Boğaziçi University

Climate Research Group

RegCM4.0 EXPERIMENTS FOR CENTRAL ASIA CORDEX DOMAIN

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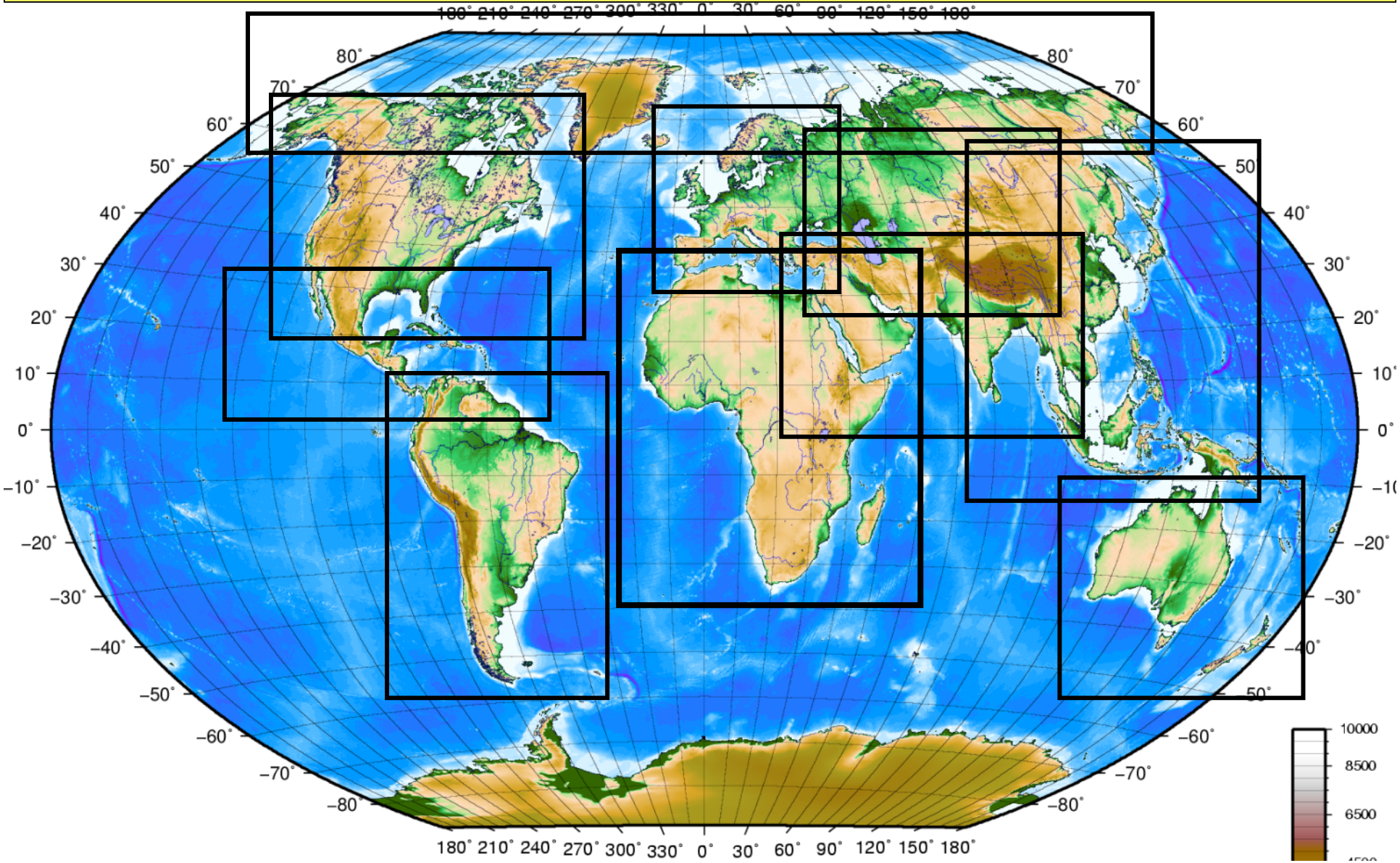
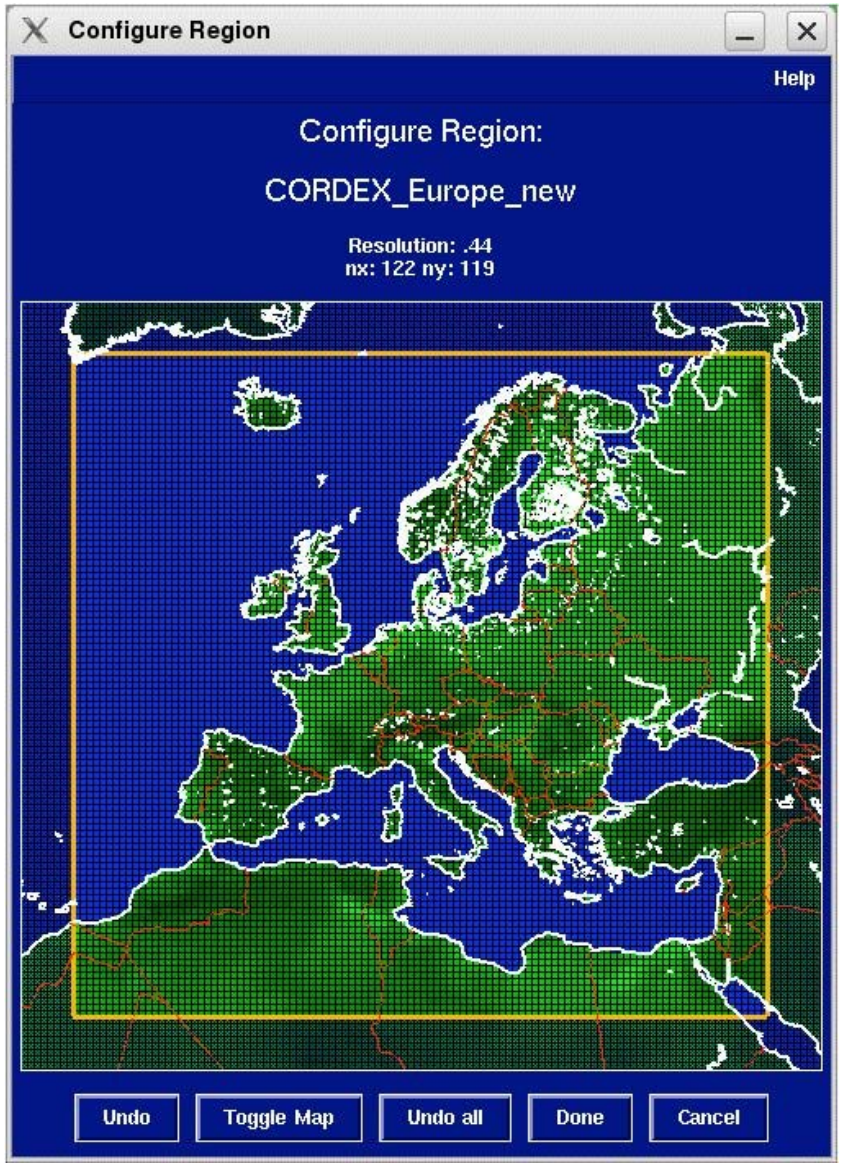
CORDEX domains

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Toggle Map
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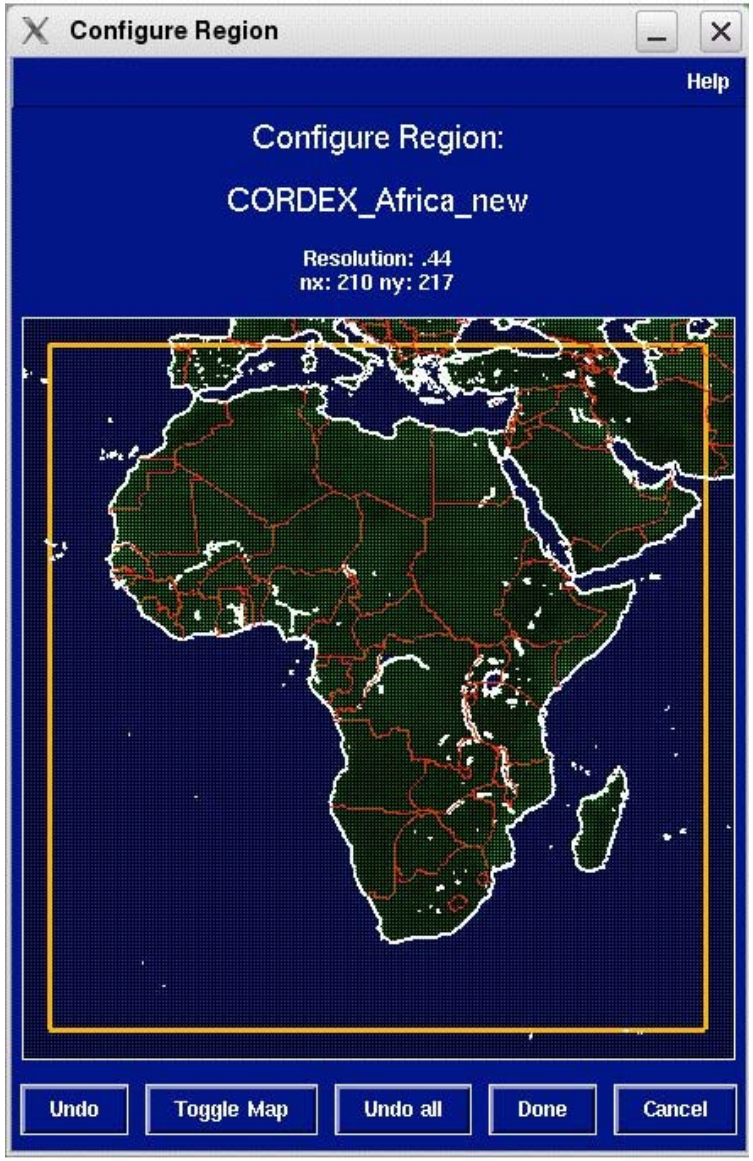
EURO-CORDEX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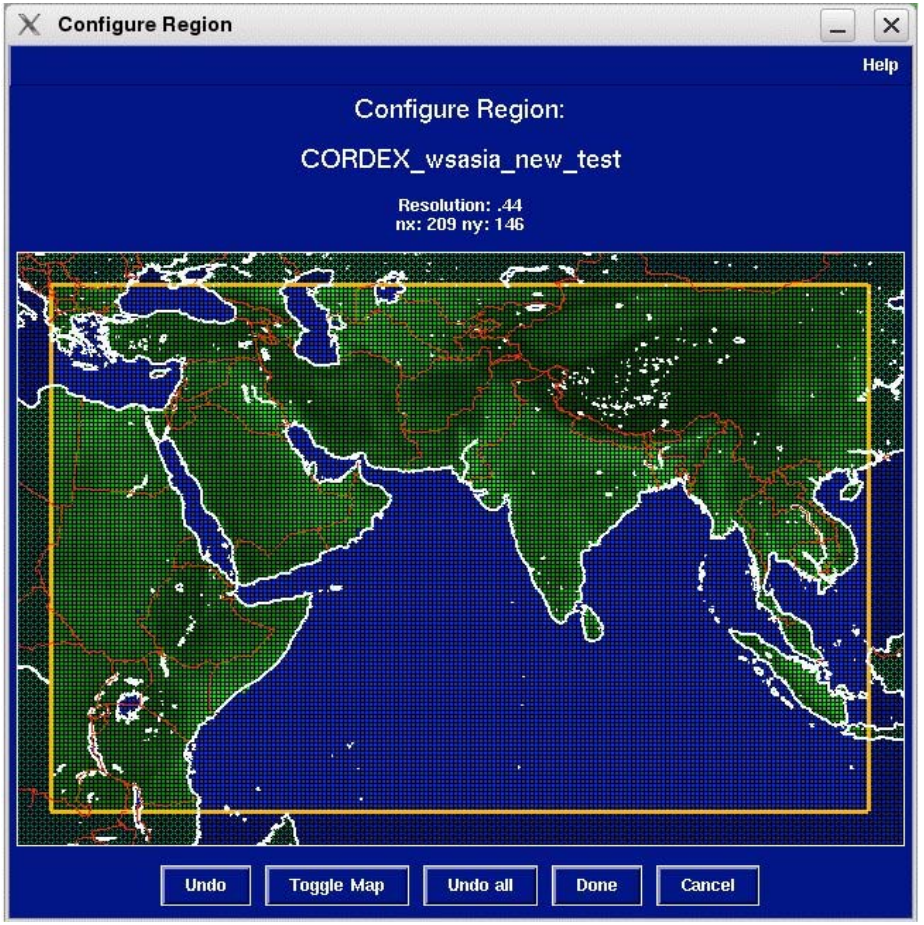
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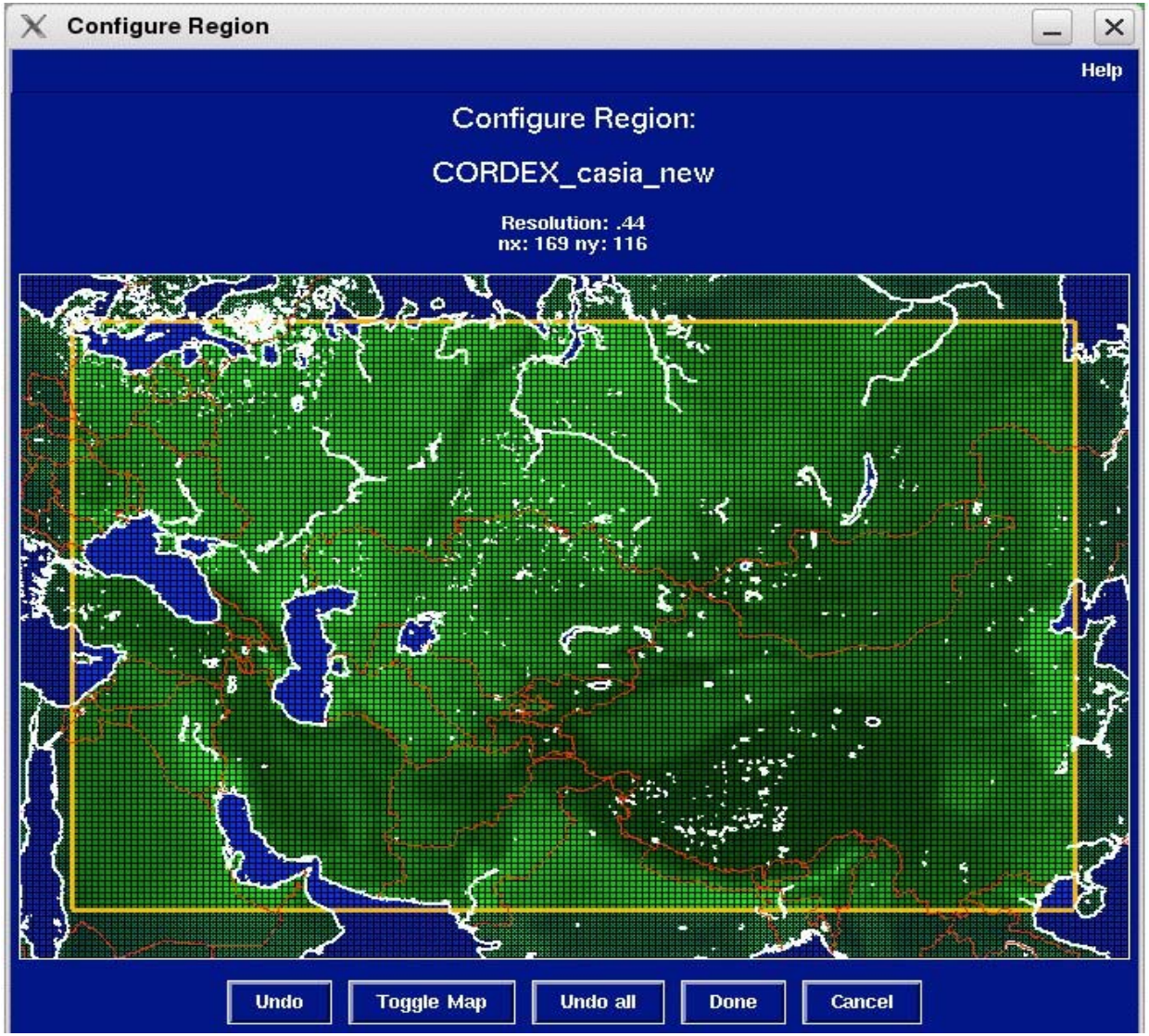
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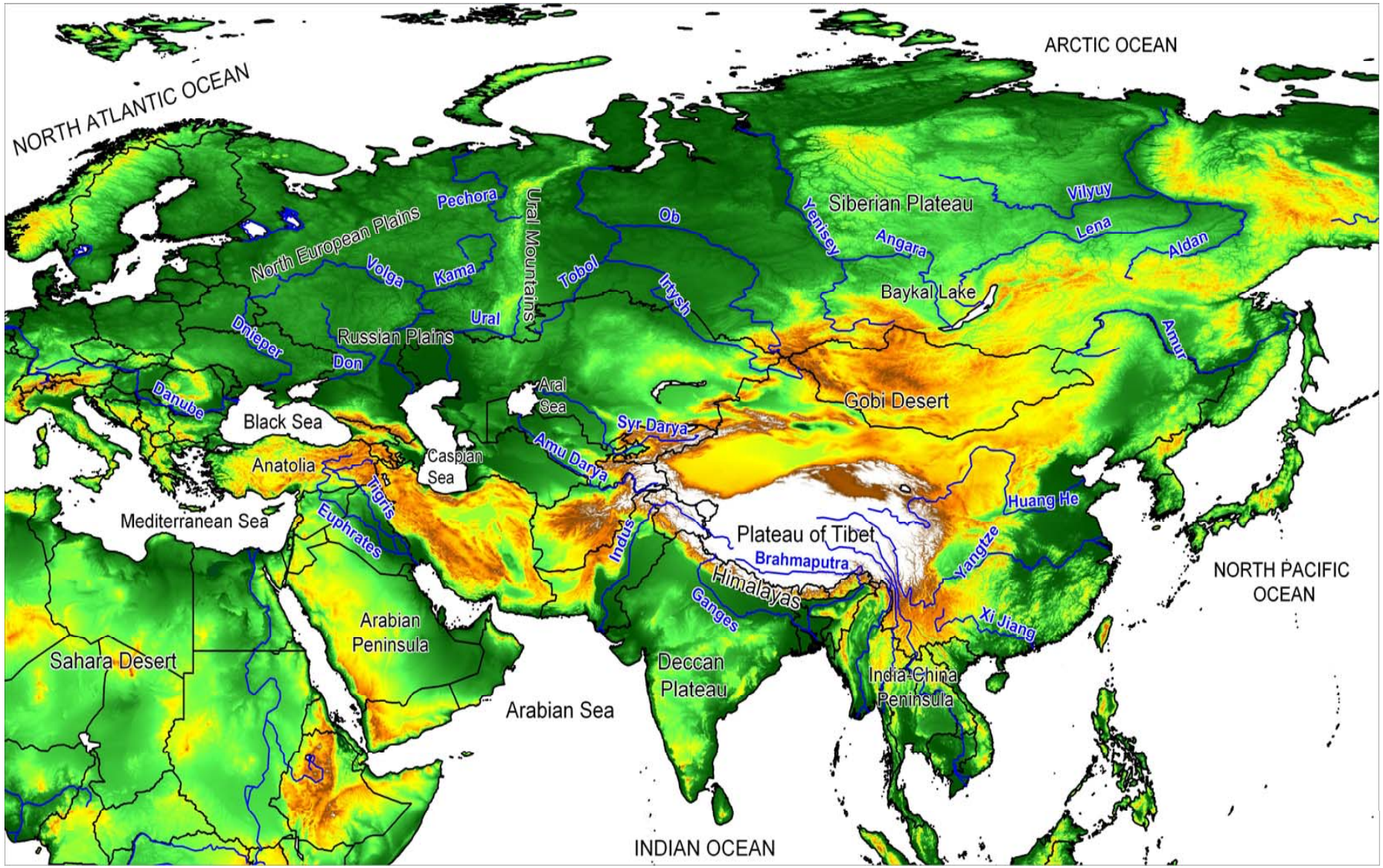
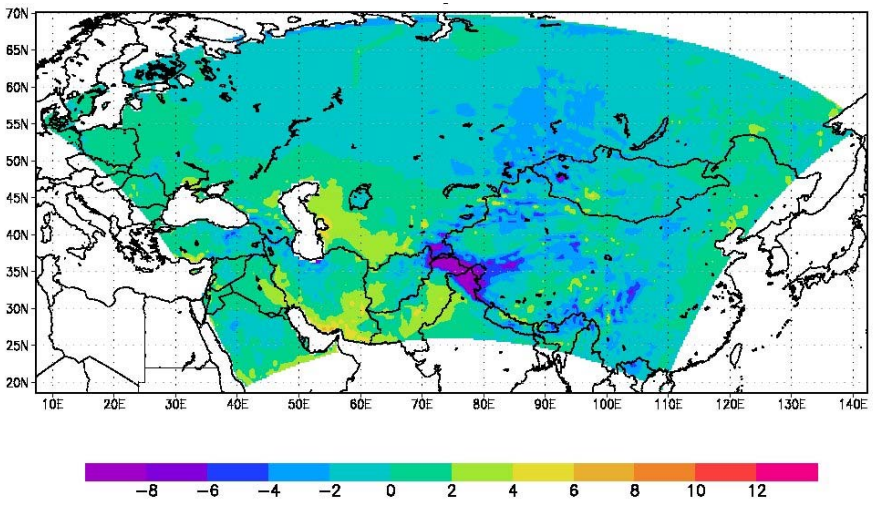
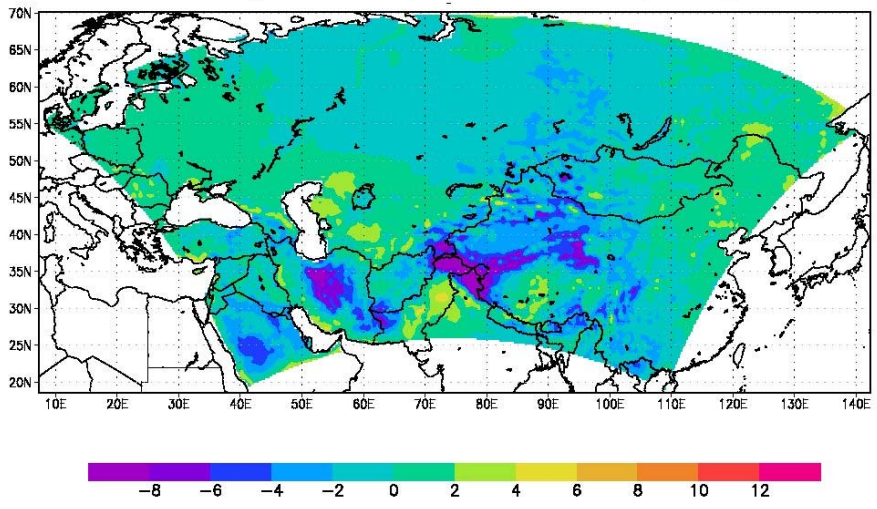

ARCTIC OCEAN
NORTH ATLANTIC OCEAN
NORTH PACIFIC OCEAN
INDIAN OCEAN
Arabian Sea
Black Sea
Caspian Sea
Aral Sea
Mediterranean Sea
Baykal Lake
Gobi Desert
Plateau of Tibet
Himalayas
Siberian Plateau
North European Plains
Russian Plains
Ural Mountains
Deccan Plateau
Arabian Peninsula
Sahara Desert
India-China Peninsula
Anatolia
Pechora
Ob
Yenisey
Vilyuy
Lena
Angara
Aldan
Amur
Volga
Kama
Tobol
Irtysh
Ural
Dnieper
Don
Danube
Syr Darya
Amu Darya
Tigris
Euphrates
Indus
Brahmaputra
Ganges
Huang He
Yangtze
Xi Jiang

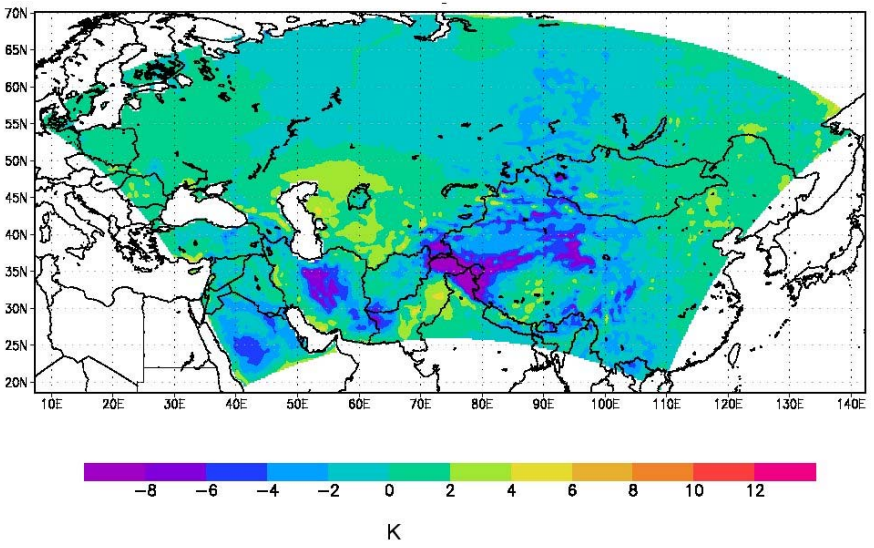
JJA Temperature Renalysis Driven - CRU OBS (Emanuel)



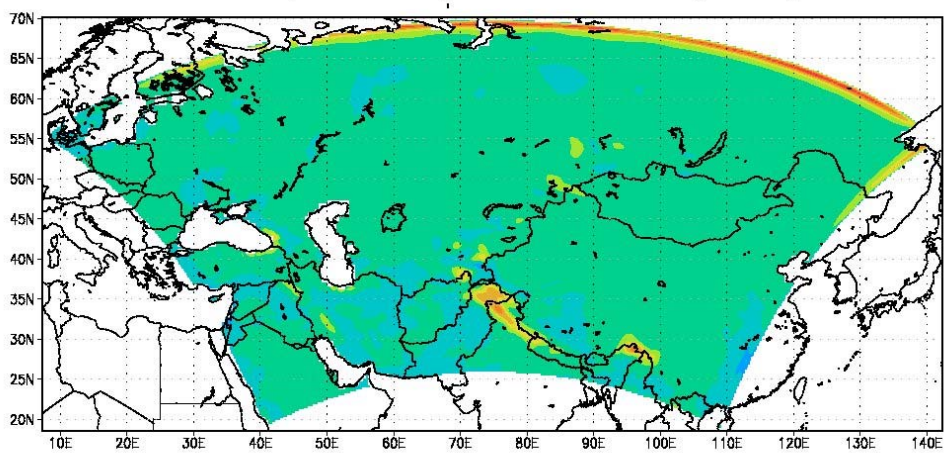
JJA Temperature Reanalysis Driven - CRU OBS (Grell/AS)



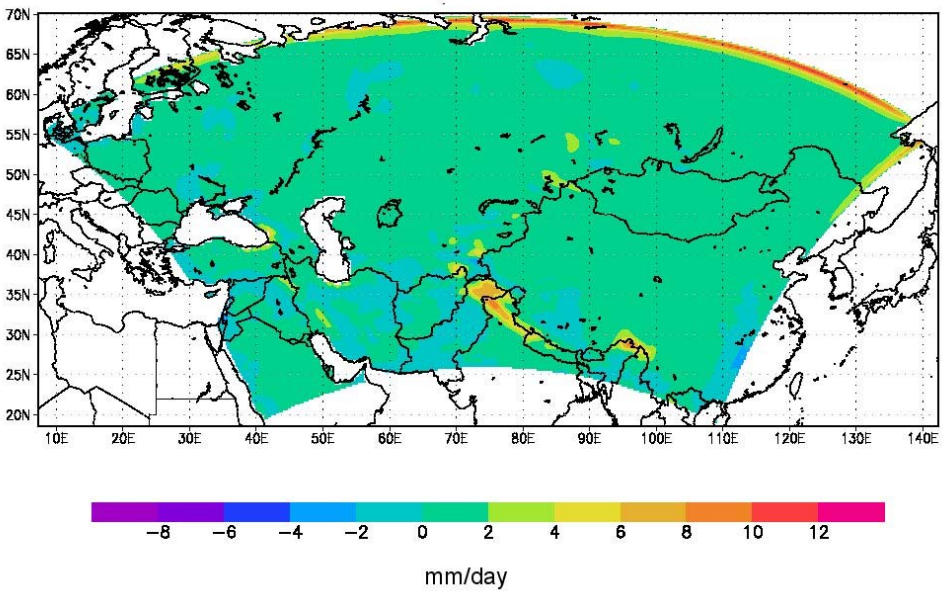
JJA Temperature Reanalysis Driven - CRU OBS (Grell/FC)



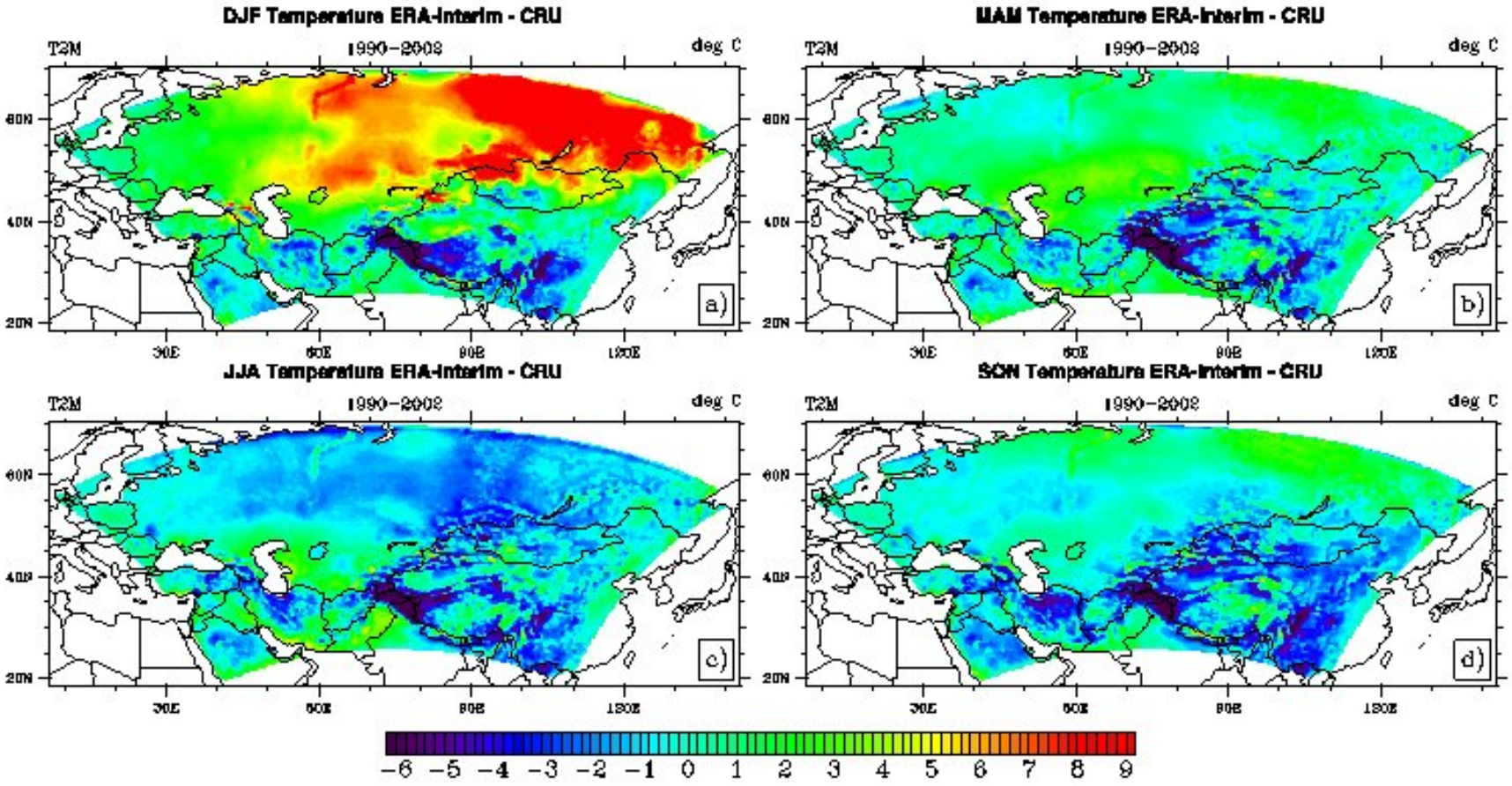
DJF Precipitation Reanalysis Driven - CRU OBS (Grell/AS)



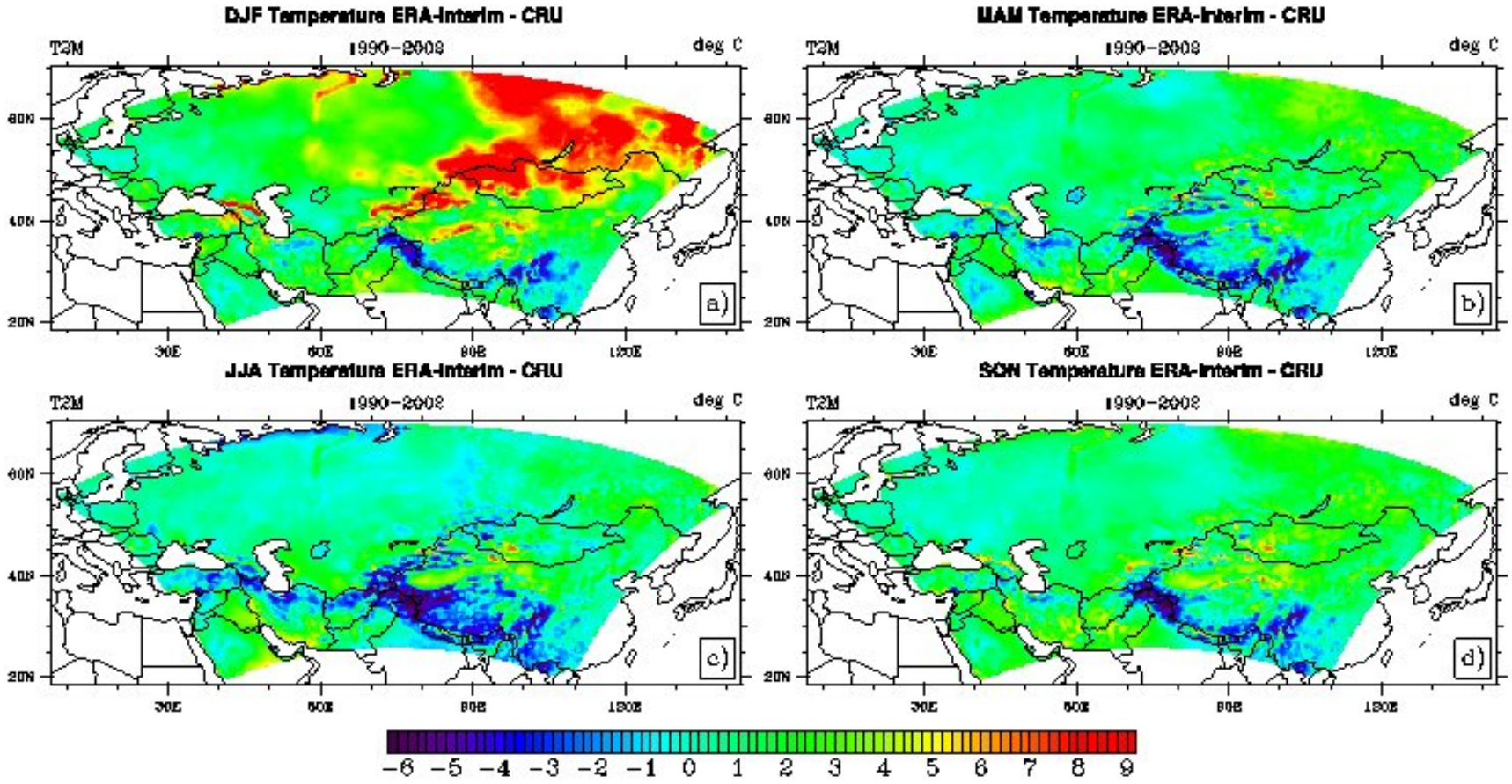
DJF Precipitation Reanalysis Driven - CRU OBS (GRELL/FC)



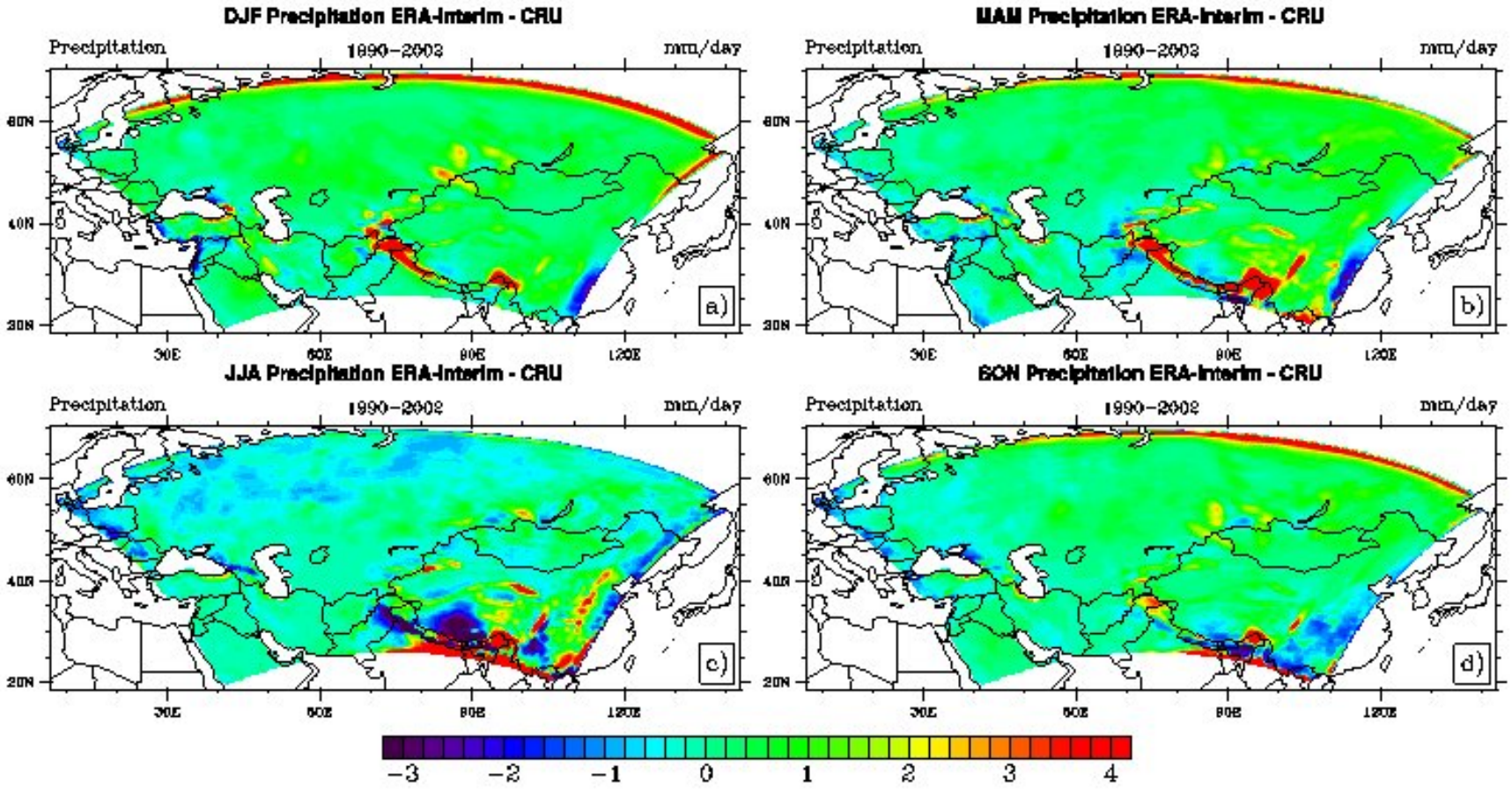
Temperature (RegCM 4.0 - CRU)



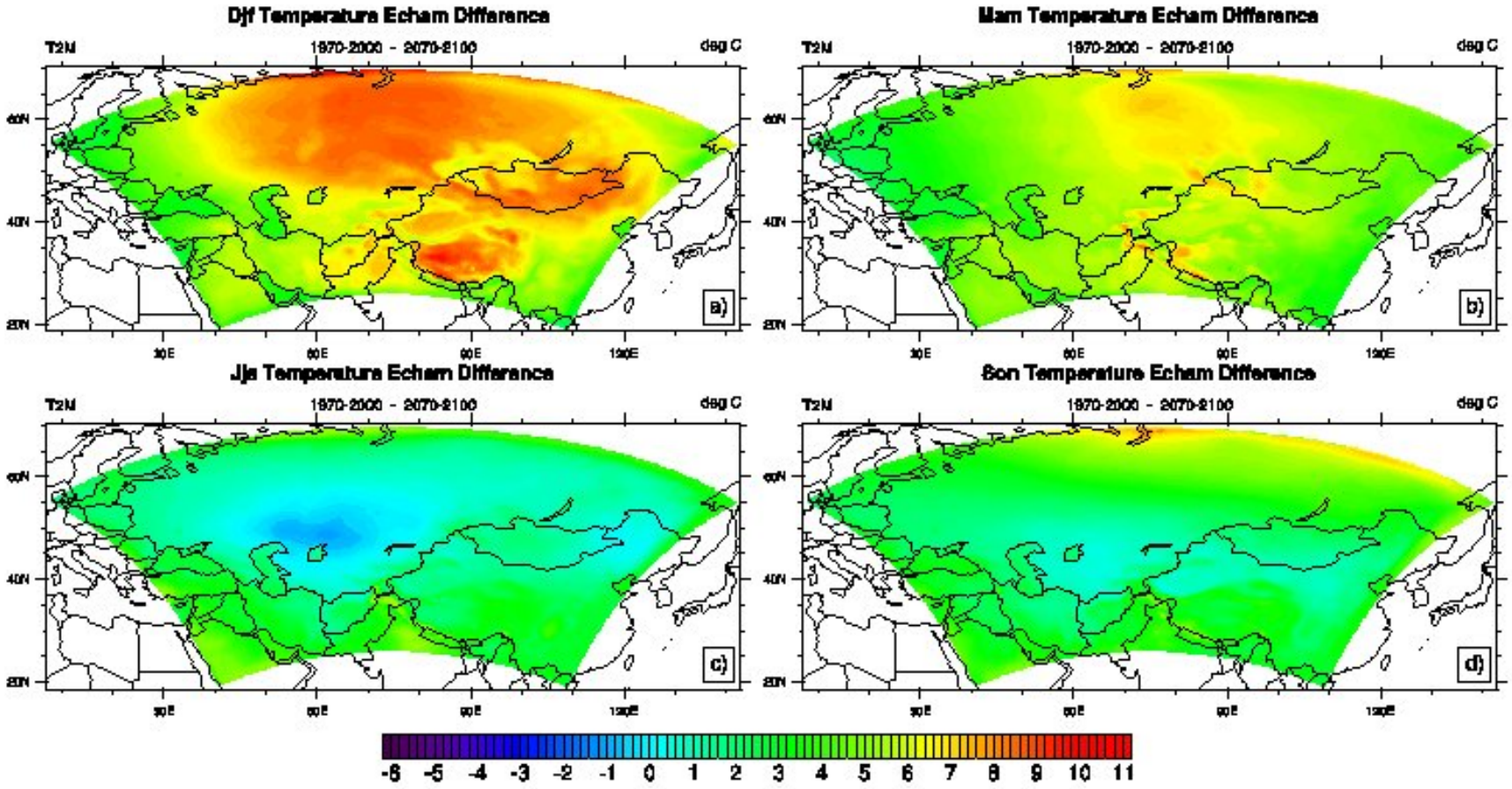
Temperature (ERA Interim - CRU)



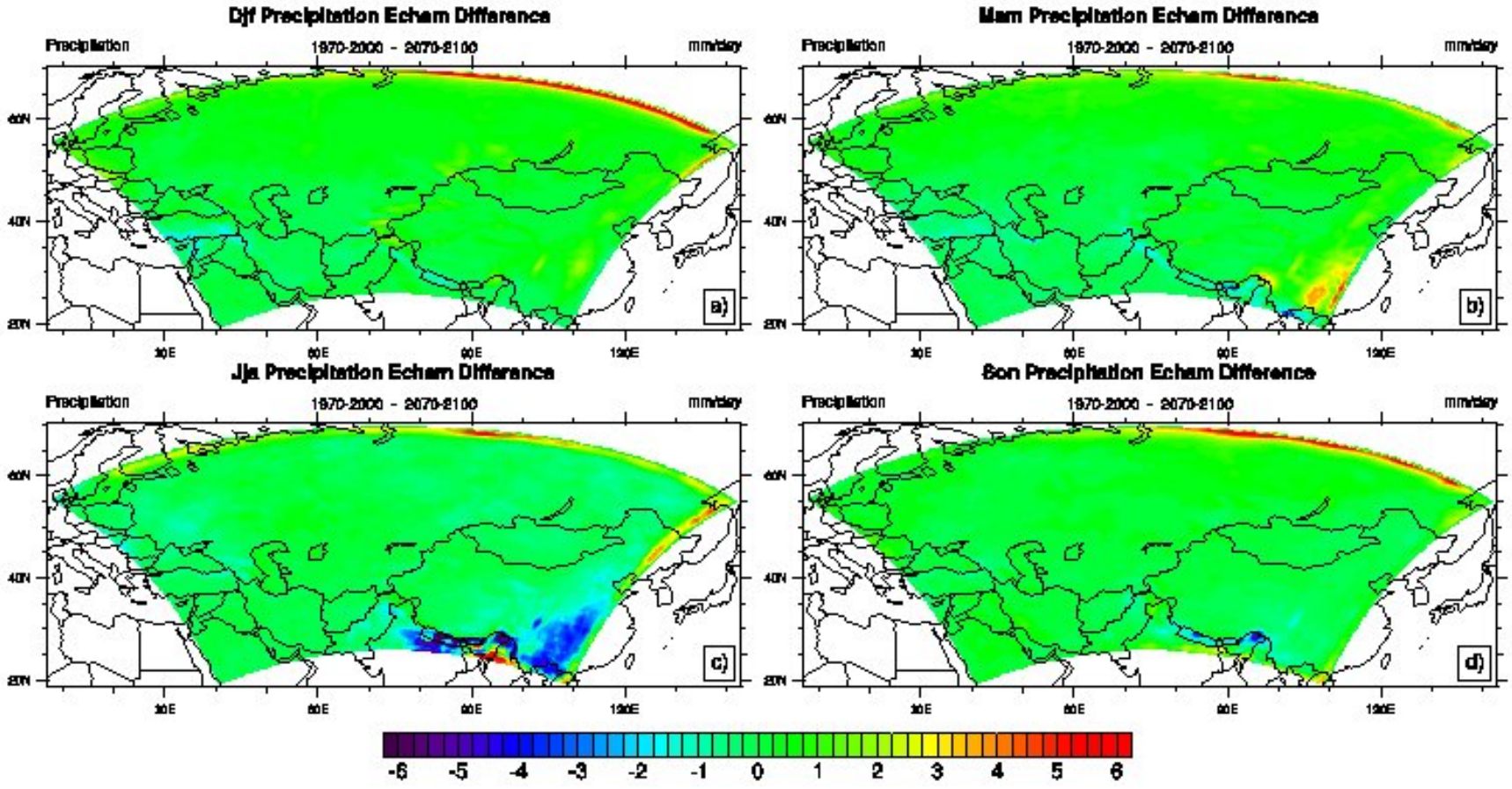
Precipitation (RegCM 4.0 - CRU)



Temperature (Forecast – Hindcast)



Precipitation (Forecast – Hindcast)



Conclusion:

Both reanalysis datasets and regional model are capable of reproducing observed climate.

We got strong warm bias in the northern part of the domain in winter season because, forcing data has also warm bias itself and perhaps RegCM is not able to produce snow cover on the surface in winter season.

Due to seasonal variability of the deep convective clouds and station data bias, we had cold bias around mountainous parts of the region.

In precipitation climatology of the domain, some deficient precipitation amount is found due to weaking of the regional temperature and thus pressure gradients over the region.

We can say that the RegCM is generally well simulated the precipitation climatology of the region.