

EGU2020-18858

<https://doi.org/10.5194/egusphere-egu2020-18858>

EGU General Assembly 2020

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## Future projections of river floods hazard over the multiple CORDEX-CORE domains

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One of the most largely recognized effect of the Global Warming is the change of weather extremes. The increase of extreme precipitation events is directly linked to a greater availability of precipitable water induced by a warmer atmosphere. The flood projected signals are heterogeneous and influenced by different phenomena. As an example, the rise in temperature could increase the risk of floods over the regions sensible to extreme precipitations and at the same time could reduce the risk of floods over the regions sensible to the melted snow accumulated during the cold season. In this work the CORDEX-CORE simulations completed using two different Regional Climate Models (RegCM and REMO) are used to estimate the future changes on flood risk for eight CORDEX domains (North-America, Central-America, South-America, Europe, Africa, West-Asia, East-Asia, South-East-Asia and Australasia). A river-routing model is applied to simulate the river discharge of a high resolution grid (0.06 degree) for three different driving Global Climate Models, two different scenarios (rcp2.6 and rcp8.5) and for each of the domains. The simulated discharges are hence used to fit a generalized extreme value (GEV) distribution to estimate the change on flood risk related to the future climate projections.

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