Summer of 2020: tragic rainy floods in an area of high population density in Brazil

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INTRODUCTION

The most populous area of Brazil, the southeastern region, was affected by floods and landslides during the summer of 2020. According to data from daily newsletters, more than 20,000 inhabitants was directly affected by tragic disasters caused by floods in the States of Minas Gerais, São Paulo, Rio de Janeiro and Espírito Santo. These impacts are associated to hydrometeorological events and mainly due the lack of urban planning. This fact, combined with the climatic seasonality of tropical regions, promotes calamity situations in Brazilian southeastern region.

MATERIAL AND METHODS

After completing the stages of the morphometric and statistical analysis of the drainage network and the relief, the risk map for the occurrence of floods was prepared. Finally, measures were suggested to manage and mitigate floods and the risks associated with flooding in river basins.

RESULTS AND DISCUSSION

Figure 2 indicates areas subject to flooding during intense or prolonged rain events. From this, it is possible to direct efforts towards better risk management and reduction of impacts.

CONCLUSIONS

To effectively solve the problem of flooding in Brazil, it is necessary to promote urban reform in small, medium and large cities.

ACKNOWLEDGEMENTS

To the “Coordenação de Aperfeiçoamento de Pessoal de Nível Superior” (CAPES), for the financing of the study - Financial Code 001.