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Climate change impact on water resources for several river basins: a European, Asian and African case study.

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Changes in temperature and precipitation patterns resulting from changes in climate are expected to impact the spatial and temporal distribution of water resources (IPCC 2007). Because climate change doesn't occur uniformly throughout the globe, climate change is expected to impact each region differently.
Few examples are reported where a possible change in water availability could heavily effects the life of peoples:
• The Volta River in Africa is responsible for 70% of the electricity production in Ghana.
• More than the 80% of the northern Italian GDP (Gross Domestic Product) is connected to the Po River.
• The Miyun Reservoir in China is the major water supply for Beijing and already in the last decades Beijing suffered from water storage deficiency.
• The Soyang, Chungju, and Daecheong Basins in Korea provide municipal, industrial, and irrigational water to downstream users, as well as control flooding and generate hydropower. The Soyang and Chungju dams supply water to Seoul the largest metropolitan areas in Korea.
These River Basins have been reconstructed using the CHYM hydrological model and by coupling CHYM with the regional climate model RegCM3 the possible impact on water resources has been quantified.