/A

**References**

R1 <https://renasterea.ro/imagini-apocaliptice-timisoara-dupa-furtuna-video/>

R2 [https://debanat.ro/2017/09/tragedie-in-buzias-o-familie-a-fost-ucisa-de-vijelie\\_202058.html](https://debanat.ro/2017/09/tragedie-in-buzias-o-familie-a-fost-ucisa-de-vijelie_202058.html)

**Narrative**

The roofs of two blocks of flats, of the local museum, of a kindergarten and of a church were damaged by the strong wind in Făget. Moreover, a local high school was also affected with approximately 11000 pieces of tiles being dislocated. Moreover, 80 family houses were also affected mainly at roof level. Tree damage (8) as well as cars (6) damaged by debris were also reported.



R1\_01



R1\_02



R2\_01

**References**

R1 <https://e-comune.ro/primaria-faget-tm/download/gF1r7YSKNDWn2j34HkP9tRObV1YDPVvJojI4S5NH.pdf>

R2 <https://lugojinfo.ro/eveniment/3027-imagini-incredibile-la-faget-un-localnic-a-filmat-momentul-in-care-un-copac-a-cazut-pesteo-masina>

R3 <https://www.youtube.com/watch?v=meHeKPENXjY&t=18s>

**Narrative**

Several roofs were affected in Lugoj by the storm which lasted for less than 10 minutes. Other damage includes collapsed electricity poles, cars damaged by debris, broken or uprooted trees.



R1\_01



R2\_01



R4\_01

**References**

R1 <https://www.pressalert.ro/2017/09/prapad-la-timisoara-vant-puternic-ploaie-torentiala-copaci-rupti-foto/>

R2 <https://lugojeanul.ro/dezastru-la-lugoj-ne-asteptam-la-inca-o-furtuna/>

R3 <https://lugojexpres.ro/blog/lugojul-devastat-de-furtuna-vijelia-facut-prapad-25-de-localitati-din-timis/>

R4 <https://www.novafm.ro/dezastru-si-in-lugoj-dupa-furtuna-extrema-de-duminica/>

R5 <https://www.youtube.com/watch?v=RWsKNjYkOd0&t=347s>

**Narrative**

Timișoara was the city the most affected by the storm of September 17<sup>th</sup> 2016. The thunderstorm lasted for approximately 15 minutes and destroyed 92 roofs of buildings, broke over 3500 trees, produced the collapse of 30 electricity poles, of 13 high-voltage transmission towers and of one billboard which killed one person. In total 2 persons lost their lives and at least 30 others were wounded. Car damage (by debris) and overturned truck were also reported.



R1\_01



R2\_01



R3\_01

**References**

R1 <https://evz.ro/bilant-dupa-furtuna-la-timisoara-pagube-de-pesto-431-de-milioan.html>

R2 <http://www.radiotimisoara.ro/2017/09/17/foto-furtuna-violenta-panou-prabusit-pesto-o-masina-in-mers-la-timisoara-copaci-rupti-acoperisuri-smulse/>

R3 <https://radu-tudor.ro/imagini-socante-de-la-enel-stalpi-de-beton-rupti-in-2/>

R4 <https://www.youtube.com/watch?v=dym5kEF-c2M&t=140s>

# Wind Damage: 2018

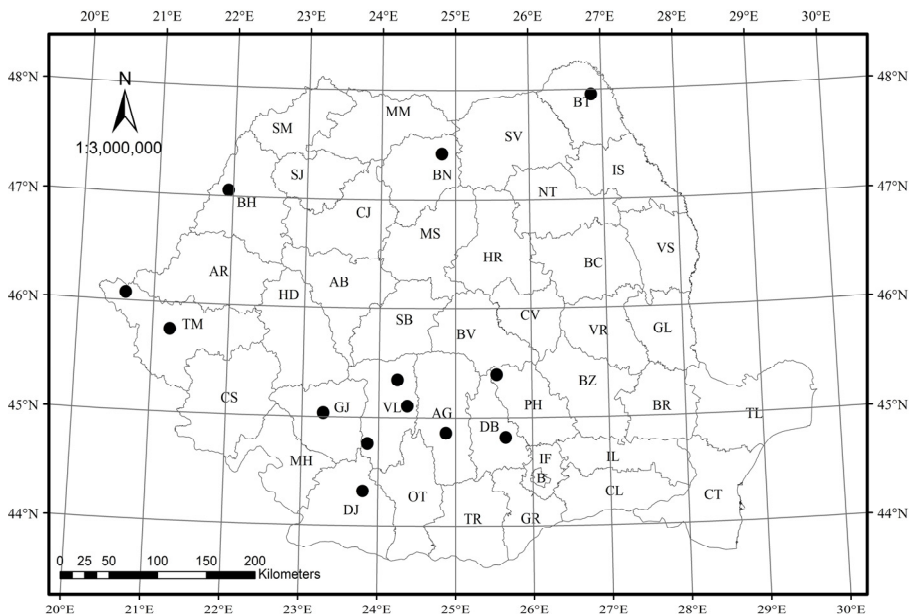
In 2018, 13 damage events have been identified, their spatial distribution being presented in Figure 7.

*Structural damage* was reported in 55% of events.

Blocks of flats and family houses were damaged in 22% of windstorms each. Other types of buildings include a church, a school and a greenhouse.

*Non-structural damage* was reported in 90% of events.

Damage consisted uprooted or broken trees (75%), crop damage (caused by one windstorm) as well as damage caused to cars by debris (23%).



**Figure 7.** Location of wind damage events identified in 2018

Event ID: 2018-04-24\_(DB)Băleni

Date: April 24<sup>th</sup> 2018

### Narrative

The storm that lasted for approximately 20 minutes damaged over 150 greenhouses in Băleni.



R2\_01



R3\_01



R3\_02

### References

R1 [http://stiri.tvr.ro/fenomene-extreme-in-jude-ul-dambovi-a-vantul-puternic-a-distrus-pestre-150-de-solarii-in-comuna-baleni\\_830514.html#view](http://stiri.tvr.ro/fenomene-extreme-in-jude-ul-dambovi-a-vantul-puternic-a-distrus-pestre-150-de-solarii-in-comuna-baleni_830514.html#view)

R2 <https://mditv.ro/furtuna-a-distrus-150-de-solarii-si-a-facut-pagube-uriase/>

R3 <https://www.youtube.com/watch?v=N20Ip3tYftk>

### Narrative

The storm was accompanied by hail which damaged over 5000 hectares of agricultural land in Botoșani County.



R2\_01



R2\_02



R2\_03

### References

R1 <https://observatornews.ro/eveniment/furtuna-grindina-botosani-253498.html>

R2 <https://www.botosaneanul.ro/stiri/grindina-a-facut-prapad-la-botosani-pagube-de-aproape-6-milioane-lei-prefectul-cere-ajutor-de-la-guvern/>



Event ID: 2018-06-06\_(TM)SânnicolauMare

Date: June 6<sup>th</sup> 2018

### Narrative

The roof of a block of flats was uplifted by the strong wind. Tree damage was also reported.



R2\_01



R2\_02



R2\_03

### References

R1 <https://www.pressalert.ro/2018/06/furtuna-facut-ravagii-intr-un-oras-din-timis-copac-rupt-acoperisul-unui-bloc-smuls-strazi-inundate-foto/>

R2 <https://www.opiniatimisoarei.ro/copaci-prabusiti-acoperisuri-distruse-ce-a-lasat-in-urma-furtuna-in-timis-la-sannicolau-mare/06/06/2018>

Event ID: 2018-06-12\_(BN)Rodna.Feldru

Date: June 12<sup>th</sup> 2018

### Narrative

The roof of a family house was uplifted by the strong wind and tree trees were broken during the storm.



R1\_01

N/A

N/A

### References

R1 <https://timponline.ro/furtunile-lasat-bezna-pesto-120-familii-doua-localitati/>

**Narrative**

The windows of a shopping center were dislocated by the strong wind produced by this storm. Mass media reported that the windows were not properly connected to the structure. Tree damage was also reported.



R1\_01



R1\_01



R1\_01

**References**

R1 <https://epitesti.ro/stiri/stiri-diverse/furtuna-a-facut-prapad-la-fortuna>

R2 <https://www.universulargesean.ro/furtuna-a-facut-prapad-in-pitesti-geamurile-complexului-fortuna-au-cazut-cu-totul/>

R3 <https://epitesti.ro/stiri/video/video-furtuna-in-pitesti-strazi-inundate-copaci-cazuti>

**Narrative**

Tree damage was reported in Oradea after this storm.



R3\_01



R3\_02

N/A

**References**

R1 [http://www.romania-actualitati.ro/efectele\\_furtunii\\_la\\_oradea-116529](http://www.romania-actualitati.ro/efectele_furtunii_la_oradea-116529)

R2 <https://www.ebihoreanul.ro/stiri/40-de-apeluri-la-112-dupa-furtuna-din-oradea-doi-copaci-doborati-de-furtuna-au-aterizat-pe-masini-142247.html>

R3 <https://www.ebihoreanul.ro/stiri/vijelia-abatuta-pesto-oradea-a-inundat-strazi-si-a-doborat-copaci-cu-nemiluita-foto-142244.html>

R4 <https://www.digi24.ro/regional/digi24-oradea/video-furtuna-in-oradea-sunt-copaci-rupti-strazi-si-subsoluri-inundate-946185>

**Narrative**

The roof of a block of flats was uplifted by the strong wind damaging nearby parked cars. Tree damage was also reported.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.ziaruldecraiova.ro/video-masini-avariate-acoperisuri-smulse-si-copaci-cazuti-urma-furtunii-din-craiova>

R2 <https://gazedadolj.ro/bilantul-furtunii-in-dolj-copaci-doborati-acoperisuri-smulse-si-sute-de-gospodarii-fara-energie-electrica/>

R3 <https://www.youtube.com/watch?v=3JJ4ODhKQHo>

**Narrative**

The roof of a family was uplifted by the wind in Târgu Jiu. Tree damage was also reported.



R1\_01

N/A

N/A

**References**

R1 <https://www.gds.ro/Local/2018-06-15/furtuna-a-ravasit-gorjul/>

R2 [https://www.paginaolteniei.ro/articol/furtuna-in-gorj-acoperis-luat-de-vant-copaci-dobor\\_1566.html](https://www.paginaolteniei.ro/articol/furtuna-in-gorj-acoperis-luat-de-vant-copaci-dobor_1566.html)

**Narrative**

The roof of a gas station was uplifted by the wind in Râmnicu Vâlcea. Tree as well as car damage was also reported after this storm. Moreover, the wind produced damage to the roof of a bank located in the city center.



R1\_01

N/A

N/A

**References**

R1 [https://www.paginaolteniei.ro/articol/valcea-acoperisul-unei-benzinarii-luat-de-vant-mai\\_1569.html](https://www.paginaolteniei.ro/articol/valcea-acoperisul-unei-benzinarii-luat-de-vant-mai_1569.html)

R2 [https://adevarul.ro/locale/ramnicu-valcea/foto-video-dezastru-furtuna-valcea-zeci-mii-oameni-bezna-copaci-acoperisuri-smulse-masini-distruse-strazi-pasaje-inundate-1\\_5b21fc79df52022f75220f8a/index.html](https://adevarul.ro/locale/ramnicu-valcea/foto-video-dezastru-furtuna-valcea-zeci-mii-oameni-bezna-copaci-acoperisuri-smulse-masini-distruse-strazi-pasaje-inundate-1_5b21fc79df52022f75220f8a/index.html)

R3 <https://www.gazetavalceana.ro/eveniment/foto-video-bilantul-unei-nopti-de-cosmar-furtunile-au-facut-ravagii-in-valcea/>

**Narrative**

The roof of a school located in Poiana Țapului was uplifted by the strong wind. The storm was reported to have lasted for less than 10 minutes.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://ziare.com/stiri/furtuna/furtunile-fac-dezastru-in-tara-un-drum-national-a-fost-inchis-acoperisul-unei-scoli-a-fost-smuls-si-mai-multe-locuinte-inundate-1517567>

R2 <https://buceginatura2000.com/2018/06/14/furtuna-pesto-scoala-regina-elisabeta-din-poiana-tapului-asfaltare-la-azuga/>

R3 <https://www.glsa.ro/furtuna-a-provocat-intarzieri-mari-in-circulatia-trenurilor/>



Event ID: 2018-07-31\_(VL)Zătreni

Date: July 31<sup>st</sup> 2018

### Narrative

Over 70 trees were broken and the roofs of 6 buildings (4 houses and 2 annexes) were uplifted by the strong wind in Zătreni. Flooding was also reported.



R2\_01

N/A

N/A

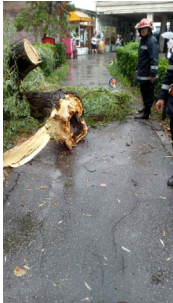
### References

R1 [https://adevarul.ro/locale/ramnicu-valcea/foto-apele-inundat-municipiul-dragasani-vijelie-puternica-pus-pamant-zeci-copaci-imprejurimi-1\\_5b60937bdf52022f75da26eb/index.html](https://adevarul.ro/locale/ramnicu-valcea/foto-apele-inundat-municipiul-dragasani-vijelie-puternica-pus-pamant-zeci-copaci-imprejurimi-1_5b60937bdf52022f75da26eb/index.html)

R2 <https://ziare.com/stiri/furtuna/zeci-de-copaci-doborati-si-acoperisuri-smulse-in-urma-unei-furtuni-in-valcea-1523701>

**Narrative**

Roof damage was produced to a church and to a block of flats. Tree damage as well as car damage were also reported.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.mediafax.ro/social/foto-furtuna-violenta-in-timisoara-acoperisuri-smulse-copaci-rupti-si-strazi-inundate-17378458/gallery-17378464/9>

R2 <https://renasterea.ro/copaci-doborati-de-vijelie-la-timisoara-foto/>

## Wind Damage: 2019

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In 2019, 18 damage events have been identified, their spatial distribution being presented in Figure 8.

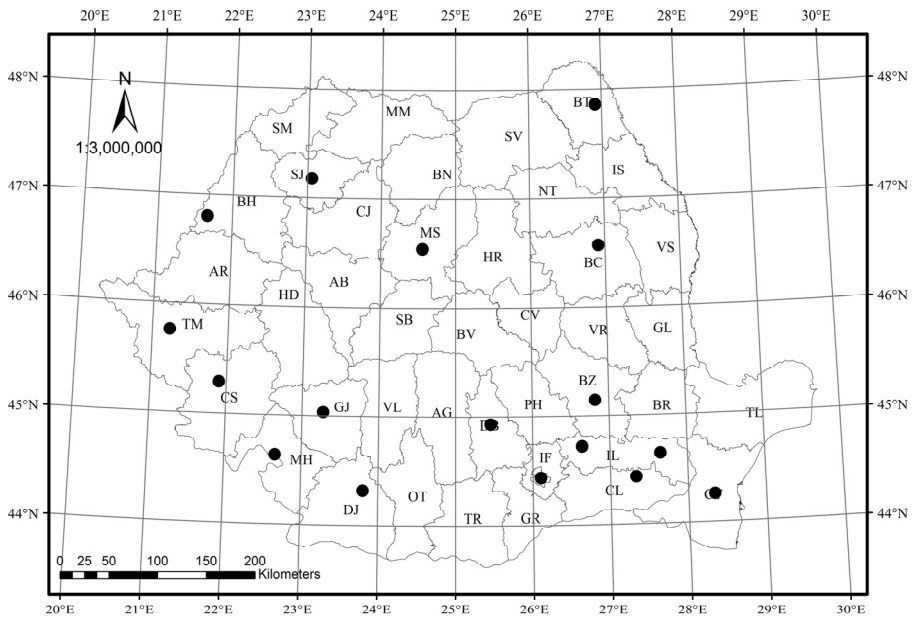
*Structural damage* was reported in 100% of events.

Block of flats sustained damage in 66% of cases and family houses in 27% of events. Damage schools and industrial builds were also reported. Electricity poles collapsed during 5 events, whereas damage to billboards was reported in 2 cases.

*Non-structural damage* was reported in 61% of events.

It consisted in uprooted or broken trees (72%), crop damage (2 events) as well as damage caused to cars by debris (50%). Trucks were overturned by the strong wind in two of the reported events.

---



**Figure 8.** Location of wind damage events identified in 2019

Event ID: 2019-04-30\_(CL)Dragajna.Dragalina.ConstantinBrâncoveanu

Date: April 30<sup>th</sup> 2019

### Narrative

A bus with 40 people on board was blown over 50 meters and 8 persons were injured. The roofs of 16 houses (15 in Constantin Brâncoveanu village and one in Dragalina village) were totally or partially ripped off and dozens of trees were downed. Crops were also damaged by hail.



R1\_02



R1\_03



R2\_01

### References

R1 <https://observatorcl.info/18-locuinte-afectate-de-tornada-ce-a-lovit-localitatea-constantin-brancoveanu/>

R2 <https://marinbadea.ro/fenomen-meteorologic-spectaculos-o-tornada-a-maturat-nordul-judetului-video/>

R3 [https://m.adevarul.ro/locale/calarasi/video-fenomen-nemaivazut-baragan-tornada-uriasa-fost-filmata-drajna-1\\_5cc86392445219c57e1e592a/index.html](https://m.adevarul.ro/locale/calarasi/video-fenomen-nemaivazut-baragan-tornada-uriasa-fost-filmata-drajna-1_5cc86392445219c57e1e592a/index.html)

Event ID: 2019-04-30\_(IL)Țândărei

Date: April 30<sup>th</sup> 2019

### Narrative

An empty lorry was overturned outside the roadway near the industrial area of Țândărei. Two roofs were detached, 2 power poles collapsed and a tree knocked down a power line.



R1\_01



R1\_02

N/A

### References

R1 <https://www.digi24.ro/stiri/actualitate/vijelie-in-ialomita-un-tir-a-fost-rasturnat-pe-sosea-mai-multe-acoperisuri-au-fost-smulse-1123577>

R2 <https://www.euroolteniainfo.com/tornada-infioratoare-in-judetul-ialomita-un-autocar-cu-39-de-pasageri-a-fost-luat-de-vant-iar-zeci-de-case-au-ramas-fara-energie-electrica-imagini-video-incredibile-cu-teribilul-fenomen/>

Event ID: 2019-04-30\_(IL)Urziceni

Date: April 30<sup>th</sup> 2019

### Narrative

Two roofs were detached during the storm in Urziceni and 2 trees fell (on the highway and over a power line).

N/A

N/A

N/A

### References

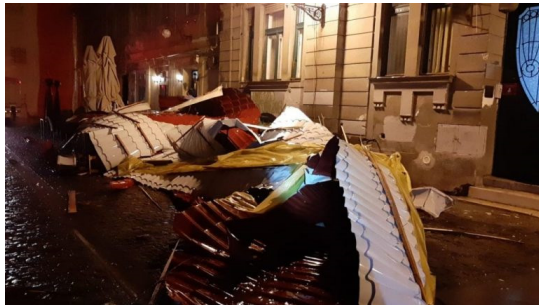
R1 <https://www.digi24.ro/stiri/actualitate/vijelie-in-ialomita-un-tir-a-fost-rasturnat-pe-sosea-mai-multe-acoperisuri-au-fost-smulse-1123577>

R2 <https://www.euroolteniainfo.com/tornada-infioratoare-in-judetul-ialomita-un-autocar-cu-39-de-pasageri-a-fost-luat-de-vant-iar-zeci-de-case-au-ramas-fara-energie-electrica-imagini-video-incredibile-cu-teribilul-fenomen/>

R3 <https://www.ziarulprofit.ro/index.php/furtuna-a-facut-ravagii-si-in-ialomita-tir-rasturnat-acoperisuri-luate-de-vant-copaci-si-stalpi-de-curent-doborati-foto/>

**Narrative**

The storm produced in Timișoara ripped off the roof of block of flats, broke or uprooted 12 trees which damaged in their fall a total of 5 cars and blocked roads and tramways. In the city center umbrellas and some tables of the local restaurants were knocked to the ground by the gusts of wind.



R1\_01



R2\_02



R3\_01

**References**

R1 <https://www.banatulazi.ro/prapad-dupa-furtuna-violenta-acoperis-smuls-de-vant-in-piata-unirii/>

R2 <https://www.pressalert.ro/2019/05/alerta-furtuna-violenta-lovit-timisoara-ce-localitati-din-timis-si-arad-au-intrat-sub-cod-portocaliu/>

R3 <https://www.impactpress.ro/2019/05/20/bilant-furtuna-violenta-care-s-a-abatut-asupra-timisoarei-a-lasat-in-bezna-mii-de-locuinte-5-autoturisme-distruse-un-acoperis-dislocat-si-zeci-de-copaci-doborati-la-pamant/>

**Narrative**

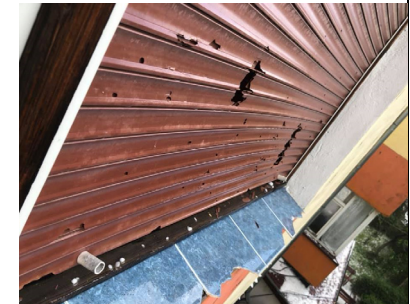
In total 2.453 cars and 607 buildings (including 19 educational institutions and 34 administrative buildings) were damaged by large hail (egg size) during a storm that lasted 15 minutes, according to the witnesses. The damage includes roof damage, broken skylights and canopies. Moreover, 97 agricultural crop lands were affected. Flooding of several streets was also reported together with a landslide on about 200m in Merilor Street.



R1\_01



R2\_02



R3\_01

**References**

R1 <https://click.ro/actualitate/national/video-furtuna-cu-grindina-uriasa-in-zalau-45287.html>

R2 <https://www.graiulsalajului.ro/primaria-zalau-a-facut-bilantul-prapadului-produs-de-grindina-a-54593>

R3 <https://zalau24.ro/masini-si-acoperisuri-distruse-de-grindina-o-furtuna-de-cateva-minute-a-facut-prapad-in-zalau/>

R4 <https://www.youtube.com/watch?v=XCVuKM14VKU&t=1s>



**Narrative**

The storm uplifted the roof of a block of flats which damaged 5 cars during its fall. Large size hail that damaged cladding and cars was also reported. Also, several trees collapsed.



R1\_01



R4\_01



R3\_02

**References**

R1 <https://www.tvsud.ro/foto-furtuna-a-facut-prapad-in-doua-cartiere-din-targu-jiu.html>

R2 <https://stirileprotv.ro/stiri/actualitate/furtuna-violenta-la-tg-jiu-vantul-a-smuls-acoperisul-unui-bloc-si-l-a-aruncat-pe-5-masini.html>

R3 <https://ziare.com/stiri/furtuna/acoperisul-unui-bloc-a-fost-smuls-de-furtuna-in-targu-jiu-mai-multi-copaci-au-fost-pusi-la-pamant-video-1564848>

**Narrative**

The roofs of two block of flats were detached leaving in each location an uncovered area of about 100m. During the fall, 3 cars were hit by the structural elements of one of the roofs. In a different location the roof was partially uplifted and remained hanging on the edge of the building.



R2\_01



R2\_02



R2\_03

**References**

R1 <https://expressdebanat.ro/urgie-acoperisuri-smulse-de-vant-la-resita-si-masini-distruse/>

R2 <https://www.radioresita.ro/actualitate/foto-acoperis-de-bloc-smuls-de-furtuna-la-resita>

**Narrative**

Approximately 90% of a 300 m roof made of steel sheeting of the school in Castelu was uplifted and carried away for 20 m. During this event an electricity pole was hit by the flying roof producing a power outage and the building of the nearby kindergarten suffered from minor damage.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.ctnews.ro/foto-video-acoperisul-scolii-din-castelu-smuls-de-o-furtuna-puternica/>

R2 <https://www.ordinea.ro/acoperisul-scolii-din-castelu-daramat-de-o-furtuna-teribila-ar-putea-fi-refacut-din-fonduri-pentru-situatii-de-urgenta/>

**Narrative**

In total 37 trees were broken or uprooted and 21 cars were damaged during the strong wind event. A billboard and two electricity poles also collapsed.



R1\_01

N/A

N/A

**References**

R1 <https://www.digi24.ro/stiri/actualitate/social/video-furtuna-in-bucuresti-zeci-de-copaci-rupti-de-vant-si-pesto-20-de-masini-avariate-1151311>

R2 <https://www.libertatea.ro/stiri/bilantul-furtunii-din-bucuresti-de-marti-dupa-amiaza-a-fost-in-vigoare-un-cod-portocaliu-de-fenomene-periculoase-2677407>

R3 <https://ziare.com/stiri/furtuna/furtuna-in-bucuresti-zeci-de-copaci-rupti-de-vant-si-21-de-masini-avariate-1566896>

**Narrative**

The roof of a block of flats was ripped off, 11 trees were broken and blocked traffic, 4 electricity poles fell and 11 properties were flooded (7 yards, 4 basements) in Buzău.



R1\_01

N/A

N/A

**References**

R1 <https://www.news.ro/social/update-furtuna-puternica-judetul-buzau-aproape-9-500-gospodarii-au-ramas-curent-electric-zeci-copaci-au-doborati-vant-acoperisul-unui-bloc-s-desprins-cazut-strada-bucuresti-zeci-copaci-rupti-21-1924404625002019061919043897>

R2 <https://stiridebuzau.ro/actualitate/trafic-ingreunat-pe-drumuri-din-buzau-din-cauza-unor-copaci-doborati-de-furtuna-2506.html>

**Narrative**

The storm damaged more than 1/3 of the roof made of steel sheeting of a student residence building.



R1\_01

N/A

N/A

**References**

R1 [https://adevarul.ro/locale/targoviste/foto-acoperisul-unui-camin-studentesc-campusul-uvt-smuls-vantul-pternic-rector-structura-rezistenta-acoperisului-nu-fost-afectata-1\\_5d125b1c892c0bb0c6ca1cdf/index.html](https://adevarul.ro/locale/targoviste/foto-acoperisul-unui-camin-studentesc-campusul-uvt-smuls-vantul-pternic-rector-structura-rezistenta-acoperisului-nu-fost-afectata-1_5d125b1c892c0bb0c6ca1cdf/index.html)

R2 <https://dbrealitynews.ro/2019/06/26/universitatea-valahia-targoviste-furtuna-din-25-iunie-a-smuls-o-parte-din-acoperisul-caminului-nr-3-cladirea-este-asigurata>

**Narrative**

During this event 16 trees were broken or uprooted (13 in Târgu Mureş and 3 in Reghin). In Târgu Mureş 5 cars, a kiosk and an electricity pole were damaged. In Reghin the roofs of 2 blocks of flats were lift off.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.punctul.ro/bilantul-furtunii-de-cod-rosu-din-mures/>

R2 <https://stiri.infomures.ro/administratie/furtuna-in-mures-pompierii-mureseni-solicitati-la-36-de-interventii-in-mai-putin-de-trei-ore/>

**Narrative**

In Dângeni 84 houses were destroyed during the storm. The roofs and in some cases even the walls were severely damaged. Trees downed and 12 electricity poles collapsed in Iacobeni. Also, in this village a roof was uplifted and projected over an electric transformer station. Moreover, the wind tore the steel sheeting from the roof, destroying, at the same time, the lighting fixtures, as well as the video system in the Border Crossing Point Vama Stâncă.



R1\_01



R2\_01



R3\_01

**References**

- R1 <https://www.botosaninews.ro/394195/social/foto-distrugeri-de-amploare-ale-retelelor-electrice-in-judetul-botosani-11-stalpi-au-fost-rupti-de-furtuna-iar-un-acoperis-a-distrus-un-post-de-transformare/>
- R2 <https://www.botosaneanul.ro/stiri/o-furtuna-puternica-a-devastat-vama-stanca-costesti-vantul-a-distrus-acoperisul-si-sistemul-video-fotogalerie/>
- R3 <https://www.botosaneanul.ro/stiri/localitate-din-botosani-lovita-de-vijelie-imagini-cu-copaci-rupti-din-curtile-oamenilor-pagube-insemnate-video-galerie-foto/>



**Narrative**

The roofs of 3 buildings (including a high school) were detached during the storm that lasted more than 30 minutes. Water infiltration in a mall lead to the collapse of a portion of the dropped ceiling. Dozens of cars also suffered from damage.



R1\_01

N/A

N/A

**References**

R1 <https://www.digi24.ro/stiri/actualitate/evenimente/foto-acoperisul-unui-liceu-din-bacau-a-fost-luat-de-vant-1155184>

**Narrative**

The roofs of 3 blocks of flats were detached and one of them damaged a gas pipe during its collapse. Tree and vehicle damage also occurred. Several family houses were destroyed after the impact with falling trees. The reported wind speed was in-between 100-120 km/h.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://politia-locala-craiova.ro/articol.php?id=676>

R2 [http://stiri.tvr.ro/dezastru-in--drobeta-turnu-severin--dupa-codul-ro--u-de-furtuna--oameni-la-spital--acoperisuri-spulberate-de-vant---copaci-dobora--i--autoturisme-distruse\\_847422.html#view](http://stiri.tvr.ro/dezastru-in--drobeta-turnu-severin--dupa-codul-ro--u-de-furtuna--oameni-la-spital--acoperisuri-spulberate-de-vant---copaci-dobora--i--autoturisme-distruse_847422.html#view)

**Narrative**

In about half an hour, a strong storm brought several roofs (blocks of flats) to the ground in Drobeta Turnu Severin and also uprooted trees or electricity poles in other places in Mehedinți county. In total 4 persons were injured (a billboard collapsed on a car with 2 passengers that required medical intervention, a wooden pavilion was damaged and one person was hurt and the collapse of another billboard broke a window that wounded another person).



R2\_01



R3\_01



R3\_02

**References**

- R1 [https://adevarul.ro/locale/turnu-severin/o-furtuna-puternica-afacut-prapad-mehedinti-1\\_5d22637b892c0bb0c6372feb/index.html](https://adevarul.ro/locale/turnu-severin/o-furtuna-puternica-afacut-prapad-mehedinti-1_5d22637b892c0bb0c6372feb/index.html)  
R2 <https://www.gds.ro/Local/Dolj/2019-07-08/pagubele-dupa-furtuna-de-azi-noapte/>  
R3 <https://www.digi24.ro/galerie-foto/1/stiri/actualitate/evenimente/cod-rosu-de-furtuni-in-mai-multe-judete-patru-persoane-au-fost-ranite-mai-multe-acoperisuri-au-fost-luate-de-vant-1156538#10>

**Narrative**

The roof of a block of flats was detached by the strong wind in Salonta and hit 2 cars and 2 garages during its collapse. A building caught fire due to lightning at roof level. A tree was downed on the roadway.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.ebihoreanul.ro/stiri/furtuna-a-facut-prapad-in-bihor-acoperisul-unui-bloc-din-salonta-luat-pe-sus-de-vant-si-aruncat-pesto-masini-iar-doua-cladiri-au-fost-traznite-foto-150582.html>

**Narrative**

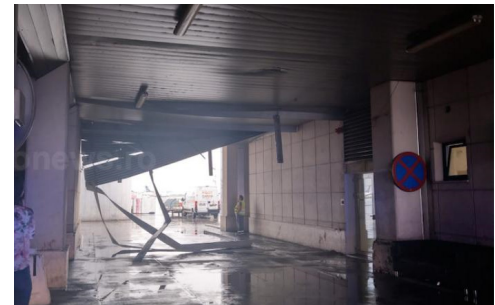
A tree collapsed over a car and a passenger suffered a minor injury. Other 24 trees broke, blocked the traffic and damaged 6 vehicles. Several streets were flooded, the water level reaching 50-60cm. In Otopeni airport a stair was moved by the strong wind and hit a Boeing 737 aircraft and some construction elements of the departure terminal detached.



R2\_01



R2\_02



R2\_03

**References**

R1 <https://ziare.com/stiri/furtuna/bilantul-furtunii-violente-din-bucuresti-zeci-de-copaci-doborati-pe-carosabil-si-pe-masini-1574864>

R2 <https://www.libertatea.ro/stiri/imaginile-dezastrului-lasat-in-urma-de-furtuna-din-bucuresti-cu-strazi-inundate-si-copaci-doborati-intrarea-in-spitalul-colentina-a-fost-blocata-de-apa-foto-video-2730574>

## Wind Damage: 2020

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In 2020, a total number of 10 damage events have been identified, their spatial distribution being presented in Figure 9.

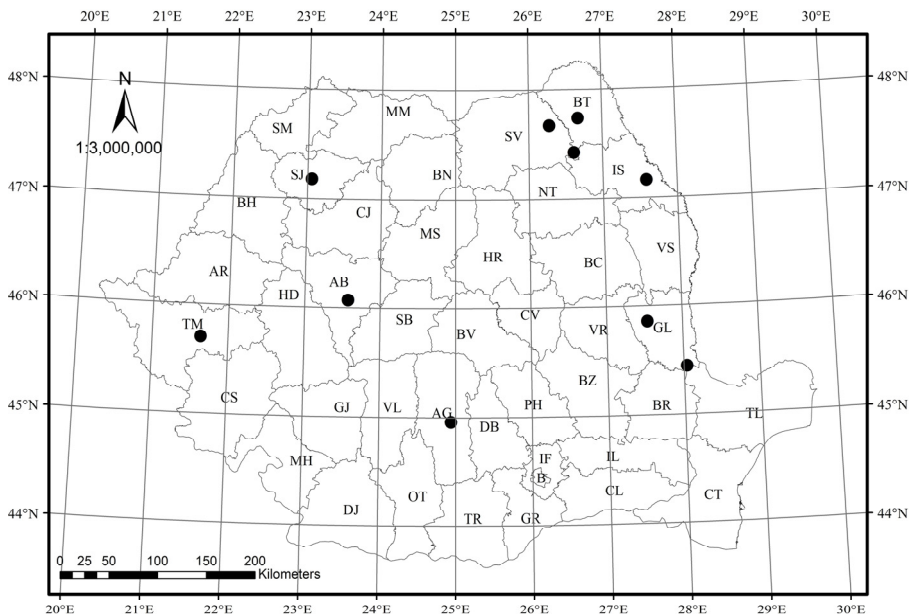
*Structural damage* was reported in 90% of events.

Wind produced roof damage to blocks of flats and family houses in 50% each. Collapsed electricity poles were reported in 3 out of the 10 cases.

*Non-structural damage* was reported in 86% of events.

Damage consisted in uprooted or broken trees (70%), crop damaged by hail (60%) as well as damage caused to cars by hail or debris (50%).

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**Figure 9.** Location of wind damage events identified in 2020

**Narrative**

The roof of 3 buildings in Botoșani were detached and trees were downed on 3 streets of the city. In the commune Brăiești the wind was accompanied by dust that damaged the corn and sunflower crops.



R1\_01



R2\_01



R2\_02

**References**

R1 <https://www.monitorulbt.ro/local/2020/05/12/copaci-doborati-si-acoperisuri-luate-de-vant/>

R2 <https://www.monitorulbt.ro/local/2020/05/12/furtuna-sahariana-la-braesti-video/>

**Narrative**

The roof made of steel sheeting of a block of flats was uplifted and collapsed over a parked car and two trees were broken in Mioveni and Merişani. The event was accompanied by hail that damaged crops and orchards.



R1\_01



R3\_01



R3\_02

**References**

R1 <https://www.7media.ro/arhiva/un-acoperis-smuls-de-vijelie-s-a-prabusit-pe-o-masina-in-arges>

R2 <https://observatornews.ro/vremea/grindina-mioveni-arges-valcea-363576.html>

R3 [https://www.facebook.com/permalink.php?story\\_fbid=921003601646888&id=100012117699245](https://www.facebook.com/permalink.php?story_fbid=921003601646888&id=100012117699245)

R4 [https://www.youtube.com/watch?v=ZcsO\\_J7Dxj8](https://www.youtube.com/watch?v=ZcsO_J7Dxj8)



**Narrative**

The wind that lasted less than 10 minutes destroyed (the wooden posts were fractured) the winter greenhouses protecting the tomatoes and cucumber crops.



R1\_01



R1\_02

N/A

**References**

R1 <https://www.monitoruldegalati.ro/evenimente/solarii-distruse-dupa-o-furtuna,-la-matca-foto.html>

R2 <https://agointel.ro/145768/dezastru-la-matca-dupa-furtuna-nelu-costea-primar-fermierii-sa-faca-solicitari-pentru-constatari/>

R3 <https://stirileprotv.ro/stiri/vremea/vijelia-a-facut-prapad-in-galati-zeci-de-solarii-au-fost-distruse-in-urma-furtunii.html>

**Narrative**

More than 100 trees were broken or uprooted during the storm that occurred in Galați. They damaged the electricity line of the city and 50 cars (18 were severely affected). A high voltage pole collapsed in Naruja Street. Hail was also reported and broke tree branches, while some streets were flooded.



R2\_01



R3\_01



R3\_02

**References**

R1 <https://www.capital.ro/alerta-meteo-anm-in-romania-un-oras-important-lovit-de-o-furtuna-teribila-100-de-copaci-doborati-inundatii-si-masini-avariate.html>

R2 <https://www.monitoruldegalati.ro/stirea-zilei/foto-video-prapad-in-galati,-dupa-furtuna-de-joi-seara-update.html>

R3 <https://www.youtube.com/watch?v=U4hrj1whoGA>

**Narrative**

The strong wind and hail that occurred in Zalău damaged or ripped off the roofs of 2 family houses and 2 blocks of flats. Some facades and windows were also damaged and 2 cars were hit by the flying roofs. For other 8 administrative and educational buildings the following types of damage were reported: damaged roofs, infiltrations in the ceiling and walls, damaged paintings, broken jambs, flooded halls and laboratories, flooded basements.



R3\_01



R3\_02



R3\_03

**References**

R1 <https://monitoruldesalaj.ro/furtuna-a-luat-pe-sus-acoperisul-unui-bloc-de-pe-str-crisan-din-zalau/>

R2 <https://www.graiulsalajului.ro/primaria-zalau-a-facut-bilantul-pagubelor-provocate-de-grindina-din-11-iunie-a-121065>

R3 <https://www.digi24.ro/stiri/actualitate/evenimente/fotovideo-dezastru-dupa-uraganul-de-la-zalau-copaci-cazuti-masini-si-cladiri-avariate-inundatii-1321655>

**Narrative**

During approximately 15 minutes the storm that broke in Alba Iulia partially detached the roofs of 2 block of flats. Other reported damages include: the coming off the plaster of another building, the fall of a tree over a family house, the collapse of 2 electricity poles and the flooding of 3 buildings. The strong wind was accompanied by hail that damaged also some agricultural crops in the area.



R1\_01



R2\_01



R4\_01

**References**

R1 <https://alba24.ro/foto-stirea-ta-vantul-face-ravagii-la-alba-iulia-acoperisul-unui-bloc-a-fost-luat-pe-sus-de-o-furtuna-puternica-776922.html>

R2 <https://ziarulunirea.ro/foto-video-furtuna-puternica-la-alba-iulia-gheata-cat-oul-de-porumbel-ghivece-cu-flori-si-acoperisuri-luate-de-vant-632693/>

R4 <https://alba24.ro/imagini-cu-norii-care-au-provocat-urgia-din-alba-doua-reprize-de-furtuna-au-facut-ravagii-in-mai-multe-localitati-din-judet-776977.html>

**Narrative**

The wind lifted the roofs (steel sheeting and clay tiles) of 4 family houses. Also, dozens of trees were downed or broken and a car was damaged.



R1\_01



R1\_02



R1\_03

**References**

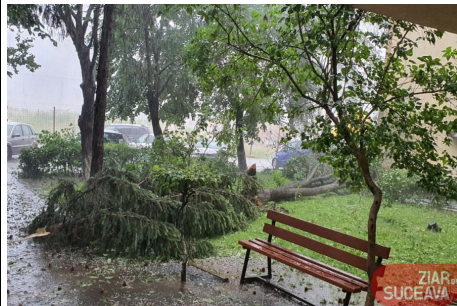
R1 <https://www.opiniatimisoarei.ro/acoperisuri-smulse-de-vant-case-distruse-copaci-prabusiti-strazi-inundate-prapad-in-timis-dupa-furtuna-foto-si-video/14/06/2020>

R2 <https://www.digi24.ro/stiri/actualitate/vremea-extrema-a-distrus-o-localitate-din-timis-primar-in-cateva-secunde-a-facut-dezastru-1323101>

R3 [https://www.youtube.com/watch?v=ebLz2QyK\\_wg](https://www.youtube.com/watch?v=ebLz2QyK_wg)

**Narrative**

During this event dozens of trees were uprooted and broken, a billboard was pulled from the ground and a shed for trolley was overturned in the parkway of a supermarket. Large size hail was also reported and streets and courtyards were flooded.



R2\_01



R2\_02



R2\_03

**References**

R1 <https://www.monitorulsv.ro/Ultima-ora-local/2020-07-23/O-ploaie-cu-grindina-a-inundat-zone-din-oras-si-impjurimi-si-adunat-mormane-de-gheata>

R2 <https://www.ziariesuceava.ro/video-ultima-furtuna-facut-ravagii-municipiul-suceava-mai-multi-copaci-au-fost-pusi-la-pamant>

R4 <https://www.youtube.com/watch?v=g1WBvPQOH9E>

**Narrative**

Dozens of cars and houses (roofs and facades) were effectively riddled by hail impact. Hectares of agricultural crops were destroyed as well.



R1\_01



R1\_02



R2\_01

**References**

R1 <https://renasterea.ro/fenomen-meteo-extrem-in-romania-grindina-uriasa-a-ciuruit-casele-oamenilor-foto/>

R2 <https://www.facebook.com/photo?fbid=4894340997258322&set=pcb.4894348390590916>

R3 <https://www.facebook.com/MeteoSuceava.Botosani/posts/2692209921100609>

**Narrative**

The roofs of 5 houses were uplifted in Miroslava and an electricity pole collapsed on the road. In Iași some elements of the façade detached, while other elements of a roof felt down onto a car. Hail that destroyed crops was also reported.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.ziaruldeiasi.ro/stiri/foto-ce-pagube-a-facut-furtuna-in-iasi-acoperisuri-smulse-masini-avariate-si-drumuri-inundate--259907.html>

R2 <https://www.stireadeiasi.ro/stiri-locale/furtuna-de-seara-trecuta-a-provocat-incidente-in-judetul-iasi/>



# Wind Damage: 2021

In 2021, a total number of 17 damage events have been identified, their spatial distribution being presented in Figure 10.

*Structural damage* was reported in 88% of events.

Block of flats sustained damage in 52% of cases and family houses in 23% of cases. Damage to churches was reported in 1 case, whereas damage to schools and hospitals was reported in 1 case each. Electricity poles collapsed in 3 cases, telecommunication tower in 1 case and scaffolding in 2 cases.

*Non-structural damage* was reported in 95% of events.

Damage consisted in uprooted or broken trees (76%), forest windthrow (1 case) as well as damage caused to cars by hail or debris (47%).

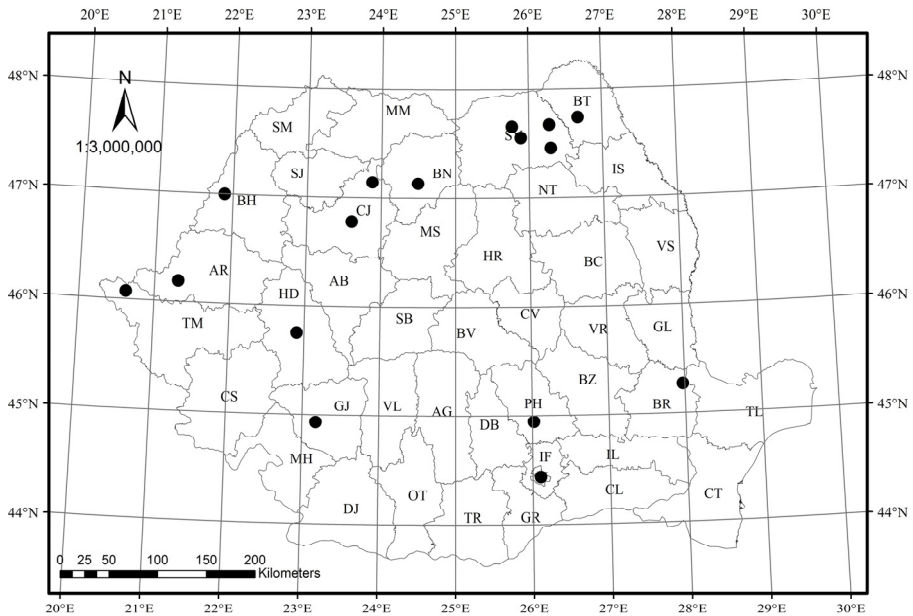


Figure 10. Location of wind damage events identified in 2021

**Narrative**

The strong wind produced damage to the roofs of 20-30 houses in Nojorid. The thunderstorm was reported to have lasted for less than 15 minutes. Tree damage was also reported.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.ebihoreanul.ro/stiri/prapad-dupa-furtuna-in-bihor-zeci-de-case-cu-acoperisuri-distruse-copaci-pusi-la-pamant-si-inundatii-163898.html>

R2 <https://observatornews.ro/social/o-furtuna-puternica-a-distrus-acoperisurile-a-zeci-de-case-in-bihor-martorii-vorbesc-de-o-tornada-video-421538.html>

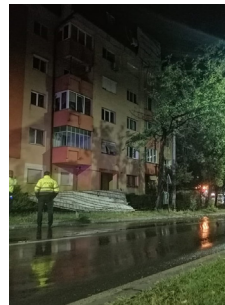
R3 <https://www.youtube.com/watch?v=swoA6LaLKt0&t=211s>

**Narrative**

The thunderstorm that was announced by a code red by the national authorities produced damage to 7 roofs (blocks of flats and family houses) and 26 trees in Arad. The cladding of the County Hospital in Arad was partially dislocated by the wind. The wind velocity reported by the mass-media was 100 km/h.



R2\_01



R3\_01

N/A

**References**

R1 <https://criticarad.ro/actualizare-3-seria-de-furtuni-de-azi-noapte-a-maturat-judetul-de-la-nadlac-la-santana-iar-in-municipiu-a-facut-curatenie-asa-cum-numai-natura-stie-sa-faca/>

R2 <https://www.agerpres.ro/social/2021/06/26/arad-numeroase-localitati-fara-energie-electrica-dupa-furtuna--737774>

R3 <https://www.aradon.ro/aradon-stirile-judetului-arad/arad-acoperisuri-luate-pe-sus-de-vant-si-copaci-doborati-de-furtuna-1398952/>

**Narrative**

The roof of a building was partially dislocated by the wind in Hunedoara. Tree damages as well as car damage was also reported. The storm duration was approximately 40 minutes.



R1\_01



R1\_02



R1\_03

**References**

R1 [https://m.adevarul.ro/locale/hunedoara/furtuna-violenta-maturat-hunedoara-deva-pagube-facut-fenomenele-meteo-extreme-foto-1\\_60d639105163ec427175b463/index.html](https://m.adevarul.ro/locale/hunedoara/furtuna-violenta-maturat-hunedoara-deva-pagube-facut-fenomenele-meteo-extreme-foto-1_60d639105163ec427175b463/index.html)

R2 <https://www.orastie24.ro/pompierii-au-actionat-in-mai-multe-zone-in-urma-furtunii/>

R3 <https://www.youtube.com/watch?v=PEM88o2M7sE>

**Narrative**

The roof of the Catholic church in Sânnicolau Mare was partially uplifted by the wind (approximately 500 m<sup>2</sup>). Moreover, hail as large as dove eggs produced damage to facades of over 200 houses.



R2\_01

**References**

R1 <https://www.opiniatimisoarei.ro/prapad-la-sannicolau-mare-vantul-a-smuls-acoperisul-bisericii-catolice-grindina-cat-oul-de-porumbel-video/25/06/2021>

R2 <https://renasterea.ro/video-cod-rosu-in-zona-sannicolau-mare-a-cazut-grindina-cat-oul-de-porumbel/>

**Narrative**

The strong wind produced windthrow in a forest with trees approximately 60 years old affecting 14 hectares. Mass-media reported approximately 4500 m<sup>3</sup> of damaged wood. The majority of trees have been broken rather than uprooted.



R1\_01



R2\_01



R3\_03

**References**

R1 <https://www.monitorulsv.ro/foto/yqsoacnR/2#galerie>

R2 <https://www.digi24.ro/stiri/sci-tech/natura-si-mediu/video-o-furtuna-puternica-a-distrus-o-padure-din-suceava-1598511>

R3 <https://stirileprotv.ro/stiri/social/14-hectare-de-padure-din-gura-humorului-distruse-total-de-o-furtuna-video.html>

R4 <https://www.youtube.com/watch?v=AZ9IBc56Ows&t=19s>

**Narrative**

The roof of a 5-story block of flats (steel sheeting) was uplifted by wind during the storm that lasted for less than 15 minutes. Tree damage and flooding were also reported.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.informatiata.ro/furtuna-puternica-pestre-suceava/>

R2 [https://adevarul.ro/locale/suceava/mansarda-unui-bloc-langasuceava-fost-distrusa-furtuna-1\\_60de91ca5163ec4271abcbf8/index.html](https://adevarul.ro/locale/suceava/mansarda-unui-bloc-langasuceava-fost-distrusa-furtuna-1_60de91ca5163ec4271abcbf8/index.html)

R4 <https://www.youtube.com/watch?v=EtAg4wiyxpg>

**Narrative**

The storm that has occurred in Ploiesti was reported to have lasted for approximately 30 minutes and was accompanied by hail. Strong winds produced damage to the roof of the Arts Community Center of Ploiesti. Tree damages was also reported.



R1\_01



R1\_02



R2\_01

**References**

R1 <https://www.observatorulph.ro/eveniment/2612385-foto-video-efectele-furtunii-din-prahova-si-in-special-din-ploiesti-arbori-doborati-strazi-si-gospodarii-inundate-acoperisuri-afectate-te-vant-si-grindina>

R2 <https://www.ziarulincomod.ro/foto-furtuna-facut-ravagii-ploiesti-duminica-dupa-amiaza/>



**Narrative**

A strong storm accompanied by hail produced roof and tree damage in Cluj-Napoca. Moreover, the roof of a local high school was uplifted by the wind and tombstones were reported to have been overthrown.



R1\_01



R2\_01



R3\_01

**References**

R1 <https://romania24.ro/foto-furtuni-in-cluj-napoca-si-craiova-acoperisuri-si-copaci-doborati-de-vant-strazi-acoperite-de-ape-290453.html>

R2 [https://www.romaniatv.net/furtuna-a-facut-prapad-in-cluj-acoperisul-unui-liceu-a-fost-smuls-de-vantul-puternic-strazi-inundate-si-copaci-cazuti-pesto-masini-imagini-apocaliptice\\_5655273.html](https://www.romaniatv.net/furtuna-a-facut-prapad-in-cluj-acoperisul-unui-liceu-a-fost-smuls-de-vantul-puternic-strazi-inundate-si-copaci-cazuti-pesto-masini-imagini-apocaliptice_5655273.html)

R3 [https://www.monitorulej.ro/monitorul-cartierelor/92033-furtuna-de-la-cluj-a-distrus-si-morminte-cimitirul-central-inca-nu-a-fost-curata\\_-foto](https://www.monitorulej.ro/monitorul-cartierelor/92033-furtuna-de-la-cluj-a-distrus-si-morminte-cimitirul-central-inca-nu-a-fost-curata_-foto)

**Narrative**

The storm that has occurred in Bucharest caused tree and car damage. In total, 122 trees were broken and 45 cars were damaged by resulting debris. Moreover, 17 electricity poles were damaged. A 50 m telecommunication lattice tower collapsed and damaged two nearby houses injuring 2 persons. Finally, the scaffolding of flats collapsed.



R2\_01



R2\_01



R2\_02

**References**

R1 [https://www.realitatea.net/stiri/actual/video-bucurestiul-lovit-de-fenomene-meteo-extreme-furtuna-fulgere-si-rafale-de-ploaie-sa-emis-ro-alert\\_6101b4a0e9e55f17ca4f9d03](https://www.realitatea.net/stiri/actual/video-bucurestiul-lovit-de-fenomene-meteo-extreme-furtuna-fulgere-si-rafale-de-ploaie-sa-emis-ro-alert_6101b4a0e9e55f17ca4f9d03)

R2 <https://spotmedia.ro/stiri/meteo/cod-galben-de-vijelie-si-averse-in-bucuresti-si-in-judetul-ilfov>

R3 <https://www.digi24.ro/meteo/de-la-canicula-la-furtuna-in-cateva-minute-cod-portocaliu-de-vijelie-si-averse-in-bucuresti-si-in-judetul-ilfov-1614559>

**Narrative**

The roofs of four family houses and one block of flats were uplifted by the strong wind in Bistrița Năsăud and nearby villages. Other damage types include broken trees, and collapsed electricity poles.



R1\_01



R2\_01



R3\_01

**References**

R1 <https://www.bistriteanul.ro/foto-video-furtuna-care-pune-stapanire-pe-judet-isi-face-simtita-prezenta-copaci-cazuti-acoperis-de-bloc-luat-de-vant/>

R2 <https://mesagerulbn.ro/pagube-in-mai-multe-localitati-din-bistrita-nasaud-ca-urmare-a-furtunii-si-a-vantului-puternic/>

R3 <https://timponline.ro/furtuni-violente-in-bistrita-nasaud-ce-pagube-s-au-produs/>

R4 <https://www.youtube.com/watch?v=sHRbd1InqjI>

**Narrative**

The storm that started around 17:00 local time produced the uplifting of the roof of a block o flats in Botoșani. The resulting debris damaged several cars. Tree damages was also reported after this storm. The only wind turbine in the county (40 m high) was destroyed by the strong wind which was reported to have a velocity of 100 km/h.



R1\_01



R1\_02



R2\_01

**References**

R1 <https://www.botosaneanul.ro/breaking-news/copaci-rupti-sarpanta-cazuta-masini-avariate-s-a-emis-cod-rou-de-furtuna-galerie-foto/>

R2 <https://www.monitorulbt.ro/local/2021/07/28/vijelia-a-doborat-singura-eoliana-din-judet-video/>

R3 <https://www.agerpres.ro/social/2021/07/29/furtuna-in-botosani-bilant-isu-sase-masini-avariate-patru-case-afectate-14-localitati-fara-curent--755246>

**Narrative**

The storm produced the collapse of several scaffoldings in Cluj-Napoca. The storm started around 15:30 local time. An electricity pole collapsed. Tree damage was also reported.



R1\_01

N/A

N/A

**References**

R1 <https://ziarulunirea.ro/foto-furtuna-face-ravagii-la-cluj-napoca-mai-multe-schele-din-centrul-orasului-puse-la-pamant-de-vantul-puternic-724772/>

R2 <https://www.servuscluj.ro/furtuna-a-creat-probleme-pe-aeroportul-international-avram-iancu-cluj-un-zbor-a-fost-redirectionat-spre-timisoara-altul-anulat/>

R3 <https://www.youtube.com/watch?v=n83xXy3K1WY>

**Narrative**

Wind velocity reached 80-90 km/h during this storm producing roof, car and tree damage as well as flooding.



R1\_01



R1\_02



R5\_01

**References**

R1 <https://www.dejeanul.ro/content/furtuna-de-cod-rosu-la-dej-acoperisuri-smulse-copaci-rupti-masini-avariate-video/>

R2 <https://www.dejeanul.ro/content/apartamente-din-dej-distruse-de-furtuna-oamenii-acuza-constructorul-video/>

R3 <https://www.facebook.com/media/set/?vanity=stiripesurse.ro&set=a.4515985355090760>

R4 <https://www.youtube.com/watch?v=rcwXepAGQFE>

R5 <https://www.facebook.com/media/set/?vanity=stiripesurse.ro&set=a.4515985355090760>

**Narrative**

At least 25-30 trees were broken by the strong wind causing car damage (10 cars).



R1\_01



R2\_01



R2\_02

**References**

R1 <https://www.facebook.com/photo.php?fbid=5927340240669760&set=p.5927340240669760&type=3>

R2 <https://realitateadebraila.net/galerie-fotovideo-furtuna-a-facut-ravagii-in-braila/>

R3 [https://adevarul.ro/locale/braila/furtuna-puternica-braila-30-copaci-cazuti-masini-carosabil-cabluri-1\\_610ae4235163ec4271caadd3/index.html](https://adevarul.ro/locale/braila/furtuna-puternica-braila-30-copaci-cazuti-masini-carosabil-cabluri-1_610ae4235163ec4271caadd3/index.html)

**Narrative**

The roof of a block of flats (asbestos cement) was uplifted by the wind damaging two nearby parked cars. Tree damage was also reported.



R1\_01



R1\_02



R1\_03

**References**

R1 [https://www.svnews.ro/vijeliile-au-produs-pagube-la-gura-humorului-si-radauti-masini-avariate-de-colile-de-azbociment-cazute-de-pe-acoperisuri-si-de-copacii-rupti-foto/262925/?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+SuceavaNews+%28Suceava+News+Online%29](https://www.svnews.ro/vijeliile-au-produs-pagube-la-gura-humorului-si-radauti-masini-avariate-de-colile-de-azbociment-cazute-de-pe-acoperisuri-si-de-copacii-rupti-foto/262925/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+SuceavaNews+%28Suceava+News+Online%29)



**Narrative**

Several roofs of blocks flats were damaged by the strong wind. Tree and car damage was also reported. The storm was reported to have lasted for approximately 15 minutes.



R1\_01



R2\_01



R3\_01

**References**

R1 <https://www.gorjonline.ro/rovinari-ce-s-a-intamplat-dupa-ce-orasul-a-fost-lovit-de-furtuna/>

R2 <https://www.radioinfinite.ro/1443-au-curatat-orasul-in-3-ore-dupa-furtuna-primar-toata-lumea-a-fost-pe-baricade/>

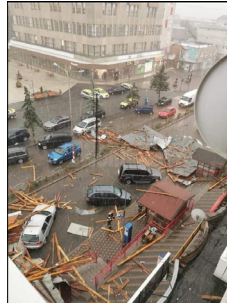
R3 <https://www.gorjexpress.ro/video-vijelie-de-proportii-izolati-blocurilor-din-rovinari-smulsa-de-vant/>

**Narrative**

The roofs (asbestos-cement) of three blocks of flats were damaged by the strong wind, debris damaging several cars. The storm was accompanied by hail as large as dove's eggs which damaged crops and gardens.



R1\_01



R2\_01



R4\_01

**References**

R1 <https://www.cronicadefalticeni.ro/vijelia-si-gheata-au-facut-pagube-la-falticeni-acoperisuri-si-culturi-distruse-masini-inundate-copaci-rupti/>

R2 <https://www.monitorulsv.ro/foto/R1kwhcnR/1#galerie>

R3 [https://www.youtube.com/watch?v=g9OAwSt\\_0Bo](https://www.youtube.com/watch?v=g9OAwSt_0Bo)

R4 <https://bucovinamedia.ro/stiri-actualitate/furtuna-puternica-cu-grindina-in-zona-falticeni/27860/>



**Narrative**

Roof damage of a block of flats was reported in Bistrița on an area of 20 sqm. Tree damage was also reported.



R2\_01



R2\_01



R2\_02

**References**

R1 <https://www.news.ro/social/bisritra-nasaud-copaci-doborati-de-vant-si-un-acoperis-luat-de-rafalele-puternice-in-mai-multe-localitati-populatia-a-fost-avertizata-prin-mesaj-ro-alert-1922405125002022041520685287>

R2 <https://www.bisritreanul.ro/urmele-furtunii-copaci-cazuti-in-bisritra-acoperisuri-smulse-si-pagube/>

**Narrative**

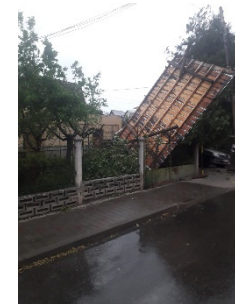
Damage reported after this storm includes tree and car damage as well the uplifting of the roof of a family house.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.ziaruldeiasi.ro/stiri/video-judetul-iasi-sub-cod-portocaliu-de-vijelii-copaci-pusi-la-pamant--323161.html>

R2 <https://www.news.ro/social/furtuna-a-afectat-judetul-iasi-copaci-cazuti-pe-sosele-localitati-fara-curent-electric-si-circulatie-rutiera-ingreunata-in-municipiu-1922401613352022052020705524>

R3 [https://www.youtube.com/watch?v=z\\_HIUPG4S9Q](https://www.youtube.com/watch?v=z_HIUPG4S9Q)

**Narrative**

The storm that was accompanied by large hail damaged crops in Pașcani on an area of 250-300 hectares. A truck was overturned by the strong wind.



R1\_01



R2\_01

N/A

**References**

R1 <https://bittv.info/foto-video-prapad-in-pascani-si-comunele-apropiate-din-cauza-furtunii-gospodarii-inundate-gheata-uriasa/>

R2 <https://agointel.ro/223893/grindina-a-facut-prapad-fermier-in-20-de-ani-de-agricultura-nu-am-vazut-asa-ceva/>

**Narrative**

Tree damage was reported after this storm. Part of the roof of a block of flats was uplifted by the wind.



R1\_01



R1\_02

N/A

**References**

R1 <https://mesagerulneamt.ro/2022/05/bilant-dupa-furtuna/>

**Narrative**

Damage reported after this storm includes tree damage, roof damage as well as a fire. The storm was accompanied by hail.



R1\_01



R1\_02



R2\_01

**References**

R1 <https://www.radioresita.ro/actualitate/peste-7-000-de-gospodarii-din-caras-severin-au-ramas-in-bezna-din-cauza-furtunii>

R2 <https://www.infocs.ro/furtuna-de-noapte-la-resita-copaci-rupti-si-zone-intregi-fara-curent-electric-video/>

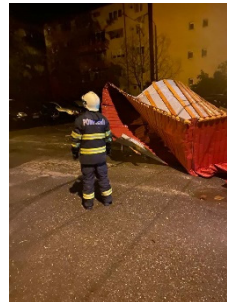


**Narrative**

The wind velocity was reported to be 80 km/h. It caused roof damage to uplifting of the roof of a block of flats as well as tree damage (approximately 25 trees). Several cars were damaged by hail as large as dove's eggs that accompanied the storm. Two trucks were overturned by the wind.



R1\_01



R1\_02



R2\_01

**References**

R1 <https://www.presasm.ro/foto-video-furtuna-de-aseara-a-facut-ravagii-intr-un-oras-de-tara-vantul-a-rasturnat-tir-uri-a-smuls-acoperisuri/>

R2 <https://www.opiniatimisoarei.ro/dezastru-in-timisoara-si-in-mai-multe-localitati-din-judet-dupa-furtuna-violenta-care-a-adus-grindina-ploaie-torentiala-si-vant-puternic-acoperisuri-avariate-strazi-inundate-gradini-si-culturi-dis/26/05/2022>

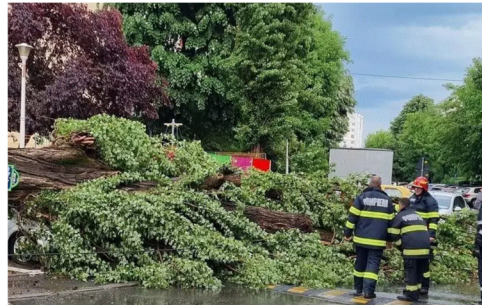
R3 <https://www.agerpres.ro/social/2022/05/26/timis-doua-tir-uri-rasturnate-de-furtuna-din-noaptea-trecuta--924464>

**Narrative**

The roof of a block of flats was uplifted by the strong wind in Bucharest. It was reported that 39 trees and 26 cars were damaged. One electricity pole collapsed.



R1\_01



R2\_01



R3\_02

**References**

R1 <https://infoday.ro/stiri-actualitate/stiri-din-romania/haos-in-bucuresti-dupa-o-furtuna-puternica-locuinte-avariate-si-masini-distruse-10094/amp/>

R2 <https://unica.md/monden/strazi-inundate-copaci-doborati-si-masini-distruse-dupa-ploaia-torentiala-din-bucuresti/>

R3 <https://www.digi24.ro/stiri/actualitate/vestul-bucurestiului-afectat-de-o-furtuna-puternica-semafoare-daramate-copaci-doborati-traffic-dat-peste-cap-1955597>

**Narrative**

Approximately 200 hectares of crops were damaged by the hail accompanying this storm. The storm lasted for approximately 15-20 minutes.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.gandul.ro/poze/video-reportaj-grindina-de-duminica-a-fost-atat-de-mare-incat-nu-s-a-topit-nici-luni-la-urzicuta-oamenii-au-facut-atacuri-de-panica-19795945?pic=10>

**Narrative**

The storm produced tree damage (broken or uprooted trees), as well as the overturning of a truck. Seven roofs were damaged by the winds and 14 cars were damage by debris. An electricity pole collapsed.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://jurnalul.ro/stiri/locale/furtuna-a-facut-ravagii-in-teleorman-zeci-de-copaci-doborati-de-vant-un-tir-rasturnat-si-mai-multe-acoperisuri-avariate-901792.html>

R2 [https://m.dcnews.ro/vreme-extrema-in-romania-dezastru-in-craiova-in-urma-unei-furtuni-puternice-teleorman-copaci-doborati-de-vant-un-tir-rasturnat-si-mai-multe-acoperisuri-avariate\\_872778.html](https://m.dcnews.ro/vreme-extrema-in-romania-dezastru-in-craiova-in-urma-unei-furtuni-puternice-teleorman-copaci-doborati-de-vant-un-tir-rasturnat-si-mai-multe-acoperisuri-avariate_872778.html)

R3 <https://www.facebook.com/100001694448752/videos/1061597548092990/>

**Narrative**

Both tree damage and car damage was reported after this storm.



R2\_01



R2\_02



R2\_03

**References**

R1 [https://www.dcnnews.ro/ro-alert-bucuresti-avertizare-de-vreme-deosebit-de-rea\\_873849.html](https://www.dcnnews.ro/ro-alert-bucuresti-avertizare-de-vreme-deosebit-de-rea_873849.html)

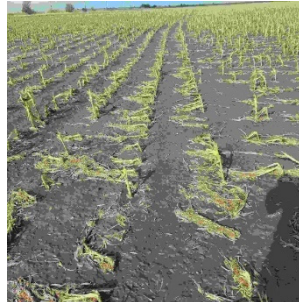
R2 <https://www.antena3.ro/amp/vreme-rea-bucuresti-furtuna-cod-portocaliu-641965.html>

**Narrative**

Tree damage was reported in Vadul Lat was reported after this storm. One car was damaged by debris. Moreover, hail produced damage to 7000 hectares of crops.



R1\_01



R2\_01



R3\_01

**References**

R1 <https://incomod-media.ro/2022/06/06/furtuna-a-facut-ravagii-in-judetul-giurgiu/>

R2 <https://www.revista-ferma.ro/articole/agronomie/dezastru-printre-culturile-de-camp-in-giurgiu-cca-7-000-de-hectare-au-fost-afectate-de-furtuna-ploi-si-grindina>

R3 [https://www.youtube.com/watch?v=MDroSgL\\_Avg](https://www.youtube.com/watch?v=MDroSgL_Avg)

**Narrative**

Tree damage and car damage were reported in Constanța after this storm.



R1\_01



R1\_02



R3\_01

**References**

R1 <https://www.constantatv.ro/2022/06/06/efectele-furtunii-de-la-constanta/>

R2 <https://www.dobrogea.tv/stire/actualitate/32329/furtunile-sau-dezlantuit-la-constanta-bilanțul-celor-5-coduri-galben-si-portocaliu-de-ploi-27-de-copaci-doborati-de-vant-14-masini-si-2-case-avariate-150-de-pompieri-au-fost-la-datorie.html>

R3 <https://www.youtube.com/watch?v=9No-MOX5Zh4>

**Narrative**

The storm lasted for approximately 15 minutes and produced tree damage and car damage in Oradea.



R2\_01



R2\_01



R3\_01

**References**

R1 <https://oradeaindirect.ro/furtuna-a-lasat-urme-in-oradea-dar-si-in-judet-copaci-doborati-de-vant-inclusiv-pe-masini-dar-si-pe-o-scoala/>

R2 <https://m.ebihoreanul.ro/stiri/furtuna-face-pagube-in-oradea-au-cazut-mai-multi-copaci-inclusiv-pe-masini-pe-o-scoala-171779.html#img-1>

R3 <https://www.youtube.com/watch?v=ouiROIb2e88&t=2s>



**Narrative**

Mainly tree damage was reported after this storm.



R1\_01



R2\_02



R3\_01

**References**

R1 <https://stiri.botosani.ro/stiri/actualitate/copaci-rupti-si-grindina-de-dimensiuni-medii-in-urma-ploilor-de-sambata-dupa-amiaza.html>

R2 <https://infobt.ro/foto-copaci-rupti-de-furtuna-de-sambata-seara-abatuta-asupra-judetului/>

R3 <https://www.botosaninews.ro/528466/eveniment/foto-ce-poate-sa-faca-o-furtuna-in-doua-minute-imagini-incredibile-cu-efectele-vantului-la-botosani/>

**Narrative**

Large hail accompanying the storm damaged cars and crops.



R1\_01



R1\_02



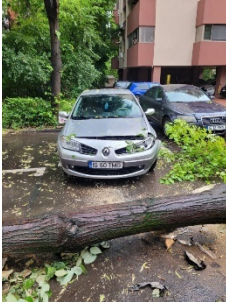
R1\_03

**References**

R1 <https://www.dezvaluirea.ro/furtuna-de-ieri-a-facut-ravagii-in-judet-in-special-in-zona-pascani-galerie-foto/>

**Narrative**

The storm produce tree damage and car damage in Iași.



R1\_01

N/A

N/A

**References**

R1 <https://zch.ro/furtuna-cu-copaci-cazuti-pesto-masini-si-cabluri-electrice-rupte/>

**Narrative**

The strong wind broke 2 trees which damaged 2 cars. Moreover, part of the roof of a block of flats was uplifted.



R1\_01



R2\_01



R2\_02

**References**

R1 <https://www.ziaruldevrancea.ro/actualitatea/stiri-locale/urmarile-furtunii-de-cod-portocaliu-in-focsani-2-arbori-cazuti-pe-2-autoturisme-si-un-element-de-acoperis-desprins-pe-strada-revolutiei>

R2 <https://www.monitoruldevrancea.ro/2022/06/12/copaci-cazuti-pe-masini-si-portiune-de-acoperis-luata-de-vant-in-urma-vijeliei-din-focsani/>

**Narrative**

In total, 25 trees were broken by the strong wind and 12 cars were damaged. Flooding was also reported.



R1\_01



R2\_01



R2\_02

**References**

R1 <https://www.g4media.ro/video-cod-rosu-de-furtuna-in-bucuresti-copaci-cazuti-in-centrul-capitala-statie-de-metrou-inundata-mesaje-ro-alert-sucesive.html>

R2 [http://stiri.tvr.ro/foto-video--furtuna-violenta-in-capitala--copaci-cazu--i-pestema--ini--strazi-inundate--grindina-in-mai-multe-cartiere---bucure--tiul-a-fost-sub-avertizare-de-cod-ro--u-de-ploi-toren--iale---i-intensificari-ale-vantului\\_907316.html#view](http://stiri.tvr.ro/foto-video--furtuna-violenta-in-capitala--copaci-cazu--i-pestema--ini--strazi-inundate--grindina-in-mai-multe-cartiere---bucure--tiul-a-fost-sub-avertizare-de-cod-ro--u-de-ploi-toren--iale---i-intensificari-ale-vantului_907316.html#view)

**Narrative**

Damage produced by this storm includes 18 broken trees and 9 cars damaged by debris.



R1\_01



R2\_01

N/A

**References**

R1 <https://mainnews.ro/cod-galben-de-furtuna-in-bucuresti-pompierii-au-intervenit-pentru-indepartarea-unor-copaci/?cn-reloaded=1>

R2 <https://www.impact.ro/efectele-codului-galben-in-bucuresti-mai-multi-copaci-au-produs-avarii-serioase-autoritatile-intervin-376994.html>

R3 <https://www.metropolatv.ro/bucuresti-ilfov/o-furtuna-de-numai-10-minute-a-facut-prapad-in-zona-de-nord-a-bucurestiului/>

**Narrative**

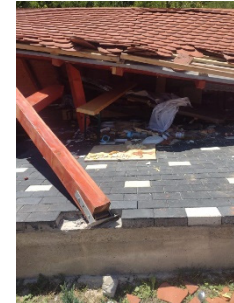
A temporary structure collapsed due to the strong wind injuring one person.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://ziare.com/subprefect/subprefect-salaj-mort-acoperis-foisor-cazut-1747363>

R2 <https://www.hotnews.ro/stiri-politic-25634277-salaj-subprefectul-virgil-turcas-murit-dupa-foisor-prabusit-pestes.htm>

**Narrative**

A storm that lasted for 10-15 minutes produced the uplifting of 2 roofs in Craiova. Several trees were broken damaging cars.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.gandul.ro/actualitate/video-acoperisuri-smulse-de-vant-copaci-cazuti-pe-masini-si-strazi-inundate-la-craiova-o-furtuna-a-facut-haos-in-banie-19808400>

R2 <https://www.gds.ro/Local/Dolj/20-22-06-28/craiova-copaci-cazuti-si-acoperis-smuls-de-vant-dupa-furtuna-din-aceasta-dupa-amiaza/>



**Narrative**

Hail accompanying the storm produced damage to crops as well as cladding of family houses in Broșteni village.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.botosaninews.ro/530961/general/stirea-zilei/foto-grindina-a-facut-prapad-intr-o-localitate-din-botosani-culturi-distruse-pereti-gauriti-de-gheata/>

R2 <https://www.botosaneanul.ro/stiri/furtuna-a-facut-ravagii-in-judet-a-cazut-grindina-acoperisuri-luate-de-vant-a-luat-foc-si-un-copac-din-parcul-eminescu-fotogalerie/>

### Narrative

The storm produced damage to the roof of a block of flats in Baia Sprie. One car was damaged by debris.



R1\_01



R1\_02



R1\_03

### References

R1 <https://vasiledale.ro/2022/07/01/exclusiv-video-furtuna-in-baia-sprie-acoperisuri-aruncate-pe-dn18-o-masina-avariata/>

**Narrative**

A truck was overturned by the strong wind in Sibiu.



R1\_01

N/A

N/A

**References**

R1 <https://www.turnulsfatului.ro/2022/07/01/video-urmarile-furtunii-remorca-tir-rasturnata-de-vant-langa-avantgarden-194423>

R2 <https://www.youtube.com/watch?app=desktop&v=c0lZZXccVRE>

**Narrative**

In total, 53 trees were broken, 36 cars were damaged by debris and 19 roofs were uplifted or damaged by the strong wind. Flooding was also reported in Craiova.



R1\_01



R2\_01



R3\_01

**References**

R1 <https://www.libertatea.ro/stiri/furtuna-puternica-la-craiova-acoperisuri-si-copaci-luati-de-vant-strazi-si-gospodarii-inundate-4197756>

R2 <https://olt-alert.ro/2022/07/03/furtunile-si-ploile-au-facut-ravagii-in-craiova-si-drobeta-turnu-severin-imagini-ale-dezastrului-fotovideo1/>

R3 <https://stirileprotv.ro/stiri/actualitate/o-furtuna-violenta-a-facut-prapad-in-craiova-apa-de-pestre-jumatate-de-metru-pe-strazi.html>

**Narrative**

The roof of a block of flats was uplifted by the strong wind. Moreover, broken trees damaged several cars.



R1\_01



R1\_02



R1\_03

**References**

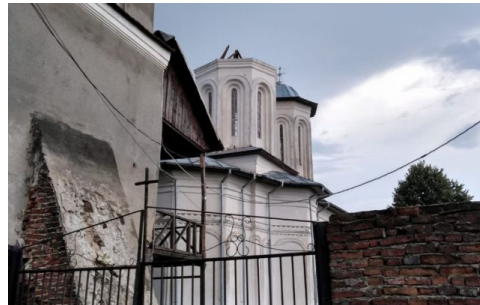
R1 <https://olt-alert.ro/2022/07/03/furtunile-si-ploile-au-facut-ravagii-in-craiova-si-drobeta-turnu-severin-imagini-ale-dezastrului-fotovideo1/>

**Narrative**

The church tower of a monastery located in Șerbănești was uplifted by the strong wind.



R1\_01



R1\_02



R2\_01

**References**

R1 [https://adevarul.ro/locale/ramnicu-valcea/fenomene-extreme-turla-biserici-stalp-electricitate-puse-pamant-barca-rasturnata-olt-video-1\\_62c069a25163ec427139535c/index.html](https://adevarul.ro/locale/ramnicu-valcea/fenomene-extreme-turla-biserici-stalp-electricitate-puse-pamant-barca-rasturnata-olt-video-1_62c069a25163ec427139535c/index.html)

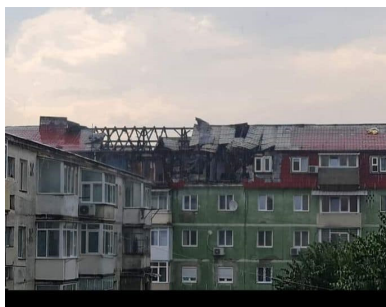
R2 <https://olt-alert.ro/2022/07/03/furtunile-si-ploile-au-facut-ravagii-in-craiova-si-drobeta-turnu-severin-imagini-ale-dezastrului-fotovideo1/>

**Narrative**

The storm produced considerable damage in Râmnicu Vâlcea: uplifted roofs of blocks of flats and houses, collapsed electricity poles, cars damaged by debris as well as flooding.



R1\_01



R3\_01



R3\_02

**References**

R1 <https://www.gazetavalceana.ro/eveniment/foto-video-furtuna-a-facut-ravagii-in-ramnicu-valcea/>

R2 <https://reporter24.info/video-momentul-in-care-un-acoperis-este-luat-de-vant-in-ramnicu-valcea-municipiul-a-fost-sub-cod-rosu-de-furtuna/>

R3 <https://www.indiscret.ro/2022/07/04/o-furtuna-de-60-de-minute-a-facut-ravagii-in-ramnicu-valcea/>

R4 [https://www.youtube.com/watch?v=F4k54\\_JTrKI&t=38s](https://www.youtube.com/watch?v=F4k54_JTrKI&t=38s)

**Narrative**

The storm that occurred in Bîrzeiu was accompanied by hail as large as guinea's eggs that destroyed crops and gardens. The storm was reported to have lasted for approximately 10 minutes.



R1\_01



R1\_02

N/A

**References**

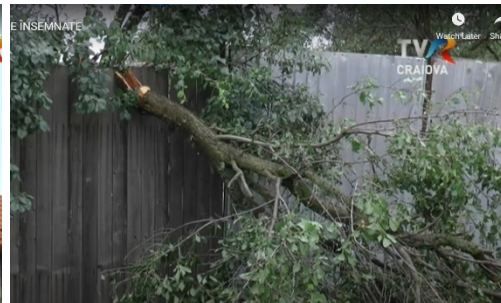
R1 [https://www.pandurul.ro/articol/gradini-distruse-de-grindina-in-zece-minute-s-a-du\\_153658.html](https://www.pandurul.ro/articol/gradini-distruse-de-grindina-in-zece-minute-s-a-du_153658.html)

R2 <https://www.sgorj.ro/gradini-distruse-de-grindina-in-zece-minute-s-a-dus-toata-munca-de-o-vara-un-dezastru/>



**Narrative**

Both wind and hail produced damage during this storm. Several houses were damage at roof level (clay tiles), trees were broken and crops were destroyed by hail.

**References**

R1 <https://tvr-craiova.ro/stiri/furtuni-si-pagube-insemnate/>

R2 <https://www.youtube.com/watch?v=gmNOeFqXxgU&t=142s>

**Narrative**

The city hall of Mitoc was destroyed by the strong wind. Moreover, more than 100 houses were damaged by hail in Liveni-Manoleasa village, the roofs being affected. Hail also damaged crops and gardens.



R1\_01



R1\_02



R3\_01

**References**

R1 <https://www.agerpres.ro/administratie/2022/07/07/botosani-sediul-primariei-mitoc-distrus-de-o-furtuna-puternica--946449>

R2 <https://www.monitorulbt.ro/local/2022/07/07/sediul-primariei-mitoc-devastat-de-furtuna/>

R4 <https://www.botosaninews.ro/531818/social/foto-acope-risul-unei-primarii-din-botosani-smuls-de-vijelie-furtuna-a-pus-la-pamant-copaci-stalpi-de-electricitate-dar-si-culturi/>

**Narrative**

Ten cars were damaged by the debris resulting from the roof of a block of flats which was uplifted by the strong wind.



R1\_01



R1\_02



R2\_01

**References**

R1 <https://alba24.ro/foto-mai-multe-masini-distruse-de-un-acoperis-care-a-cazut-pestele-ele-in-uoara-de-sus-ocna-mures-ce-s-a-intamplat-933693.html>

R2 <https://adevarul.ro/stiri-locale/alba-iulia/zece-autoturisme-au-fost-avariate-la-ocna-mures-de-2180639.html>

R3 [https://www.publika.md/vremea-extrema-face-ravagii-in-romania-acoperis-smuls-de-vijelii-masini-distruse-video\\_3127770.html](https://www.publika.md/vremea-extrema-face-ravagii-in-romania-acoperis-smuls-de-vijelii-masini-distruse-video_3127770.html)

**Narrative**

The storm that lasted for less than 15 minutes produced considerable damage in Padina. The roof of a family house was uplifted by the wind, several trees were broken or uprooted and cemetery crosses were overturned.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.antena3.ro/emisiuni/news-hour-with-cnn/furtuna-15-minute-comuna-distrusa-buzau-romania-avertizari-canicula-vijelii-647373.html>

R2 <https://www.stirilekanald.ro/o-furtuna-de-15-minute-a-distrus-o-intreaga-comuna-din-buzau-20240886>

R3 <https://adevarul.ro/stiri-locale/buzau/vantul-puternic-a-daramat-crucile-din-cimitirul-2181410.html>

R4 <https://www.fanatik.ro/furtuna-devastatoare-in-buzau-arbori-smulsi-case-distruse-si-intreruperi-de-curent-primarul-nu-am-mai-intalnit-niciodata-asa-ceva-20100962>

R5 <https://www.youtube.com/watch?v=mVxDyDKT0fg>

**Narrative**

The roof of a block of flats was uplifted by the strong wind. The resulting debris produced damage to nearby parked cars. Broken trees was also reported.



R1\_01



R2\_01



R2\_01

**References**

R1 <https://www.digi24.ro/stiri/actualitate/furtuna-a-facut-prapad-la-focsani-acoperisul-unui-bloc-a-fost-luat-de-vant-iar-copacii-cazuti-au-distrus-masini-2030515>

R2 <https://www.hotnews.ro/stiri-esential-25706392-video-furtuna-puternica-focsani-copaci-acoperisuri-cazut-pest-autoturisme-iar-pompierii-intervin-pentru-indepartarea-lor.htm>

**Narrative**

Several roofs of blocks of flats were uplifted by the strong wind. Moreover, broken trees (approximately 20) produced damaged to cars.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://dbonline.ro/foto-o-vijelie-puternica-facut-prapad-la-targoviste-masini-avariate-bransamente-electrice-deteriorate-acoperisuri-smulse-de-vant-si-copaci-rupti-dupa-o-furtuna-de-proporti/>

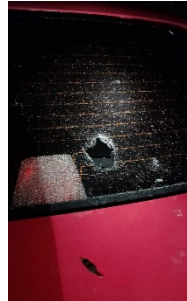
R2 <https://www.youtube.com/watch?v=Nlig2INrfZ0>

**Narrative**

The hail as large as hens' eggs damaged cars, crops and facades of family houses in Poșta Câlnău village.



R1\_01



R1\_02



R1\_03

**References**

R1 <https://www.antena3.ro/actualitate/locale/grindina-cat-pumnul-judetul-buzau-bucati-mari-gheata-masini-distruse-649753.html>

R2 <https://adevarul.ro/stiri-locale/buzau/grindina-cat-oul-de-gaina-a-spart-parbrize-si-2199957.html>

R3 <https://www.youtube.com/watch?v=h65ovtzcI4s>

**Narrative**

Only tree damage was reported after this storm.



R1\_01



R2\_01



R2\_02

**References**

R1 <https://www.ebihoreanul.ro/stiri/vijelie-in-oradea-copaci-cazuti-inclusiv-pe-masini-pe-mai-multe-strazi-din-municipiu-173392.html>

R2 <https://www.bihon.ro/stirile-judetului-bihor/copaci-cazuti-pe-mai-multe-strazi-din-oradea-in-urma-vijeliei-ce-s-a-abatut-o-masina-avariata-4074229/>



### Narrative

The roof of a block of flats was uplifted by the strong wind in Bacău, part of the debris damaging nearby parked cars.



R1\_01



R2\_01



R2\_02

### References

R1 <https://www.libertatea.ro/stiri/acoperis-smuls-vant-bacau-furtuna-cod-portocaliu-4272781>

R2 <https://telem.ro/foto-acoperisuri-smulse-de-furtuna-in-bacau/>

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