

Epidemiology of Deaths by Lightning in the State of Sao Paulo-Brazil Years 2000 to 2014, and Impacts of Development and Environmental Factors

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Introduction

Brazil is the world champion lightning rays. Generated by its extension and continental characteristics. The Atmospheric Electricity Group (ELAT) of the National Institute for Space Research - INPE develops research on atmospheric electricity through experimental techniques, numerical modeling and theoretical studies. Emphasis is given to research on lightning in Brazil. Are estimated 57 million lightning strikes per year, where 70% occur in the months of January and February. There was a 79% increase in the number of stormy days in the last 60 years, compared with the first half of the 20th century. In the years 1910-1951, there were 43 days of storm, in 2010, that number jumped to 77 days. The cities that were most relevant data were São Paulo, Goiania, Manaus and Belém, with more than 100% from 1910 to 2010 storms increases. INPE indicate that in 14 Brazilian cities, all with more than 50 000 inhabitants and had significant population increase in recent 50. Studies show that 70% of the rays fall on urban.

Objectives

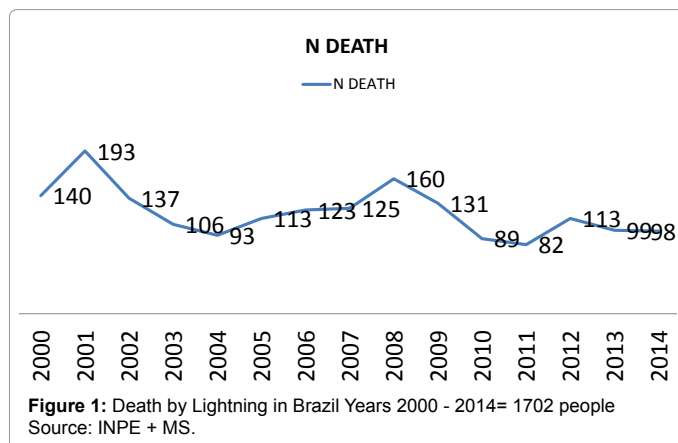
Analyze on the state of São Paulo - Brazil, deaths by lightning second location, gender, age. Period 2010 to 2014.

Methodology

The analyzes were performed by the Technical Center staff Surveillance Epidmiological, using information from the National Institute for Space Research (INPE) and the State Secretaria of Health. Periods 2010 to 2014 were analyzed. This is a descriptive analysis, seeking identify key characteristics.

Results

At the 100 deaths that occur by lightning, 80% are rural. In 10 years, 1,702 people died from lightning in Brazil. 80% are men and 20% are women. Figures 1 and 2 shows the number of Death by Year (2000-2014) of occurrence and the age. The people with 25-59 years old, are the principal occurrence (Figures 1 and 2).



Conclusions

The studies by INPE shows that the number of storms has increased in São Paulo and Campinas, in proportion to the growth of cities, which supports the idea that heat islands formed in urban areas are responsible for the increased rainfall. Studies by Secretary Health shows that number of death are important. Deaths by lightning decreases as the population becomes more aware of the risks, then it is important to analysis and dissemination (Figure 3).

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Received February 24, 2015; Accepted June 17, 2015; Published June 24, 2015

Citation: Nery T, Pereira F, Christensen R (2015) Epidemiology of Deaths by Lightning in the State of Sao Paulo-Brazil Years 2000 to 2014, and Impacts of Development and Environmental Factors. J Climatol Weather Forecasting 3: 134. doi:10.4172/2332-2594.1000134

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