



Implementation of the High-Resolution Climate Information for Assessing the Risk of Historic Buildings Damage

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The recent research shows that the preservation of the cultural heritage of Europe is urgent because it is particularly vulnerable to the climate change. Thus the aim of the large-scale integrated FP7 EU project "Climate for Culture" was to assess the damage risk, the economic impact and the mitigation strategies for sustainable preservation of the cultural heritage in the times of climate change.

The target of the project was to apply the regional climate model REMO alongside with the new building simulation tool to predict the future indoor climate conditions. The high-resolution climate simulations were performed on a horizontal grid of about 11 km, 27 levels are applied on the vertical grid.

Two IPCC emission scenarios A1B and RCP4.5 were made used of. A series of 30-year time slice experiments were performed. These are the scenario simulations for the near (2021 to 2050) and far future (2071 to 2100) climate and the control simulations for the recent past (1961 to 1990).

In the presentation the results of the climate simulations are related. These were provided both for each of the selected historical buildings and for entire Europe. The results were further used as an input for other work packages. Besides in cooperation with other project partners the list of climate variables useful for the damage risk assessment was created.