



Intense summer precipitation vs temperature in Europe, observations and projections

M. Radziejewski (1, 2), I. Pinskiwar (2) and Z. W. Kundzewicz (2, 3)

(1) Faculty of Mathematics and Computer Science, Adam Mickiewicz University, Poznan, Poland [maciejr@amu.edu.pl], (2) Research Centre for Agricultural and Forest Environment, Polish Academy of Sciences, Poznan, Poland, (3) Potsdam Institute for Climate Impact Research, 14412 Potsdam, Germany

According to simulations by the Hadley Centre global and regional models, HadCM3 and HadRM3/PRECIS, for SRES scenario A2, intense precipitation events are expected to become more frequent in the warmer future. This is likely to impact adversely the flood hazard. Temperature rise is believed to be the primary driving factor of this change. The relations between precipitation intensity and seasonal temperature in model simulations as well as in observational records are studied, with particular emphasis on summer precipitation. Changes in the temperature-precipitation pattern in selected grid points of the regional (HadRM3) model are also examined.