

Good example of research paper on impact of the tri-state tornado

[Environment](#), [Disaster](#)



The Tri-State Tornado of March 18, 1925

Introduction

The Tri-State tornado of 18th march 1925 is the deadliest in the United States history. The tornado travelled from southeastern Missouri through southern Illinois and then into southwest Indiana . The storm destroyed a number of towns completely causing about 695 deaths. The tornado started about one p. m. local time in Ellington. The weather was normal, and the residents were continuing their normal business as usual. The practice of tornado forecasting was not there, and the use of the word ‘ tornado’ had been banned from the United States forecasts since the late 19th century . The storm moved so quickly towards the northeast, spreading through the town of Mississippi, Annapolis, Biehle and Frohna. The storm killed 11 people river Mississippi into the southern Illinois. In Illinois, it destroyed the towns of Gorham, De Soto and Murphysboro. The town of Murphysboro was the most affected with the death of 243 people. The tornado killed around 600 people in Illinois before crossing Wabash River into Indiana. In Indiana, the storm demolished the towns of griffin, Owensville and Princeton. About 85 farms were devastated and killed 71 people. The storm disappeared about 4. 30 p. m. close to 3 miles southwest of Petersburg .

The speed of wind was approximately 300 miles per hour. The tornado lasted a record three and half hours and travelled a distance of 219 miles. The tornado had a width of one mile, travelled at an average speed of 62 miles per hour and had a peak speed of 73 miles per hour thus, making it one of the largest and fastest Tornadoes in the United States history.

Other than the 695 casualties that died, more than 2000 people were injured as well as thousands others were rendered homeless and without any food. The other effects include looting fires and theft. The people who were left behind underwent a lot of problems such as hunger and shelter though they received donations from other nations and individuals. Looting of property that belonged to the victims was reported. More than 15000 homes were destroyed by the tri state tornado. The overall estimates were approximated to \$16.5 million dollars. This tornado remains the third most destructive in terms of wealth after the city of St. Louis in 1986 and 1927. The tornado leads to the destruction of nine schools across the three states of Illinois, Missouri and Indiana, killing 69 students. It took a lot of time for the recovery to take place leaving a lasting blow to the development of the region.

Risk management and disaster preparedness

There has been an increase in the number of Tornadoes being reported in the United States in the past 60 years. The number of Tornadoes that happen in a year cannot be determined, and the specific time of occurrence cannot be determined. There has been an increase of 14 Tornadoes reported per year. Today, the world has a better understanding of Tornadoes than in the past.

The Tri-State tornado that struck in 1925 in the United States caused a lot of damages to the victims. Many factors contributed to the extent of destruction of the tornado. Tornado forecasting was banned in the United States in 1988. There was no system watching over Tornadoes, and there

were no warnings of any coming tornado. All the people were caught off guard, and they did not even understand what was happening. During times of Tri-State tornado, people relied heavily on local newspapers, government mail or word of mouth to pass a message. So if a monitoring system could have been in place, the message could have reached people. This could have given them a necessary lead to seek shelter before the disaster.

National Weather Service (NWS) has developed the most effective and sophisticated weather warning systems today. NOAA has done a lot of research using modern technology to develop storm prediction systems.

Forecasters at the storm prediction center (SPC) predict the most likely places to be hit by the tornado and any other severe weather 48 hours early. These predictions are fine tuned as the disaster draws nearer. Meteorologists at SPC use GOES satellite imagery, upper air data, current surface observation and computer forecast models to issue severe Tornadoes watches when the severe weather is a few hours away .

After the SPC has issued the information, weather forecast offices monitor continuously WSR-88D radar time lapse imagery on sophisticated workstations to determine the potential of the storm. The radar then generates reports from a network of trained and dedicated SKYWARN spotters, amateur radio operators, emergency managers and local law enforcers.

If the radar system indicates or spots a severe weather, the WFO radar operator issues a severe Tornado warning through WarnGen. This warning alerts the public about existing threat of severe weather. After the warning has been distributed, NOAA broadcasts special tones on their weather station

in conjunction with the warning message. The other television stations are forced to interrupt their normal programming to keep local residents updated on the events of the tornado. It takes a well coordination between the government and private entities to ensure the best coverage of the warning .

After the tornado is over, the NWS takes a survey of the places that are most devastated and compiles information of the tornado for research and climatological purposes. This data is used to improve the disaster preparedness of the nation. Media stations update residents on the damage of the storm and the cleanup efforts being employed .

The Federal Emergency Management Agency (FEMA) and the American Red Cross are the ones mostly involved in rescue and cleanup process. In spite of technological developments, the effects of tornado cannot be eliminated. Sometimes the communication system sometimes can fail to issue warnings, hence, the effect may be very great but good disaster preparedness mechanisms can save the situation .

The short term Prediction Research and transition (SPoRT) centre and Marshall Space Flight Centre in Huntsville, both belonging to NASA is aiding in the aftermath observation and assessment of the damage. The SPoRT carries damage assessment using NASA's high resolution imagery obtained from polar orbiting satellites such as terra and aqua. The sport provides total lightening data to forcers through North Alabama Lightening Mapping Array, useful for monitoring storms and this can potentially increase the lead time for Tornadoes.

NWS receives training from SPoRT on the use of lightening data in prediction

of short time severe weather. The sport centre continuously investigates new data sets to help improve weather prediction capabilities using high resolution weather forecast models. This high resolution models increases the awareness of likelihood of severe weather hence, providing additional lead time for public advisories ad disaster preparedness activities. NASA uses its unique satellite to collect data which is then given to the National Weather Service (NWS). NASA's systems are very accurate and precise. These data is kept for research and analysis as scientists try to understand more about the Tornadoes.

Conclusion

Many scientists wonder if the Tri-State tornado was actually one tornado or a group of Tornadoes. According to findings from modern weather records, research suggests that the Tri-State tornado resulted from a cyclic Super Cell rather than one massive storm. In this suggestion, the storm is assumed to be continuously evolving, and the decay of one Super Cell leads to the development of another. A single Super Cell can be responsible for one or more Tornadoes .

This theory has a problem when applied to the Tri-State tornado because the Super Cell tends to exhibit breaks in its damage path as the storm evolves. This is contrary to the Tri-State tornado whose destruction was continuous. The Tri-State tornado slowed down only on two occasions, but it did not break completely.

Further analysis has revealed that the tornadic Super Cell developed near to the centre of the synoptic cyclone, with possibility being at the triple point of

intersection of the warm front and the dry line. The temperature gradient near the triple point and north of the warm front remained strong in the afternoon due to the air that had been cooled by earlier precipitation. The Super Cell was moving at 60mph away from the slow moving cyclone .

Works Cited

- Agamben, G. What is an Apparatus? In W. Hamacher (Ed.) “ What is an Apparatus?”, and other Essays. Stanford : Stanford University Press, 2009.
- Anti Essays. " Tri-State". 12th november 2013. 13th november 2013 .
- Barclay, Shelly. " Tri State Tornado." Atmosphere And Weather (2010): 1.
- Barnet, B. A. " Idiomeia: The rise of personalized, aggregated content." The Journal of Media & Cultural Studies (2009): 93-99.
- Browning, K. A.,. " Cellular structure of convective storms." Meteorological Magazine (21962): 341-350.
- Chicago sun times. " DOG DAYS OF SUMMER TWISTER TALES.". 2003. 13th november 2013 < .>.
- Compo, G. P., J. S. Whitaker, and P. D. Sardeshmukh. " Feasibility of a 100-year reanalysis using only surface pressure data." Bull. Amer. Meteor. (2006): 175-190.
- Custers, B. H. M. The power of knowledge. Ethical, legal, and. Nijmegen: Wolf Legal Publishers, 2004.
- Derrida, J. " From “ Shibboleth: For Paul Celan”." In D. Attridge (Ed.), Acts of literature (1992): 370-413.
- Foucault, M. Technologies of the self. In L. H. Martin, H. Gutman, & P. H. Hutton (Eds.), Technologies of the self. London: Tavistock, 1988.

Galvin, John. " Tri-State Tornado: Missouri, Illinois, Indiana, March 1925." popular mechanics (2007): 1.

Grazulis, Thomas P. " THE FORGOTTEN STORM: THE GREAT TRI-STATE TORNADO OF 1925." . 204. 13th november 2013 < .>.

Horvitz, E. www. research. microsoft. com. 2007. 10th november 2013 .

J. S. Johnson, L. J. Czepyha, J. M. Grzywacz, B. A. Klimowski, and M. R.

Hjelmfelt,. " An observational examination of long-lived supercells." Part II: Environmental conditions and forecasting. (2006): 689-714.

Jason, Thomas. www. ehow. com. 2010. 5th november 2013 >.

Jennifer. " The Great Tri-State Tornado of March 1925." discover historic travel (2013): 1.

Johns, R. H., D. W. Burgess, C. A. Doswell III, M. S. Gilmore, J. A. Hart, and S.

F. Piltz,. " The 1925 Tri-State Tornado Damage Path and Associated Storm System." Electronic J. Severe Storms Meteor (2013): 1-33.

Johnson, Ruth Spencer. Monster tornado.(Tri-State Tornado of 1925). . 2012. 13th november 2013 < .>.

Kristen Crossett, brent ache, Percy Pacheco, Kate haber. national coastal population report: population trends from 1970 to 2020. NOAA, 2010.

Landerville, Timothy. " After Oklahoma, the Tragedy and Science of Tornadoes." Risk Management and Deadly Tornadoes (june 2013): 1-5.

Linden, G., Smith, B., & York, J. " Amazon. com recommendations: Amazon. com recommendations:." IEEE Internet computing (2003): 76= 80.

Maddox, R. A., M. S. Gilmore, C. A. Doswell III, R. H. Johns, C. A. Crisp, D. W. Burgess, J. A. Hart. " Meteorological analyses of the Tri-State tornado event of March 1925." Electronic J. Severe Storms Meteor., (2013): 1-27.

<https://assignbuster.com/good-example-of-research-paper-on-impact-of-the-tri-state-tornado/>

National Weather Service. " NOAA/NWS 1925 Tri-State Tornado Web Site-- 1925: Now vs. Then." national weather service forecast office (2010): 1.

Pantagraph Publishing Co. " Timely weather alerts can save lives if heeded." . 2003. 13th november 2013 < >.

Post Tribune-IN. " BOOK RECOUNTS NATION'S WORST TORNADO THE TRI- STATE TORNADO KILLED 689 PEOPLE AND CAUSED \$182. 6 BILLION DAMAGE IN TODAY'S DOLLARS." . 1992. 13th november 2013 < .>.

Ricoeur, P. Oneself as another. Chicago: The University of Chicago Press., 1994.

S. Ben-David, A. Borodin , R. Karp , G. Tardos , A. Wigderson. power of randomization in online algorithms, Proceedings of the twenty-second annual ACM symposium on Theory of computing. baltimore, maryland, 1990.

Stiegler, B. Technics and time, 2: Disorientation. Stanford : Stanford University Press, 2009.

Sunstein, C. R. Republic. com 2. 0. Princeton: Princeton, 2007.

Velasco., Catherine Ann. " Plainfield collecting memories of deadly tornado." . 2005. 13th november 2013 < .>.

Weber, W., Rabaey, J. M., & Aarts, E. (Eds.). Ambient intelligence. Berlin: Springer., 2005.

YPTE. <http://www.ypte.org.uk>. 2013. 5th november 2013 .