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CONTROL ID: 822502
TITLE: A 60 year homogeneous reconstruction of TC activity in E Asia, 1948-2007
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ABSTRACT BODY: The feasibility to reconstruct the weather of E Asia for the last decades using an atmospheric regional climate model was analysed. Global National Centers for Environmental Prediction - National Center for Atmospheric Research (NCEP-NCAR) re-analyses data were dynamically downscaled using a state-of-the-art regional climate model, the Climate version of the "Lokal Model" (CLM).

The resulting continuous 60 year simulation, extending from 1948 until 2007, is examined. Using an automated tracking system, all TCs are identified in the 60-year simulation. The parameters of the tracking system have been chosen so that on average the same number of TCs is detected as in the operational best track data base of JMA, namely about 25 TCs per year.

The 1948-2007 time series of the annual numbers of TCs in the simulation and in the best track (BT) data correlate favourably. The rms-difference between the number of simulated and BT-analysed TCs is about 5 TCs per year. Interestingly, the rms-error shows only a little tendency of getting smaller after the advent of satellite data. Seemingly, the availability of satellite data had a minor impact on the quality of the large-scale analysis of NCEP (used to run the LAM) and on the quality of the best track analysis of TCs in E Asia.

In both, the best track data set as well as in the downscaled data, a weak tendency towards less TCs emerges; this slight downward trend is masked by strong interannual variability, with an overall maximum of 39 TCs and a minimum of 16 storms. The interdecadal variability is relatively weak, albeit stronger in the best track data than in the downscaled data.

KEYWORDS: [1637] GLOBAL CHANGE / Regional climate change.
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