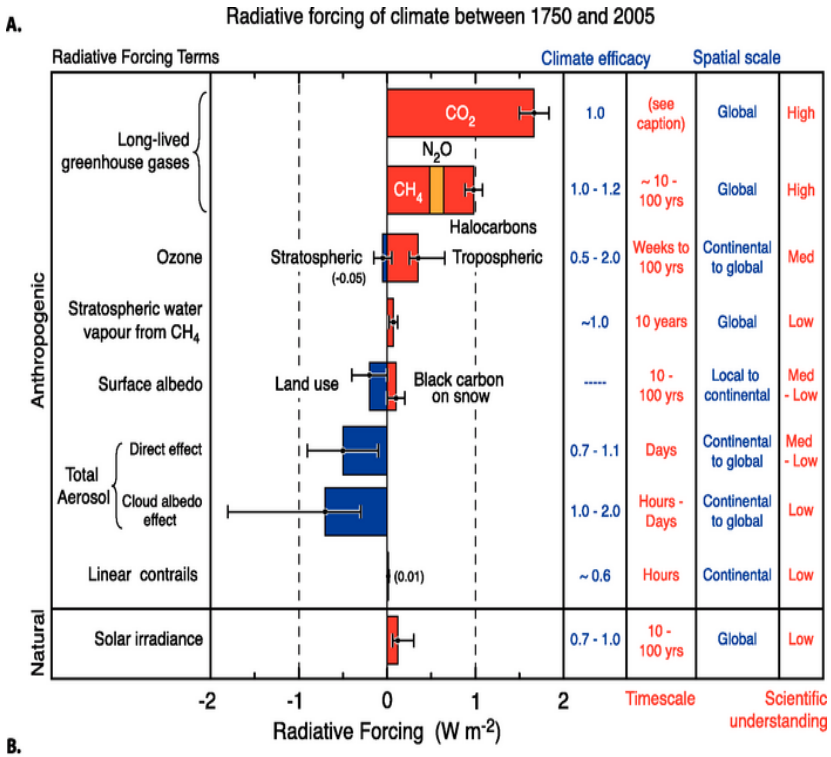
Issues

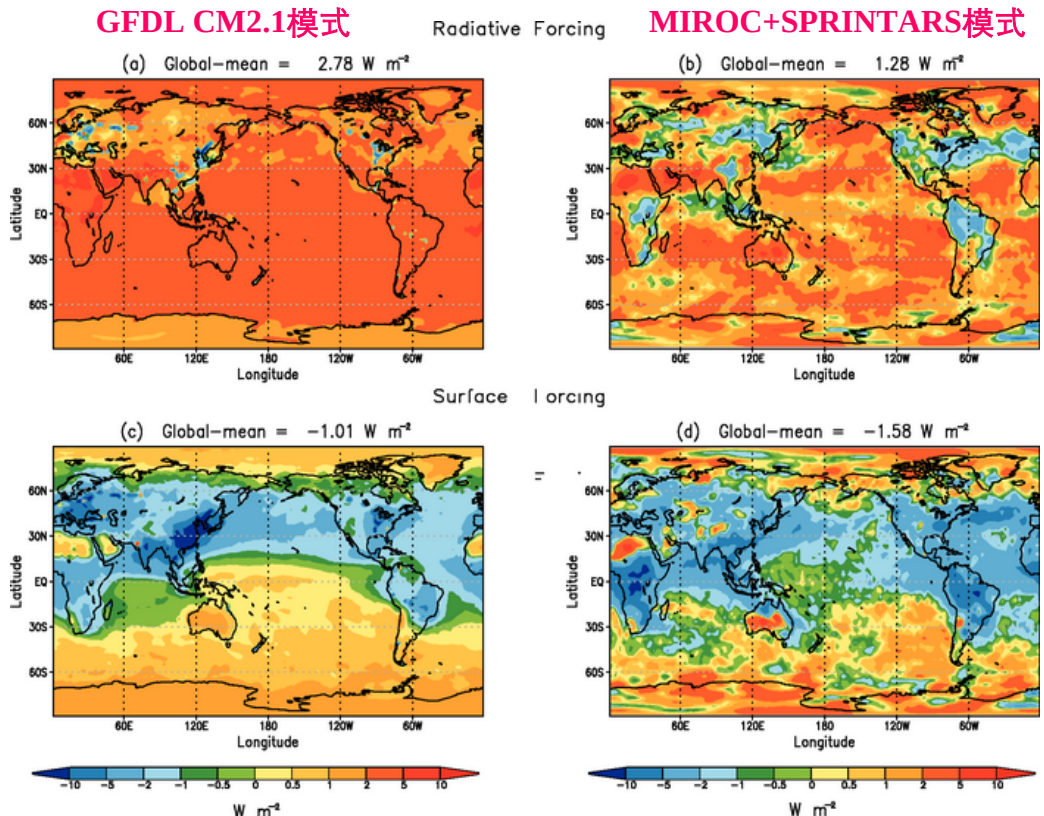
- What is the observed decadal change in East Asian monsoon climate system ?
- Can such a decadal change be considered as natural variability (say, the PDO's impact)?
- What is the role of increased CO2 and aerosols?
- Summary

Uncertainties in RF estimation are mostly due to regional human activities

IPCC/AR4估计的全球平均的辐射强迫及其不确定性

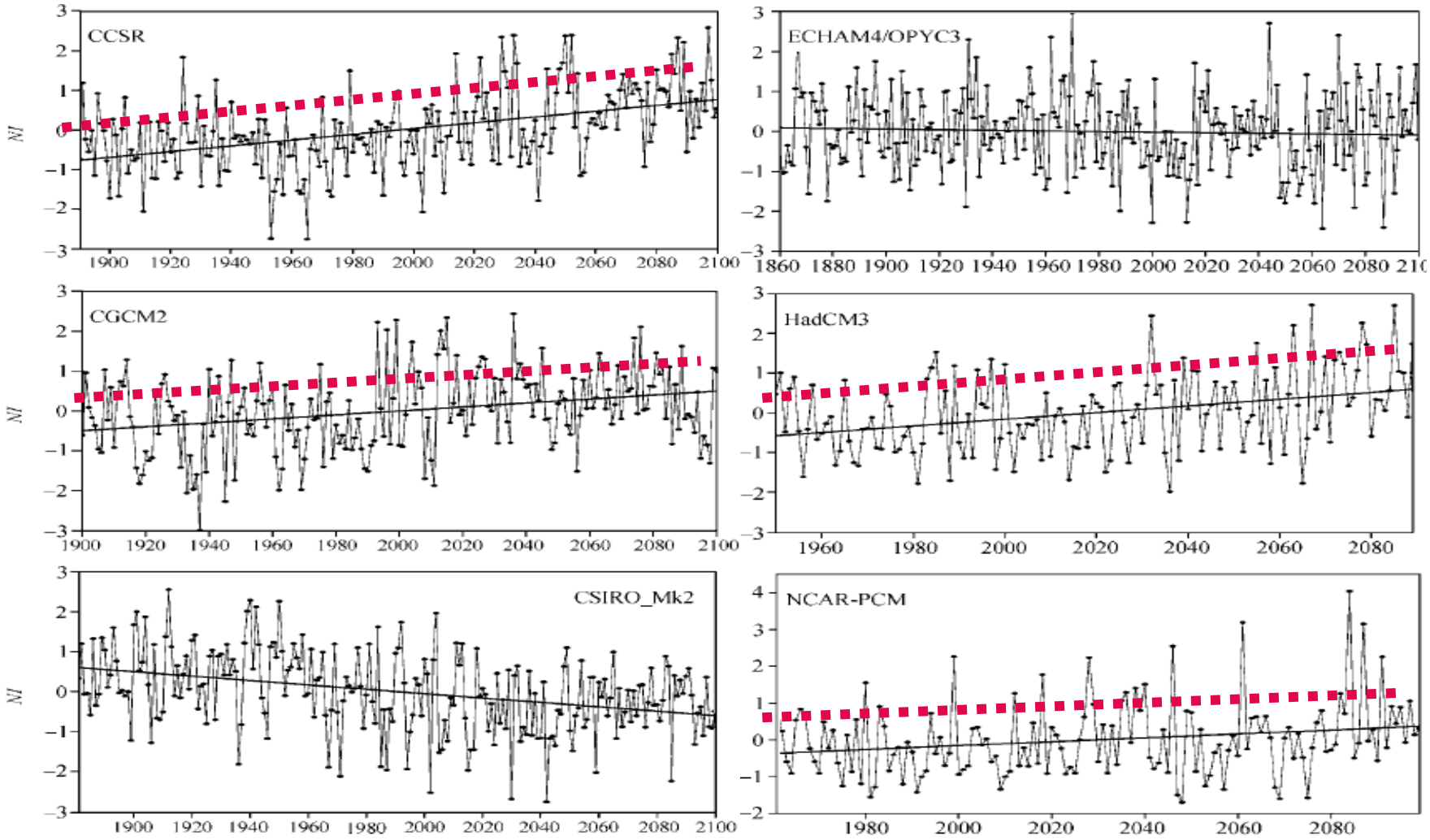


IPCC/AR4估计的对流层顶和表面全球辐射强迫空间分布



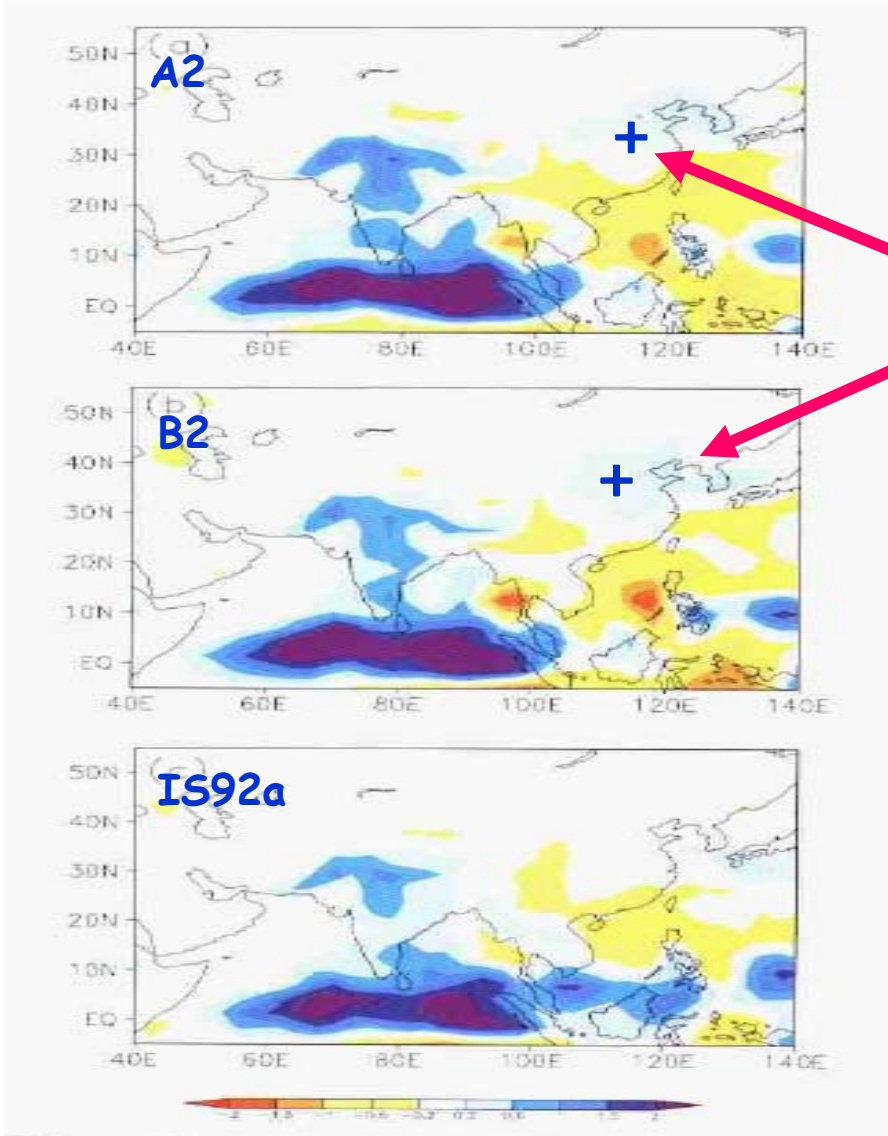
The EASM index change in six coupled climate models for scenario SRES A2

Most of models show an intensified EASM



(Jiang & Wang, 2005)

The EASM precipitation change simulated by climate model with different scenarios of emissions

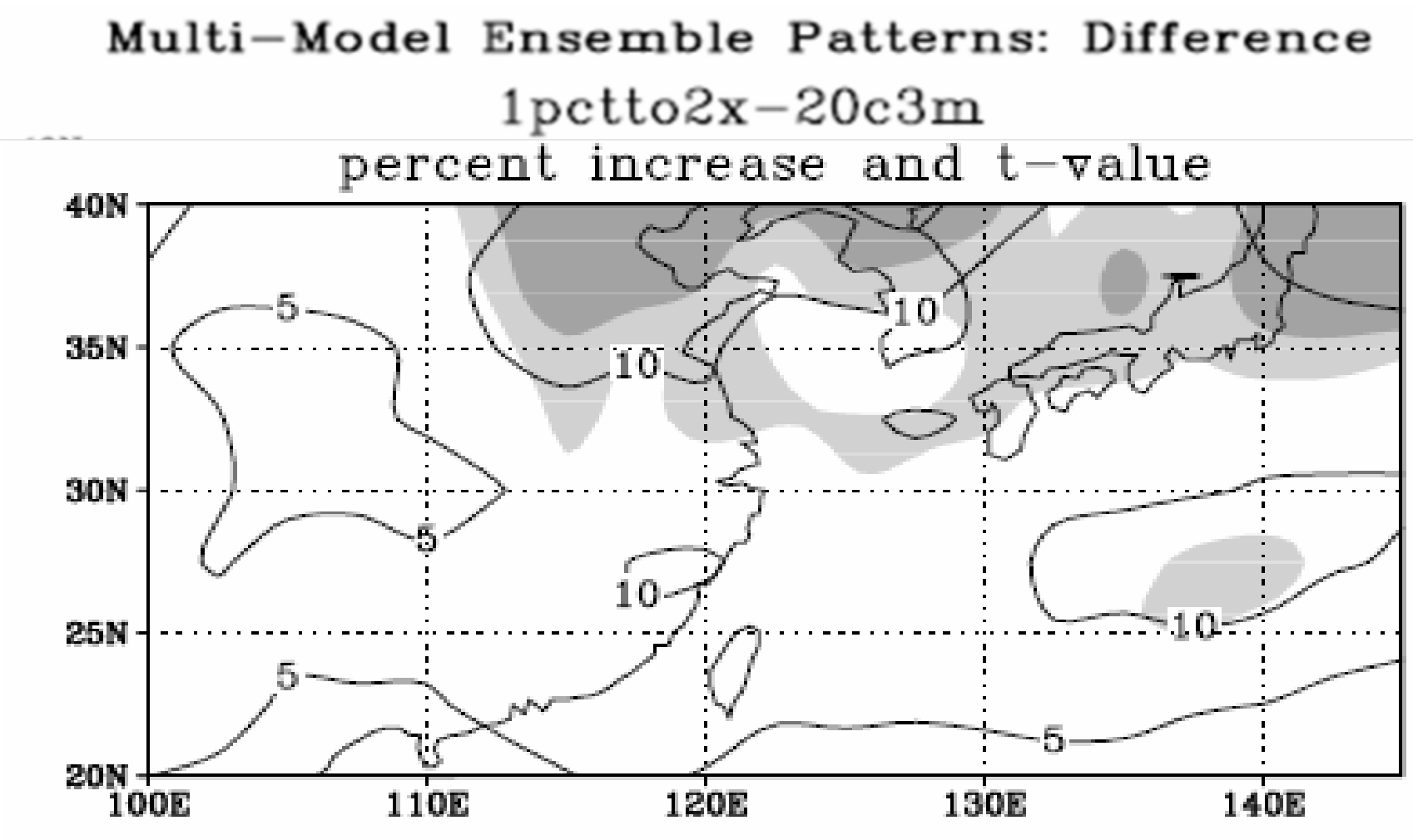


Increased precipitation in northern China, rather than along Yangtze River valley

（Wei，2005）

22 coupled climate models (IPCC AR4)

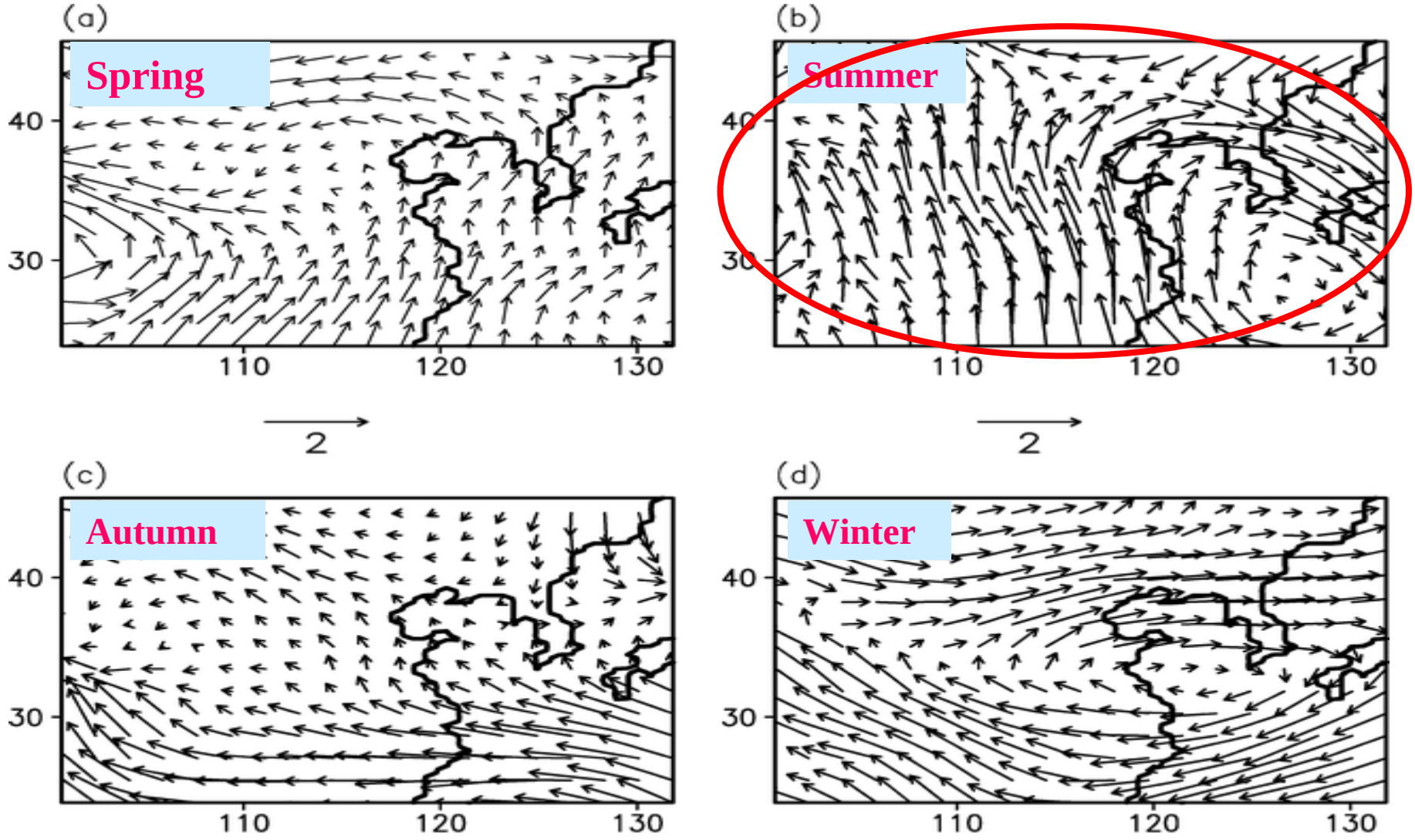
Simulated precipitation change by -0.6 % ~ 14 %, mainly over northern China, Korea and Japan, associated with an enhanced EASM



（ Kripalani et al，2006 ）

Regional climate model

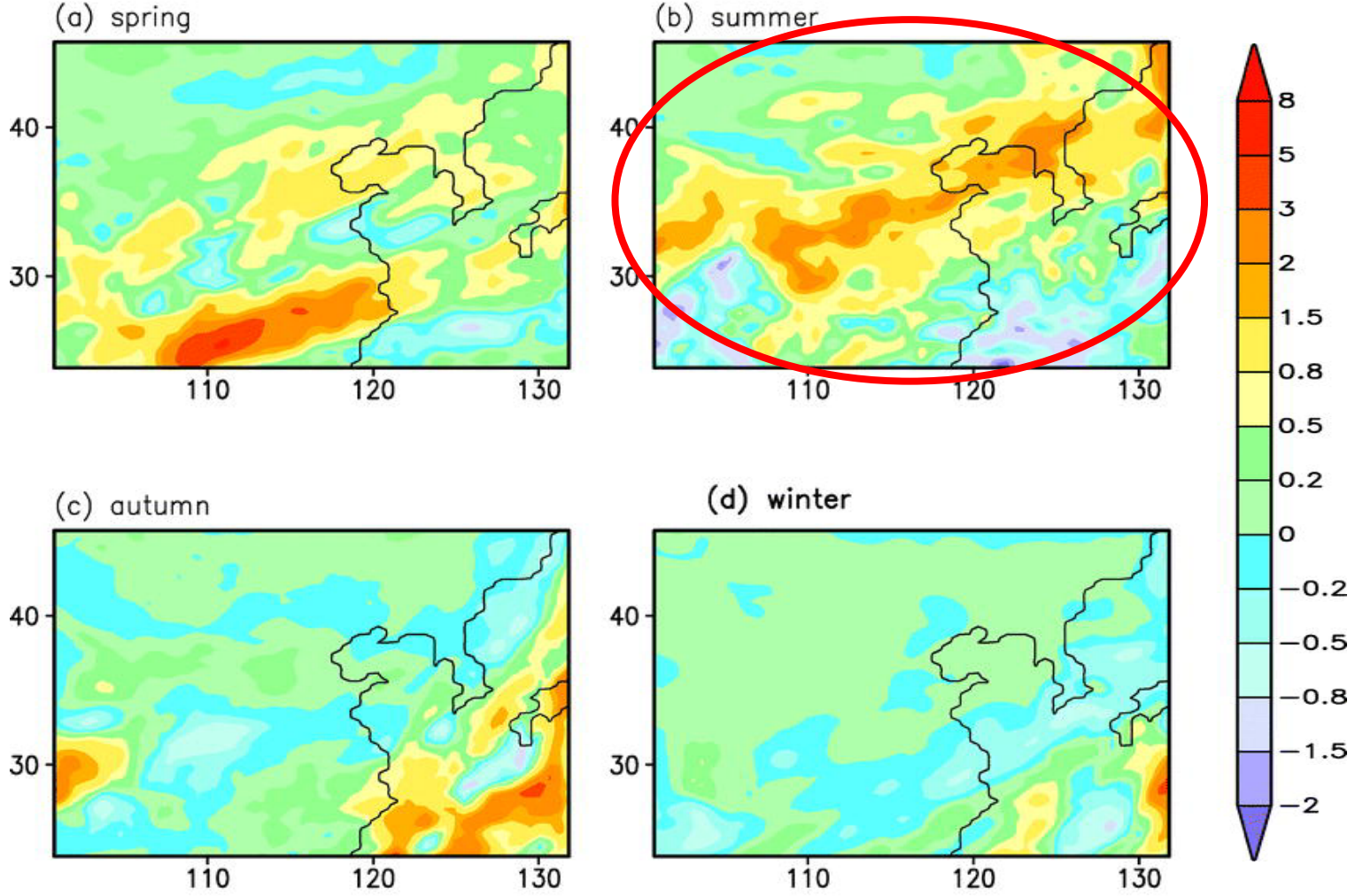
Doubling of CO_2 concentration induces a weakened EA winter monsoon, BUT an enhanced EA summer monsoon



(Chen, Pollard and Barron, JC 2004)

Regional climate model

Doubling of CO2 concentration induces an increased precipitation in northern China



(Chen, Pollard and Barron, JC 2004)