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Is climate change modifying precipitation extremes?

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The title of the present contribution is a relevant question that is frequently posed to scientists, technicians and managers of local authorities. Although several research efforts were recently dedicated to rainfall observation, analysis and modelling, the above question remains essentially unanswered. The question comes from the awareness that the frequency of floods and the related socio-economic impacts are increasing in many countries, and climate change is deemed to be the main trigger. Indeed, identifying the real reasons for the observed increase of flood risk is necessary in order to plan effective mitigation and adaptation strategies. While mitigation of climate change is an extremely important issue at the global level, at small spatial scales several other triggers may interact with it, therefore requiring different mitigation strategies. Similarly, the responsibilities of administrators are radically different at local and global scales.

This talk aims to provide insights and information to address the question expressed by its title. High resolution and long term rainfall data will be presented, as well as an analysis of the frequency of their extremes and its progress in time. The results will provide pragmatic indications for the sake of better planning flood risk mitigation policies.