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SaferPLACES platform: a cloud-based climate service addressing urban flooding hazard and risk.

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Floods are a global hazard that may have adverse impacts on a wide-range of social, economic, and environmental processes. Nowadays our cities are flooding with increased occurrence due to more severe weather events but also due to anthropogenic pressures like soil sealing, urban growth and, in some areas, land subsidence. Frequency and intensity of extreme floods are expected to further increase in the future in many places due to climate change.

The characterisation of flood events and of their multi-hazard nature is a fundamental step in order to maximise the resilience of cities to potential flood losses and damages.

SaferPLACES employs innovative climate, hydrological and raster-based flood hazard and economic modelling techniques to assess pluvial, fluvial and coastal flood hazards and risks in urban environments under current and future climate scenarios.

SaferPLACES platform provides a cost-effective and user-friendly cloud-based solution for flood hazard and risk mapping. Moreover SaferPLACES supports multiple stakeholders in designing and assessing multiple mitigation measures such as flood barriers, water tanks, green-blue based solutions and building specific damage mitigation actions.

The intelligence behind the SaferPLACES platform integrates innovative fast DEM-based flood hazard assessment methods and Bayesian damage models, which are able to provide results in short computation times by exploiting the power of cloud computing.

A beta version of the platform is available at platform.saferplaces.co and active for four pilot cities: Rimini and Milan in Italy, Pamplona in Spain and Cologne in Germany.

SaferPLACES (saferplaces.co) is a research project founded by EIT Climate-KIC (www.climate-kic.org).

