

The Event of Extreme Precipitation Occurred in the Metropolitan Mesoregion of the Capital of Para

Authors : Natasha Correa Vitória Bandeira, Lais Cordeiro Soares, Claudineia Brazil, Luciane Teresa Salvi

Abstract : The intense rain event that occurred between February 16 and 18, 2018, in the city of Barcarena in Pará, located in the North region of Brazil, demonstrates the importance of analyzing this type of event. The metropolitan mesoregion of Belem was severely punished by rains much above the averages normally expected for that time of year; this phenomenon affected, in addition to the capital, the municipalities of Barcarena, Murucupi and Muruçambá. Resulting in a great flood in the rivers of the region, whose basins were affected with great intensity of precipitation, causing concern for the local population because in this region, there are located companies that accumulate ore tailings, and in this specific case, the dam of any of these companies, leaching the ore to the water bodies of the Murucupi River Basin. This article aims to characterize this phenomenon through a special analysis of the distribution of rainfall, using data from atmospheric soundings, satellite images, radar images and data from the GPCP (Global Precipitation Climatology Project), in addition to rainfall stations located in the study region. The results of the work demonstrated a dissociation between the data measured in the meteorological stations and the other forms of analysis of this extreme event. Monitoring carried out solely on the basis of data from pluviometric stations is not sufficient for monitoring and/or diagnosing extreme weather events, and investment by the competent bodies is important to install a larger network of pluviometric stations sufficient to meet the demand in a given region.

Keywords : extreme precipitation, great flood, GPCP, ore dam

Conference Title : ICEMR 2022 : International Conference on Emergency Management and Response

Conference Location : Lisbon, Portugal

Conference Dates : October 27-28, 2022