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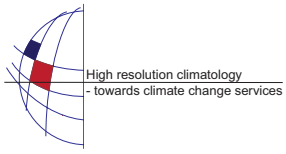

Climate and Mortality in Vienna and Impact of Climate Change

S. Muthers (2), A. Matzarakis (2), and E. Koch (1)

(1) Central Institute for Meteorology and Geodynamics, Climatology, Vienna, Austria (e.koch@zamg.ac.at), (2) Meteorological Institute, Albert-Ludwigs-University of Freiburg, Germany (stefan.muthers@meteo.uni-freiburg.de

For the period 1970-2007, the relationship between heat stress and mortality in Vienna was analyzed using a human biometeorological thermal index. Using the PET (Physiologically Equivalent Temperature) at 14 CET mortality is significant below the baseline for days with PET < 29°C and significant above for hotter days. On days with extreme heat stress (PET $\geq$ 41°C) an additional mortality of +13.0 % was found. The sensitivity to heat stress is significantly higher for women and for patients with cardiovascular diseases.
To assess the impact of climate change on the heat-related mortality, we used the two regional climate models REMO and CLM and the emissions scenarios A1B and B1. The heat related mortality was assessed by one scenario without any long-term adaptation and one scenario including continuous long-term adaptation. In both scenarios, heat-related mortality could increase until 2071-2100. Till 2011-2040 no significant changes to the period of examination were found.
Adaptation measures should focus on the extreme heat days (PET $\geq$ 41°C), were the mortality will increase even with long-term adaptation.