

A nighttime photograph of a city, likely Budapest, with a large, bright fireball or meteor streaking across the sky. The city lights are visible in the foreground, and the fireball is the central focus of the image.

The tragical story of the August 20, 2006 severe thunderstorm in Budapest as an example for the importance of the good communication in the disaster management

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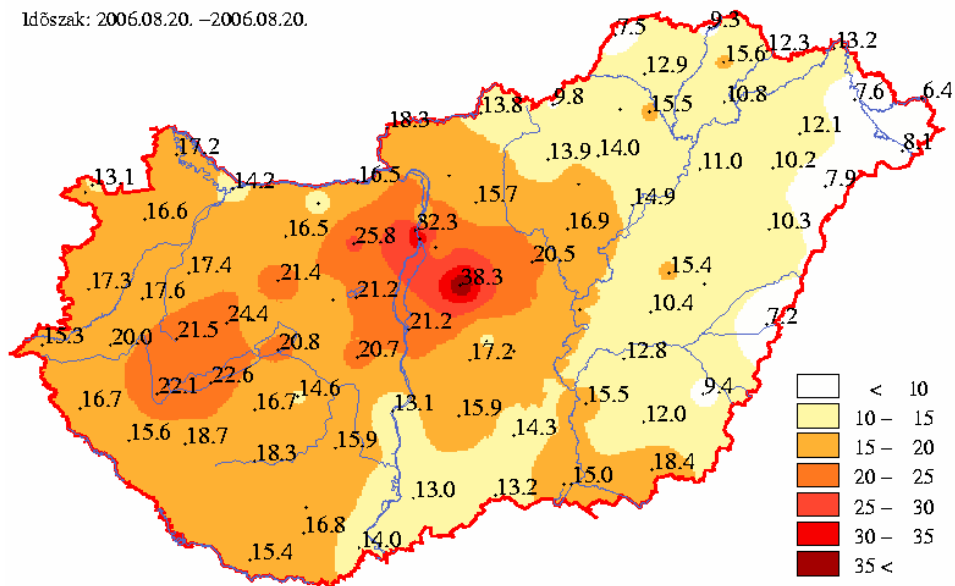
Hungarian Meteorological Service (HMS)

Budapest, Hungary

A severe thunderstorm caught Budapest on 20th August 2006, causing havoc during the celebrations of the National Holiday. Around 1.2 million spectators of the National Holiday fireworks were hit by storm and hail shortly after the show began at 21:00 local time. Heavy rain and wind-gusts over 120 km/h uprooted trees, smashed cars and windows and ripped tiles off rooftops. 5 people died and hundreds injured as a result of the fierce storm.

A napi szélmaximum időszakos átlaga [m/s]

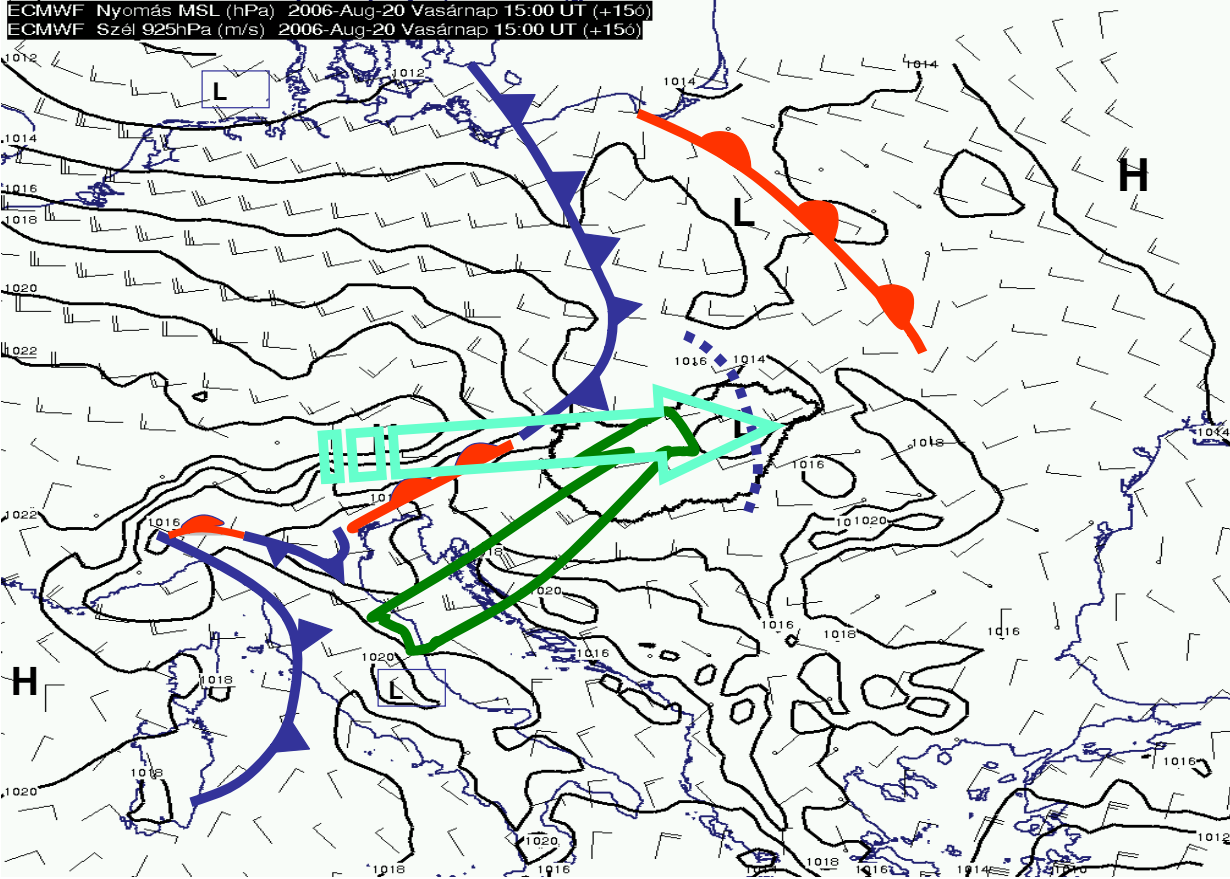
Időszak: 2006.08.20. -2006.08.20.



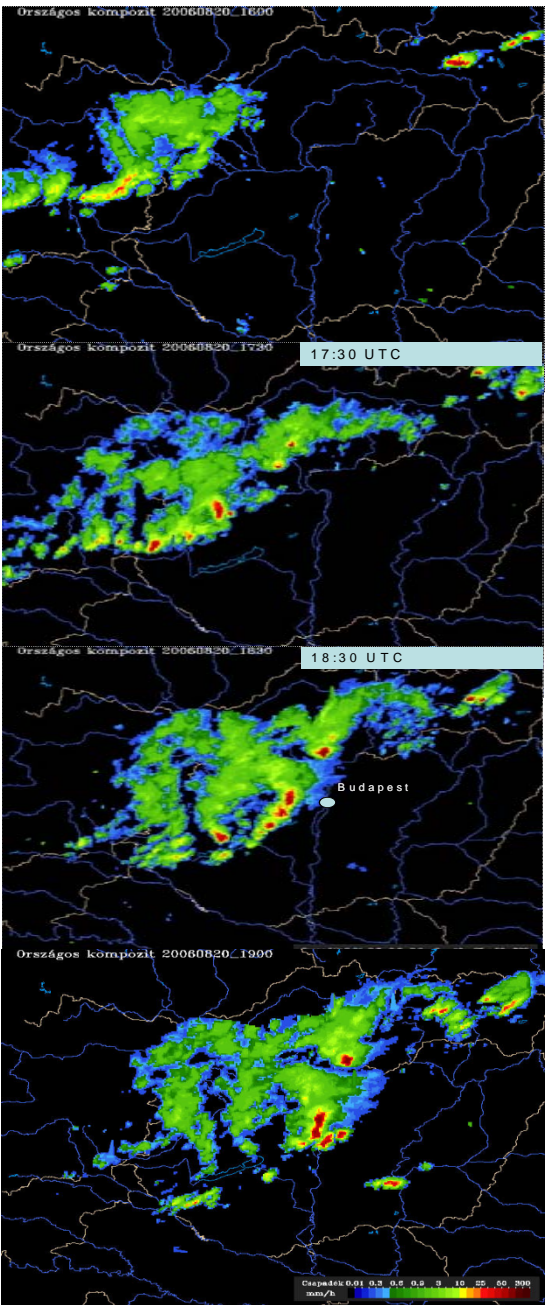
Strongest wind gusts in the down town reached 116 km/h (32.3 m/s), at Lágymányos station (next to the Danube) 123 km/h, (34.1 m/s), at Budapest - Pestszentlőrinc station (in the outpart of Budapest) 82 km/h (22.6 m/s) speed.



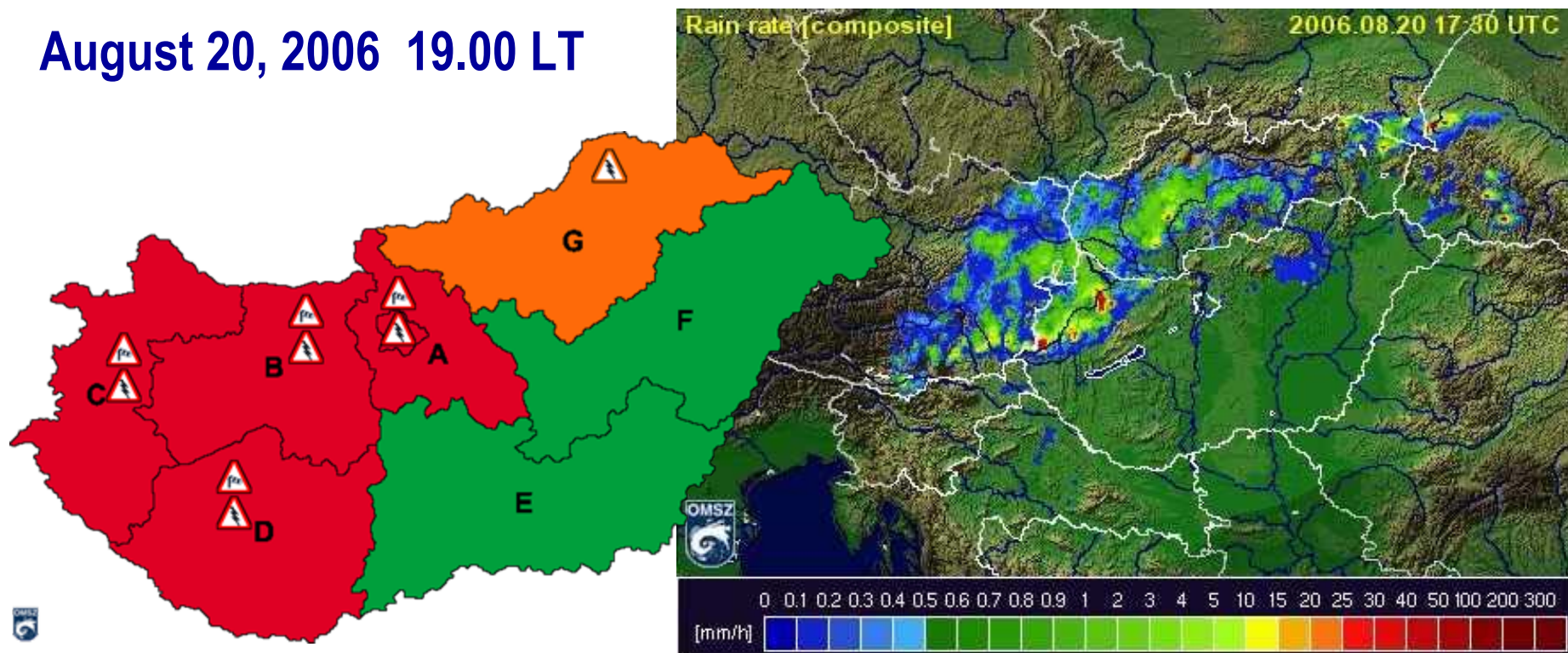
Synoptic scale weather conditions on August 20, 2006



- Long and thermally sharp cold front crossed Central and Southern Europe moving to the east
- Extremely intense wet conveyor belt at the 700 hPa level
- Upper level jet stream at the 300 hPa level



August 20, 2006 19.00 LT



The Hungarian Meteorological Service (HMS) had forecasted the cold front days ahead. Also on the web-based warning system of HMS, which is available for everyone, the forecasters issued the red level warning in due time. Additionally, on the day of the tragical weather event the forecasters sent several warnings to the Disaster Management Organization which is official duty of HMS. On contractual basis the different partners of HMS have been also warned.

The forecast was good, the warning was issued in due time. What is the reason, that the tragedy couldn't have been prevented? The answer is the lack of the communication between the responsible organizations in disaster management.

The circumstances of the catastrophe were first investigated by the state, and then examined in more detail by the Commissioner for Civil Rights. The most important findings were the following:

- While safety documents were prepared for the events, these were incomplete and inefficient. They did not deal with the problem of meteorological support.**
- Neither the state institutions responsible for the organization of the ceremonies, nor the organizers of the events requested weather forecasts and warnings.**
- Therefore, the HMS was not able to send the warnings directly to those concerned.**
- The civil protection service officially received the weather forecasts and warnings, but they found those too generic to take concrete measures, and they also did not have an established contact system with the organizers of the programs.**

Measures taken after the events

Technical developments at the HMS:

The renewal of the alarm system

- The aggravation of the criteria for warnings, in order to avoid confusion. The “red” warning is now only issued in the case of the most dangerous, rarely occurring weather events.
- The disclosure of new documents defining, explaining, and describing the effects of dangerous weather phenomena at the official web page of the HMS. (www.met.hu)
- The renewal of the web-based display of our alarm system, and the establishment of an alarm page which is accessible to everyone from the front page of met.hu (www.met.hu/hunalarm).
- Handouts were made containing information about the alarm system.

Administration, Contact

- According to the resolution passed by the government in October 2006, the HMS is a member of the Operative Staff, which is responsible for organizing the national and state festivities. The OT assembles for the entire day of the state festivities, thus the organizers responsible for the events receive meteorological information first-hand.
- From 2006 August 20 meteorological support is a compulsory part of the management plan for every state event. Outside of the Operative Staff, the organizers of the events are in contractual relationship with the Meteorological Service

The events of 20 August 2007

On 20 August 2007, albeit in different weather conditions, a storm of similar intensity hit Budapest during the festivities. This time the storm arrived earlier. The first weak thunderstorm reached the capital at 6 pm, while the second, which was similar in force to last year's storm, hit at 6:30. The wind speed measured at the Lágymányosi station (on the banks of the Danube) was 34 m/s, which is the same as last year. The Hungarian Meteorological Service already forecasted the storm in the morning hours almost on the minute. The hundreds of thousands of people who took part in the events (air parade, cultural programs, religious procession etc.) were informed of the weather conditions through screens and loud speakers. Thanks to the all-encompassing, carefully planned security measures nobody was hurt during the storm this year.

