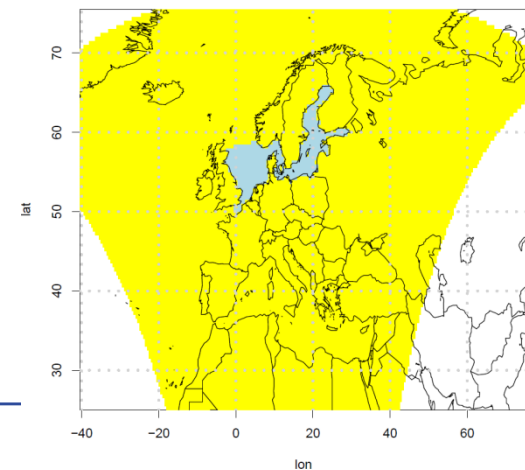
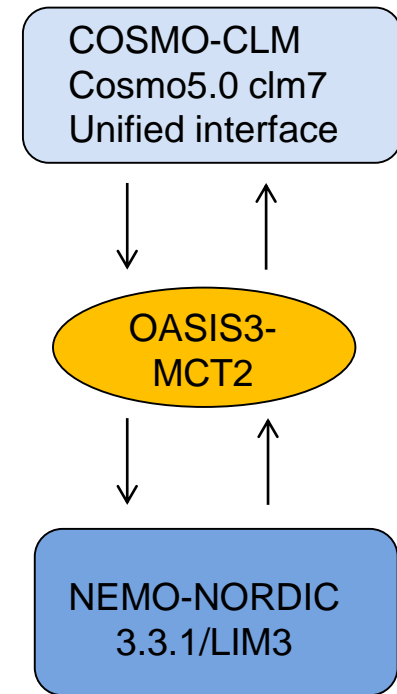
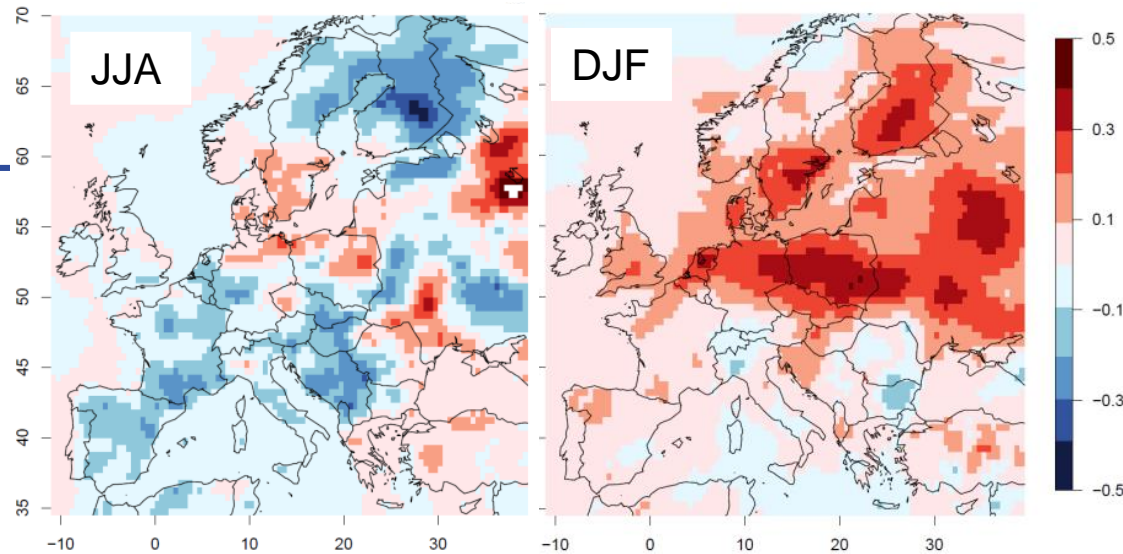
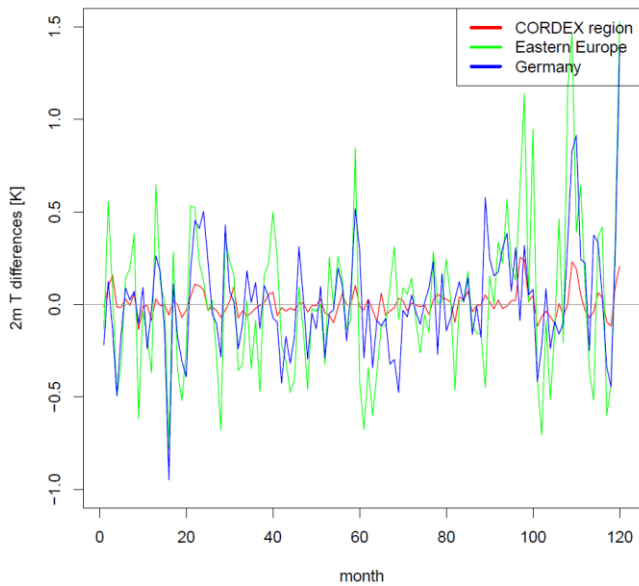


Trang Van Pham
Deutscher Wetterdienst

- 2 sensitivity experiment with coupling time steps 5 minutes and 6 hours:
 - Period: 2001-2010
 - Domain:
 - COSMO-CLM: CORDEX-EU
 - NEMO: North and Baltic Seas
 - Forcings:
 - COSMO-CLM: ERA-Interim
 - NEMO: ORAS4
- Results:
 - Computing time: no difference
 - Small differences in long term average of 2mT



Impact of coupling time steps



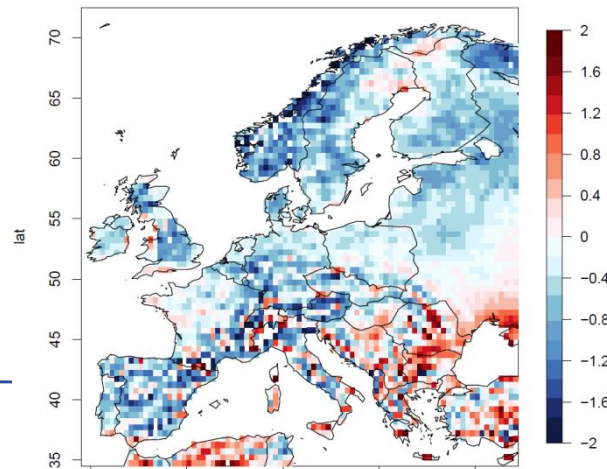
2mT CP5min-CP6hr

10-year seasonal averaged differences:

- Differences between -0.5K and 0.5K
- Summer and winter have the largest differences (opposite trend)
- With 5 min coupling, 2mT is a bit higher -> smaller biases compared to E-OBS

Monthly averaged differences 2mT CP5min-CP6hr

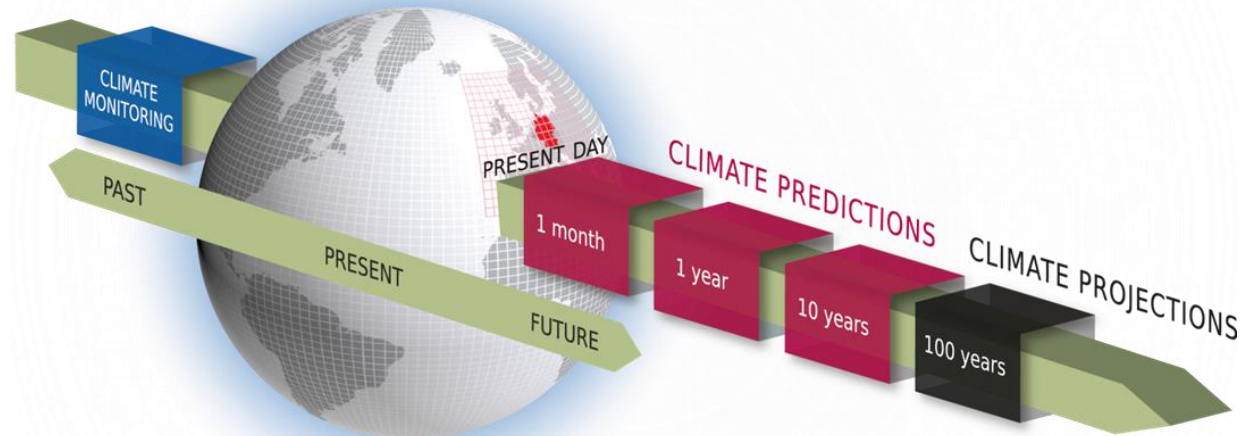
- Differences between -1K and 1.5K
- Do not show trend of increasing or decreasing



2mT CP5min-EOBS:

- Mostly cold biases
- Biases are under +/-2K





DWD Strategy 2020

- Provide prediction products on all relevant time scales until climate projections („seamless prediction“)
- Reliable assessment of a seasonal, decadal and long-term trends
- Service for the society (public, economy, politics) to advice at an early stage for a possible adaption to climate change



ICON: The IC0sahedral Nonhydrostatic modelling framework of MPI-M and DWD

development since 2004, new dynamical core

key aspects:

- Triangular grid
- New dynamical core
- Non-hydrostatic
- Seamless prediction (NWP & climate)
- flexible (global & regional)
- Efficient computing

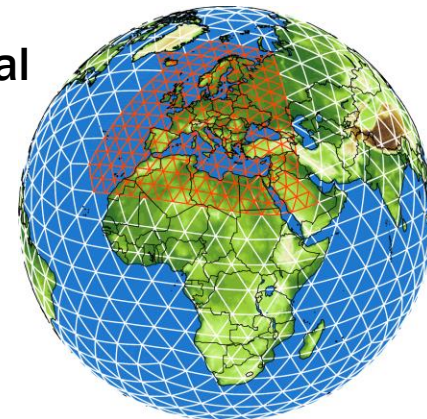


Max-Planck-Institut
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Wetter und Klima aus einer Hand



global



regional

weather

climate

Pilot PROject on climate, Waterways and Shipping (PROWAS)



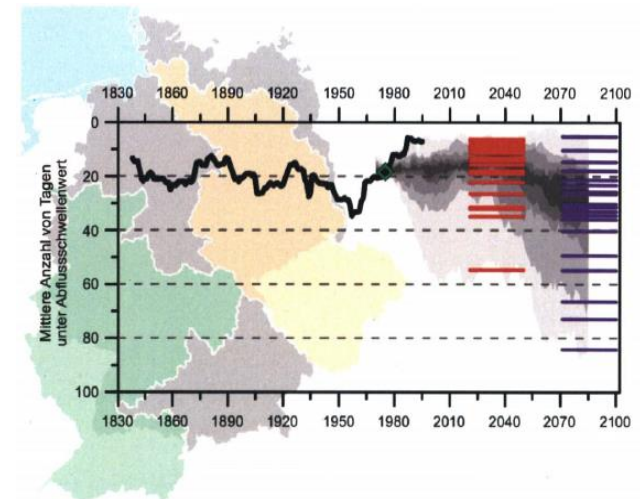
Bundesministerium
für Verkehr und
digitale Infrastruktur

Key aspects:

- Development of tools and provision of operational pilot services for assessment of climate change and adaption measures
- Focus on products for water ways and shipping in the regions Rhine, Elbe and German Bight

DWD contribution:

- Simulation with coupled model system to provide climate change information
- further improvement of coupled model system
- Adaption of ICON-LAM for Europe



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