



The Observation Facts of Climate Change in China

中国气候变化的观测事实



www.cleanairnet.org/caiasia

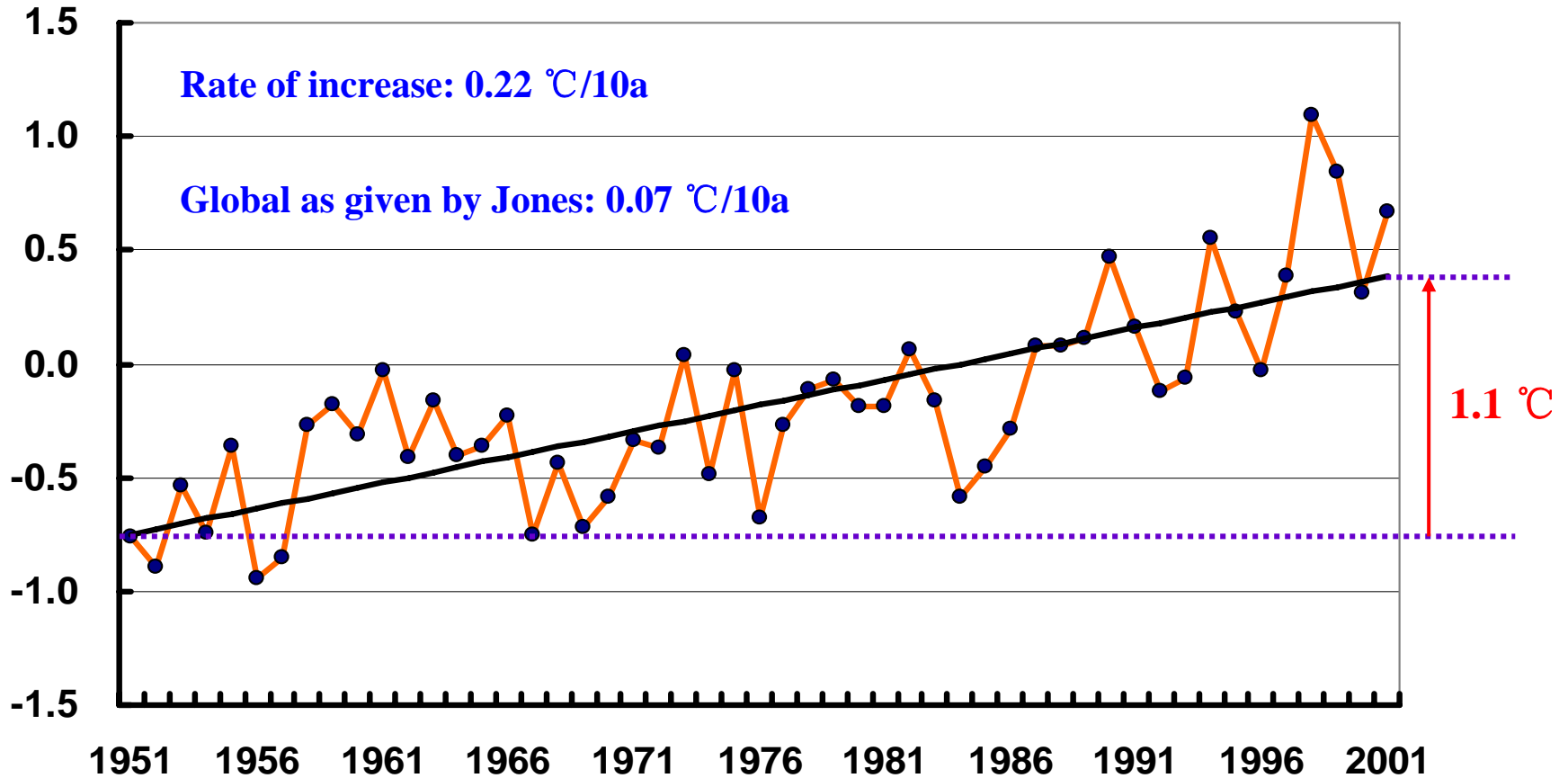


The Annual average Temperature Anomalies from 1951 to 2001

1951-2001年均温度距平

Anomalies

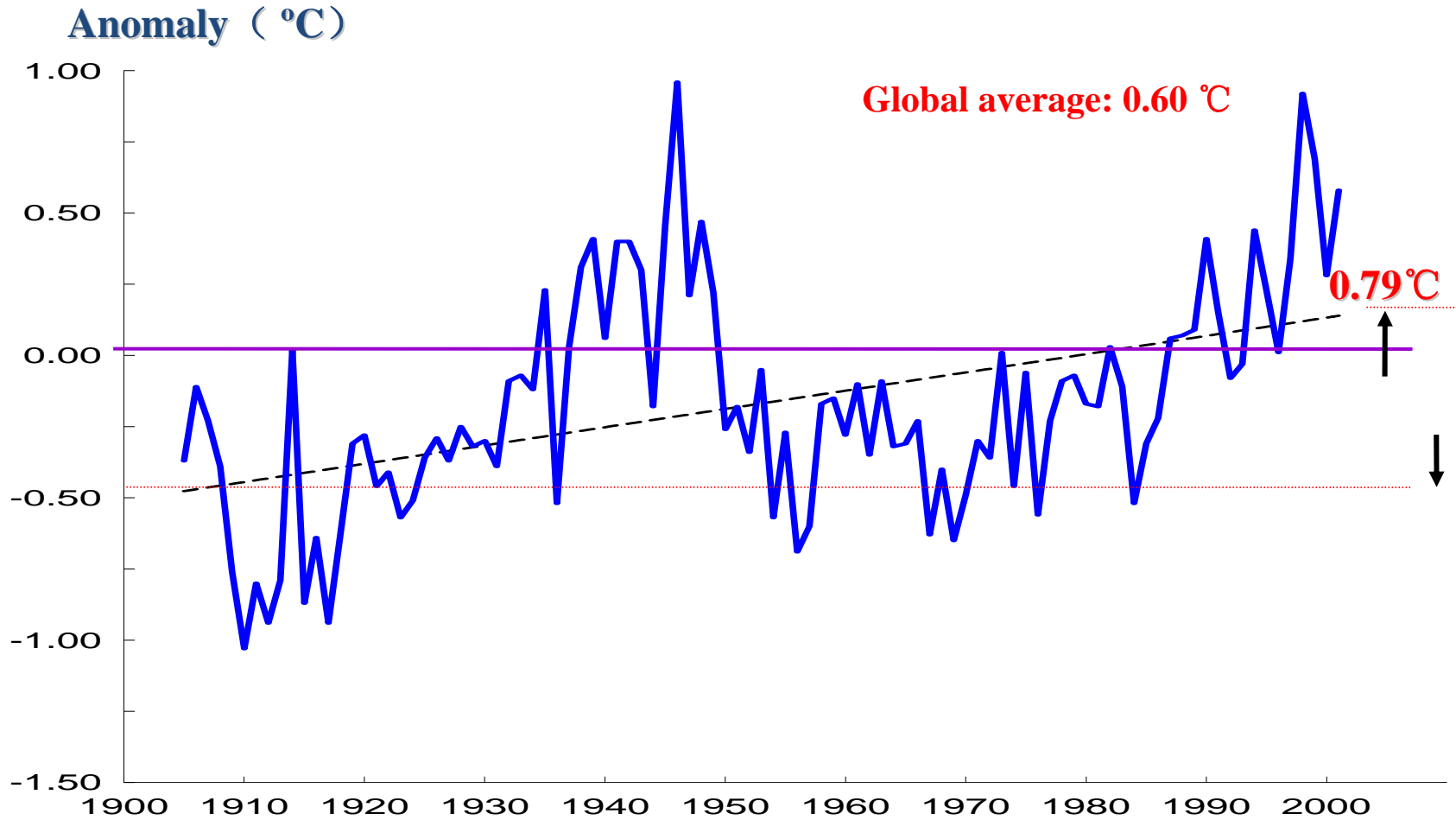
(°C)





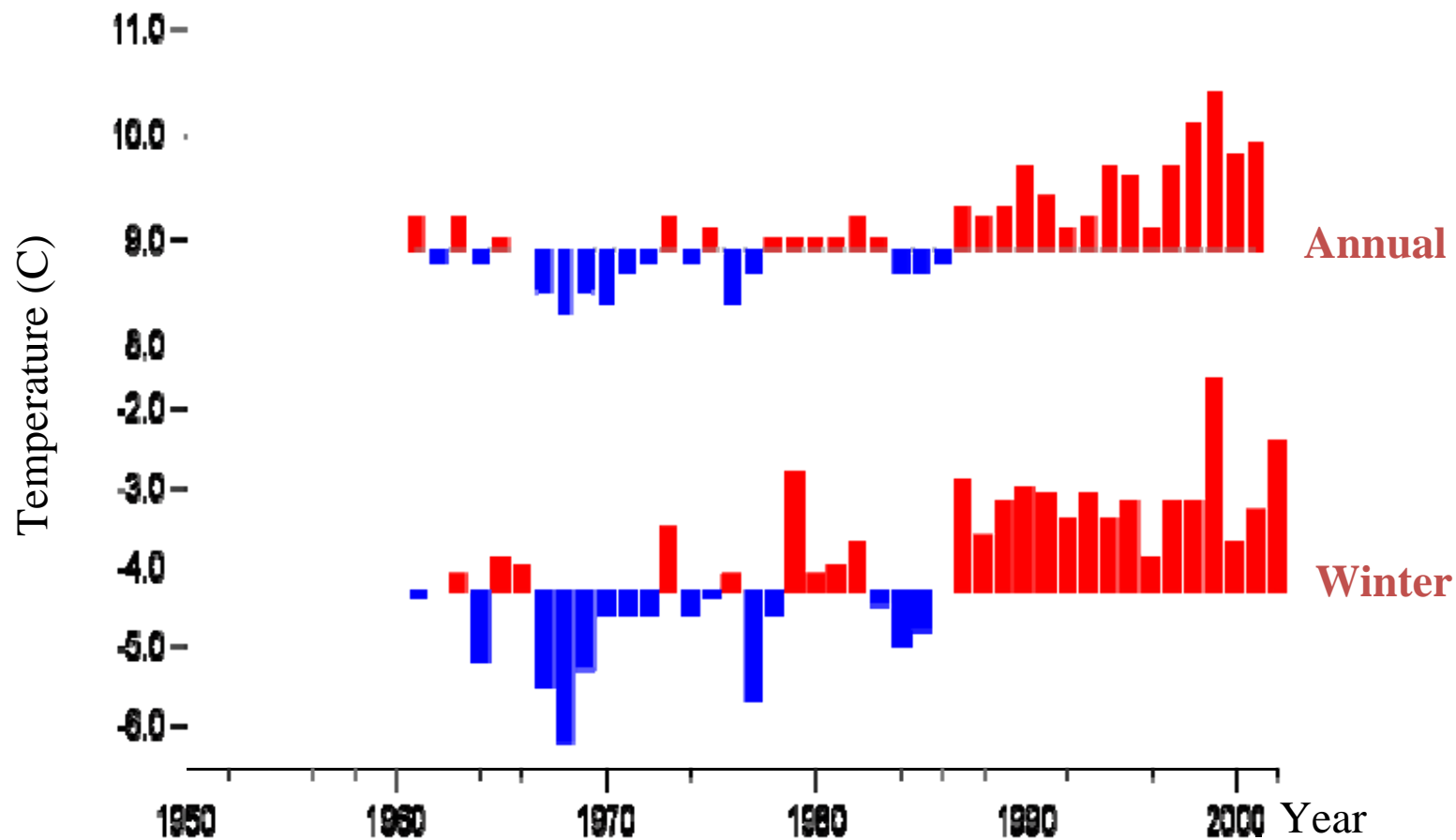
The Annual average Temperature Anomalies from 1905 to 2001

1905-2001年均温度距平





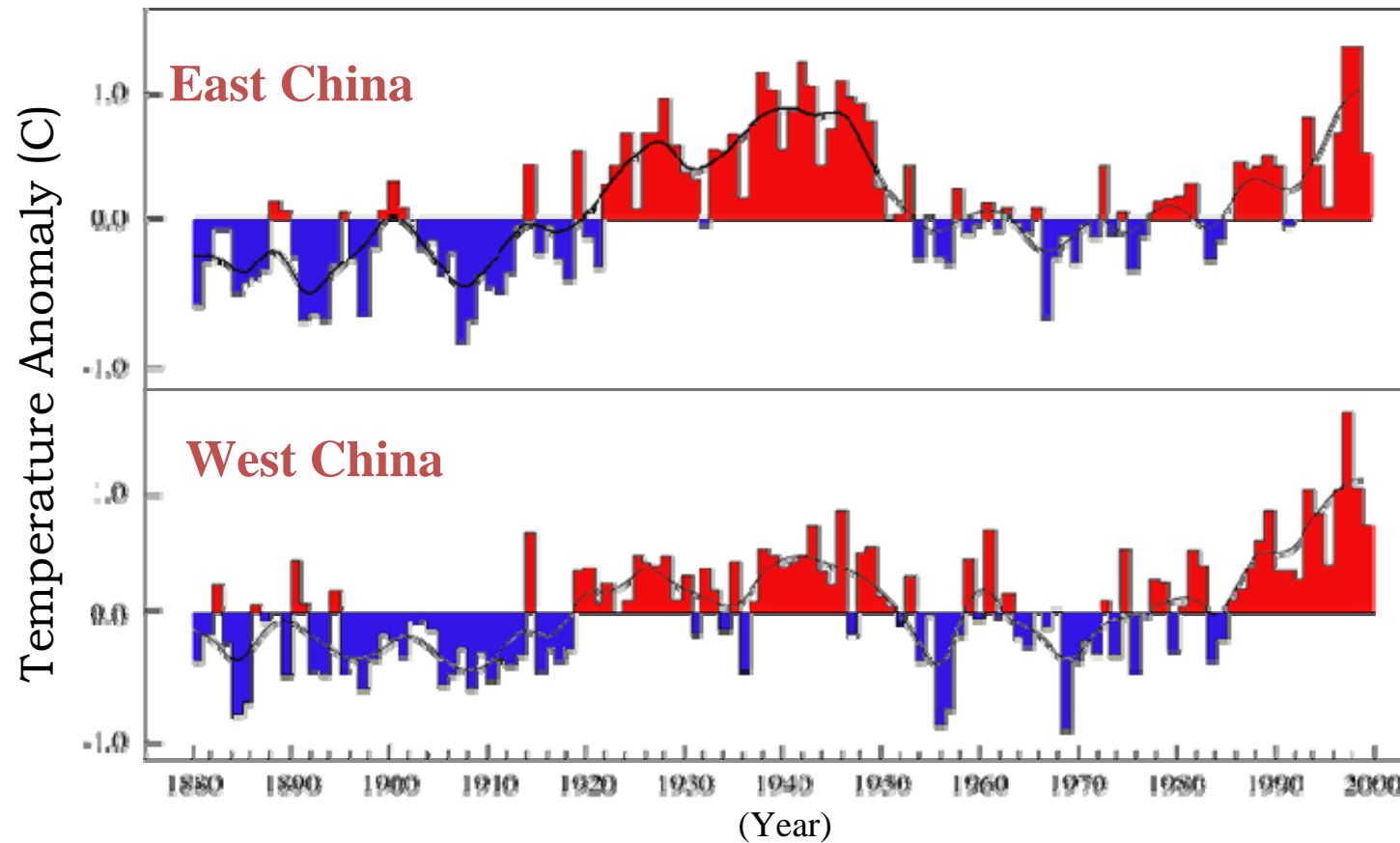
Change in Surface Temperature in China for Past 50 Years 过去50年中国表面温度的变化



NCC, 2002



Change in surface temperature for past 100 years (60-70yr Period) 过去100年中国表面温度的变化



(Wang et al.,2002)

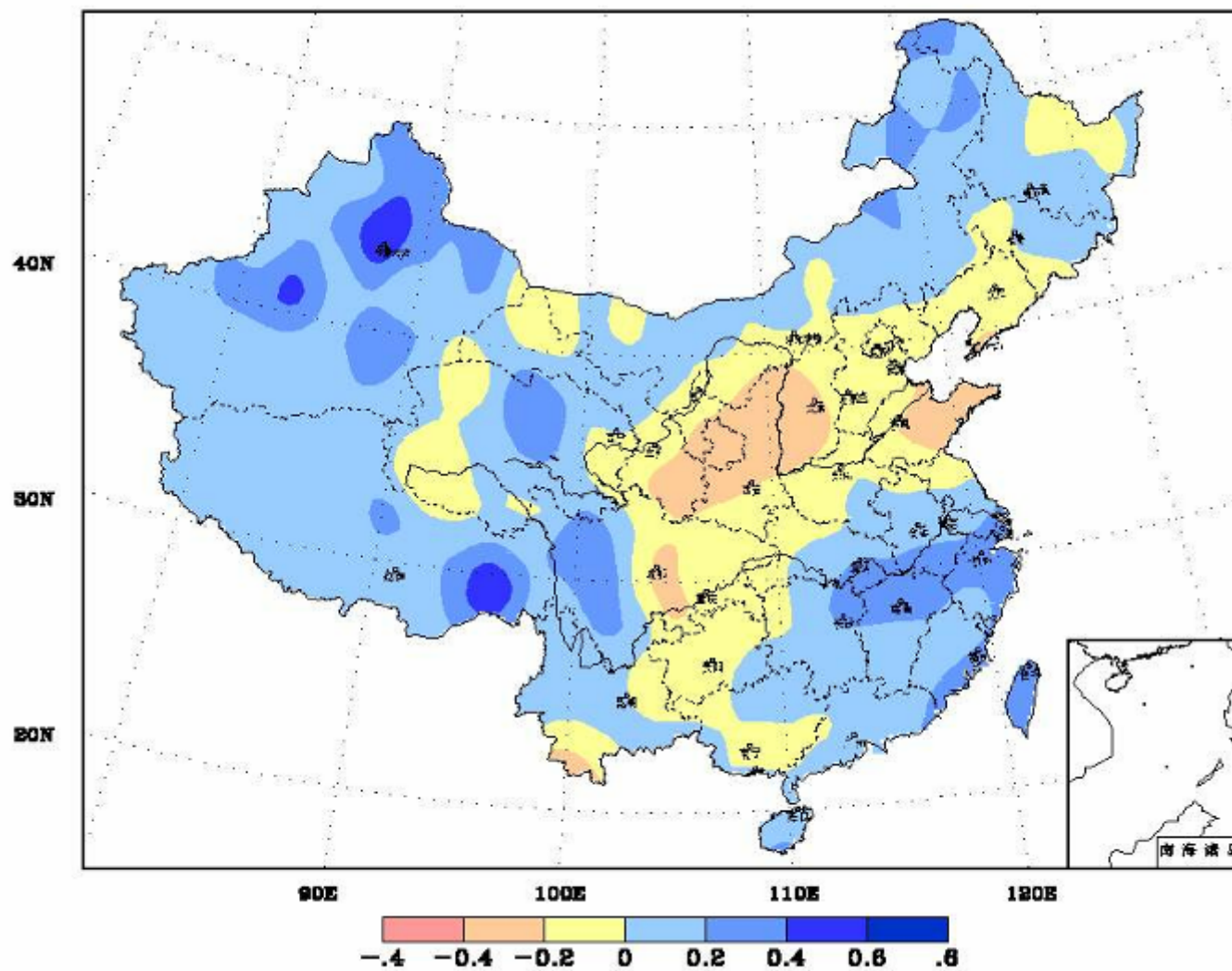


- ❑ **The surface temperature in China has been increasing since the last century. The long-term warming trend is similar to the global average.**
- ❑ **The warming in winter is the most significant. The maximum warming was found in North China, Northeast China and Northwest China.**

- ❑ **中国地表温度增加，长期增温趋势与国际背景一致!**
- ❑ **冬季增温最为明显！最大的增温发生在华北、东北和西北！**

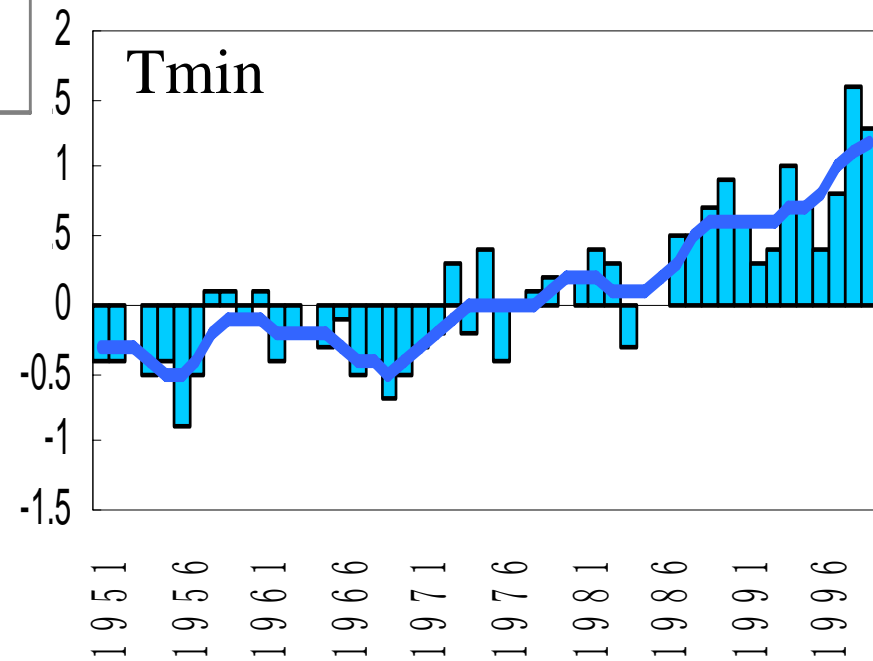
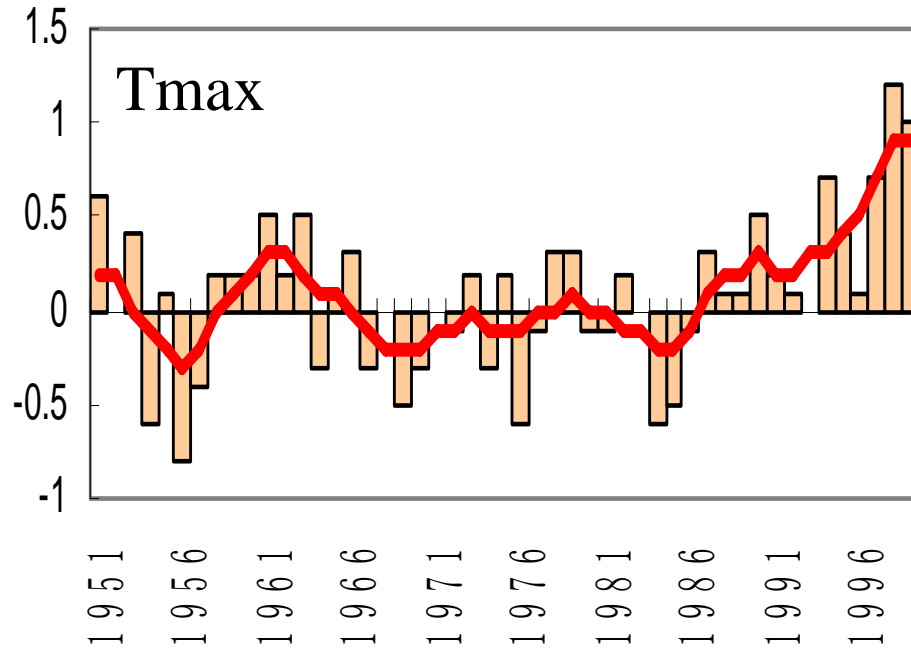
The annual precipitation trend from 1961 to 2000

1961-2000年降水趋势



Anomalies of Annual T_{min}, T_{max} in China

中国年温度最大值、最小值的距平

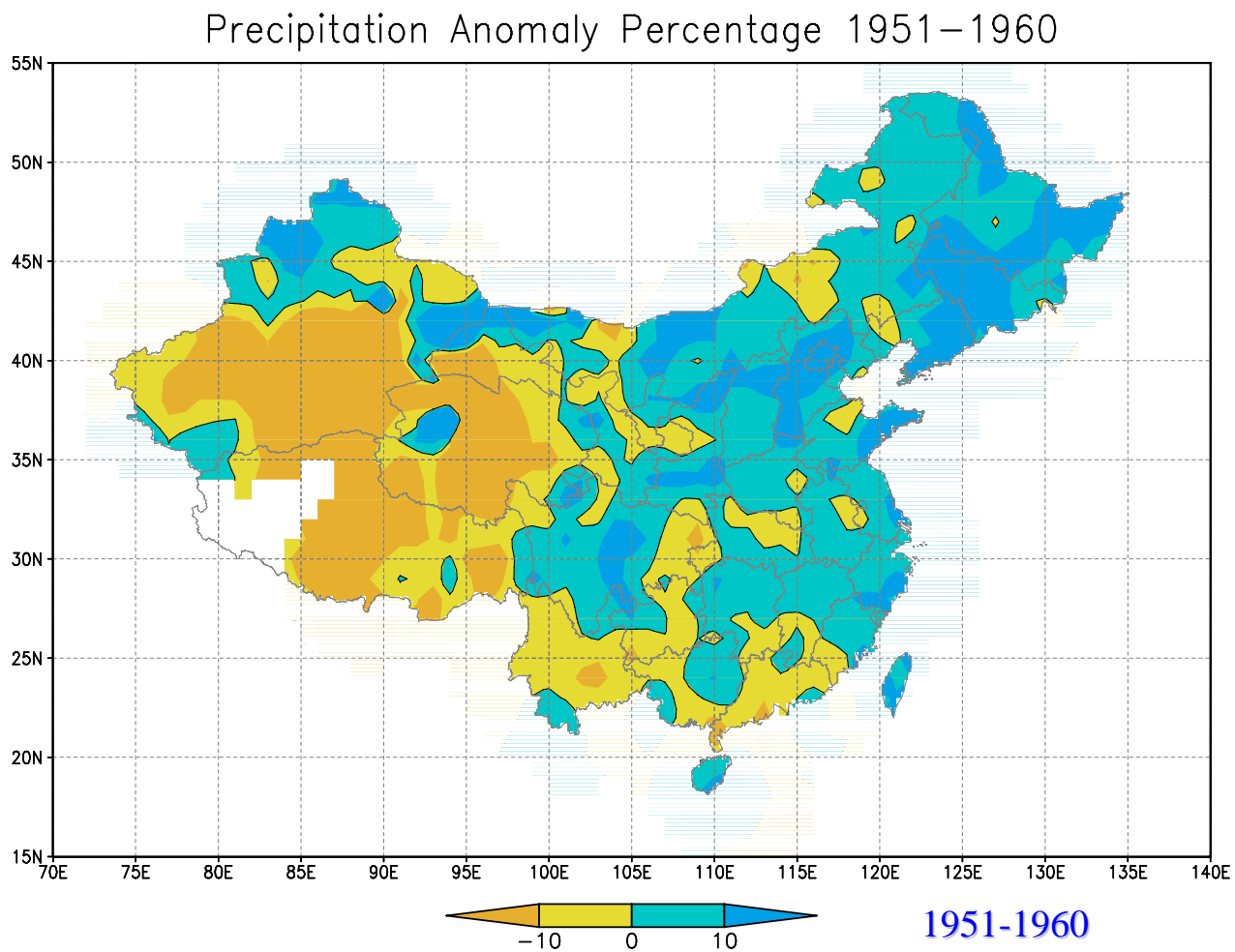


(Zhai and Pan, 2002)



Annual Precipitation Anomaly Percentage at Decadal Scale

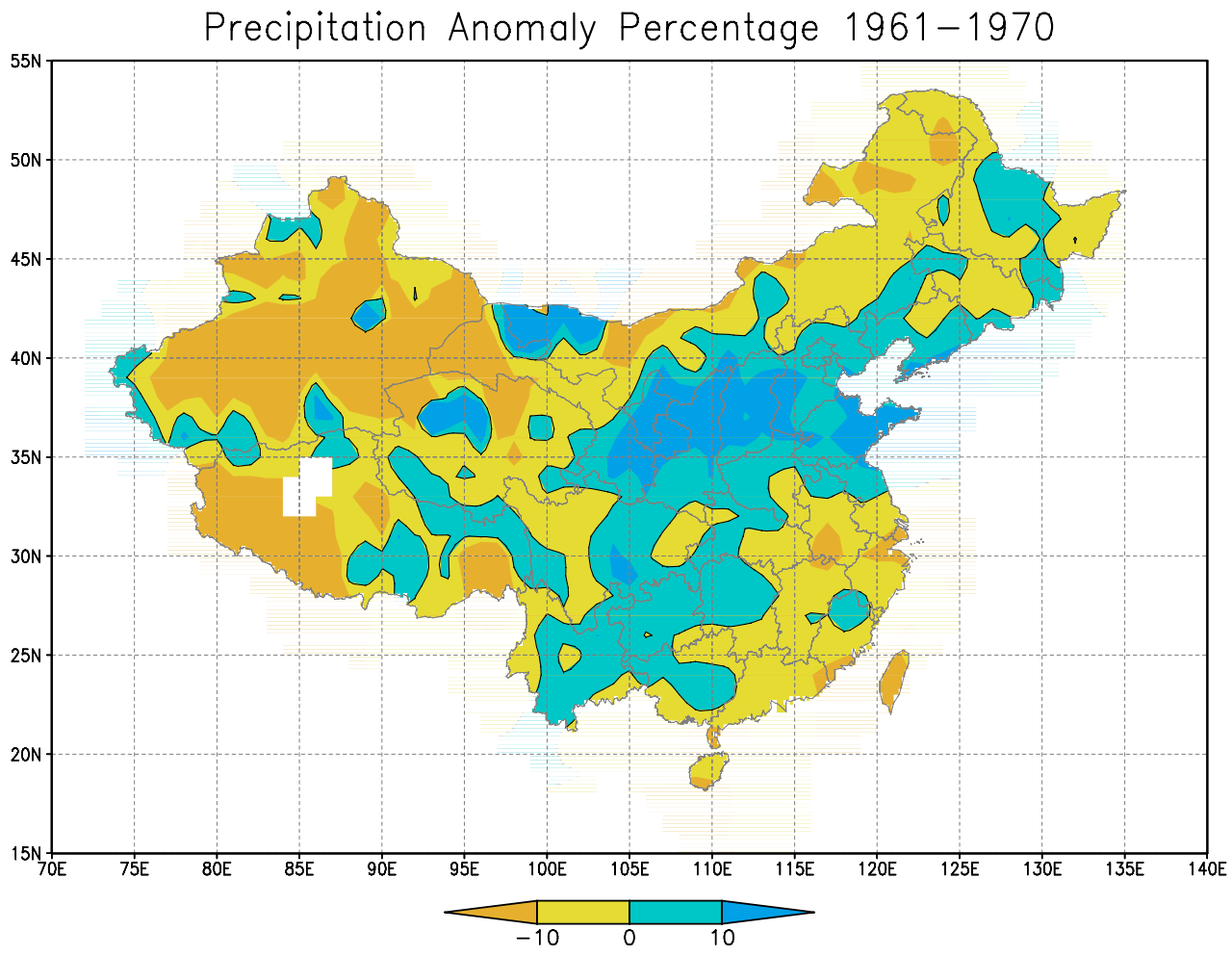
10年尺度年降水距平百分比

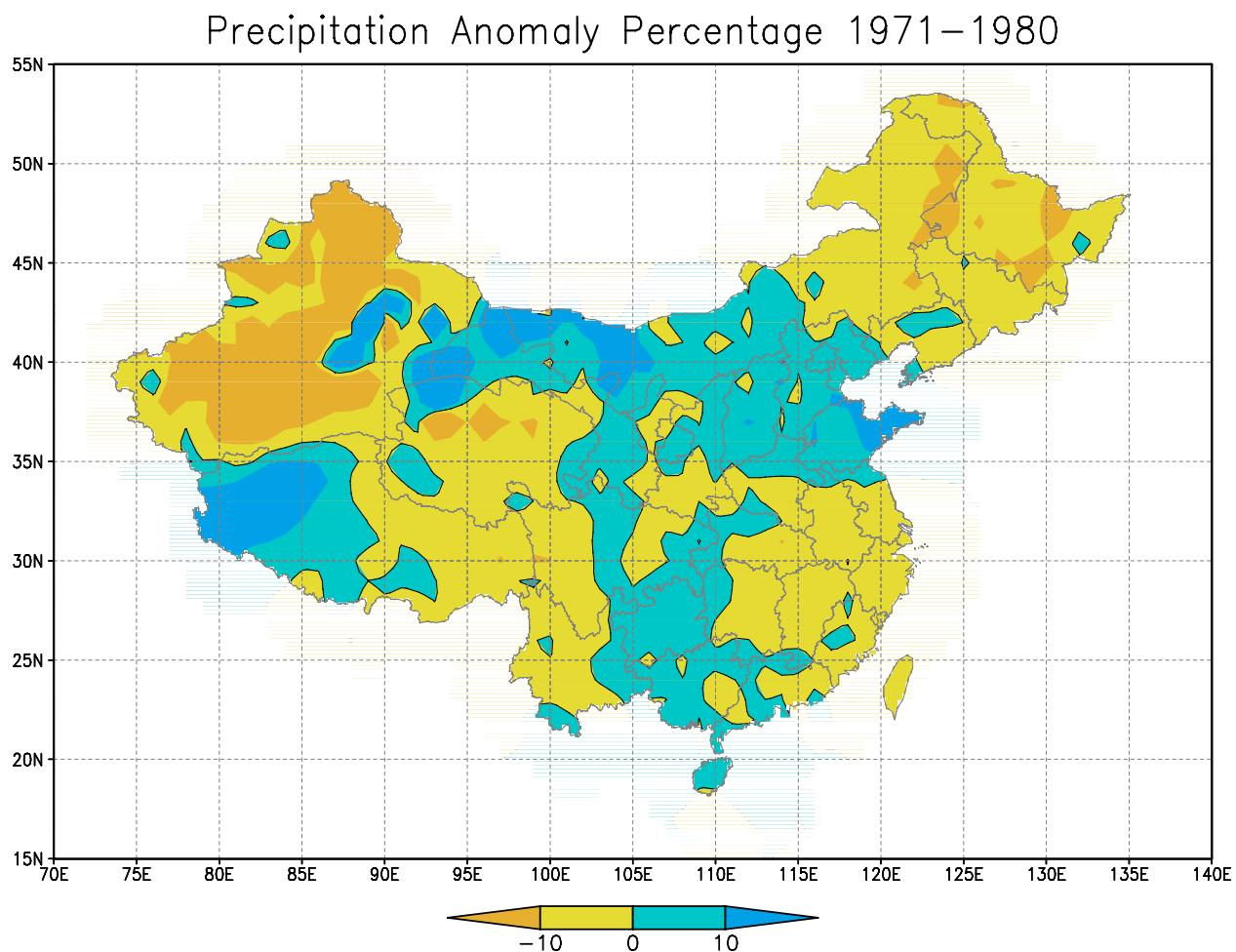




Annual Precipitation Anomaly Percentage at Decadal Scale

10年尺度年降水距平百分比

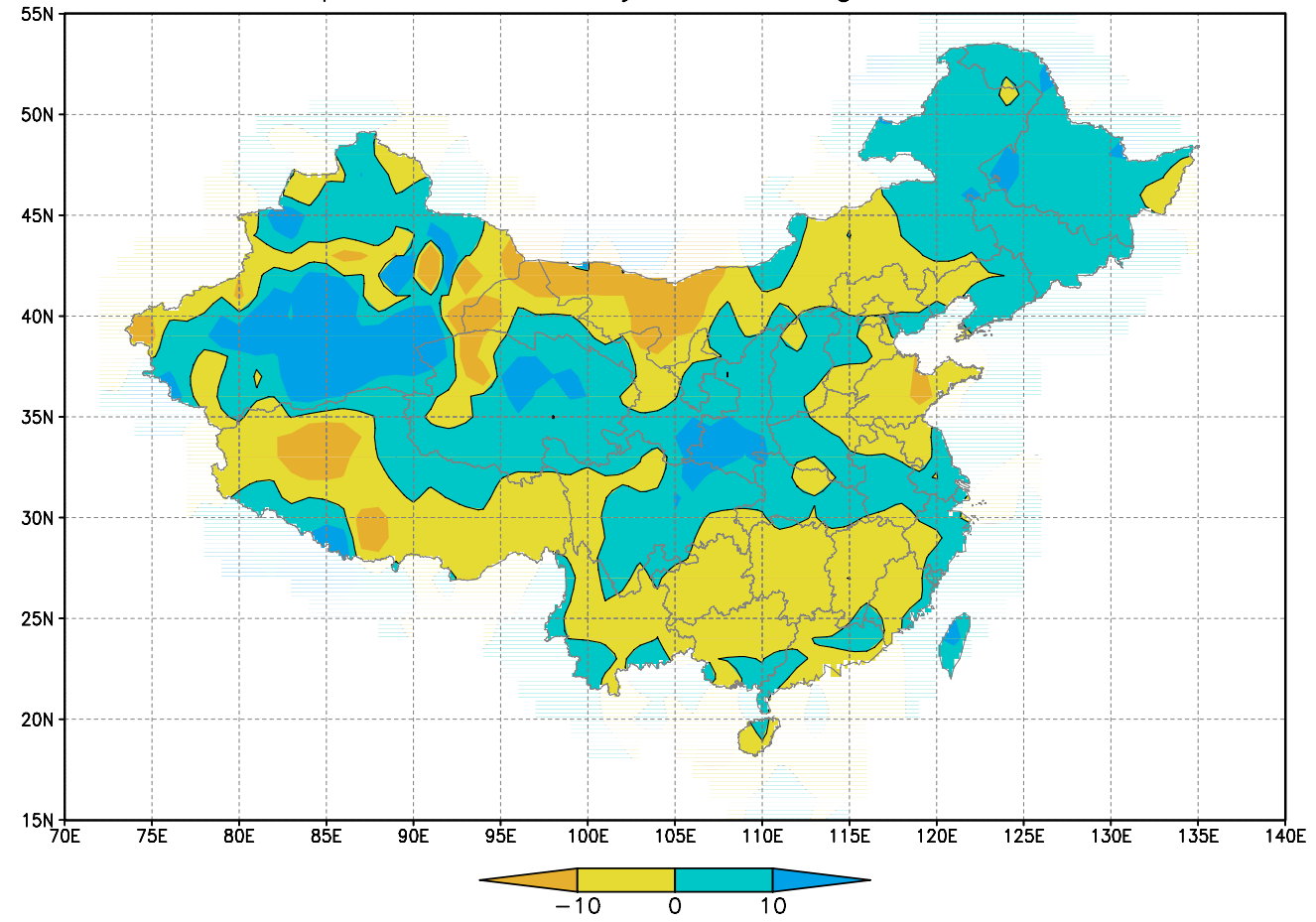






Annual Precipitation Anomaly Percentage at Decadal Scale 10年尺度年降水距平百分比

Precipitation Anomaly Percentage 1981–1990

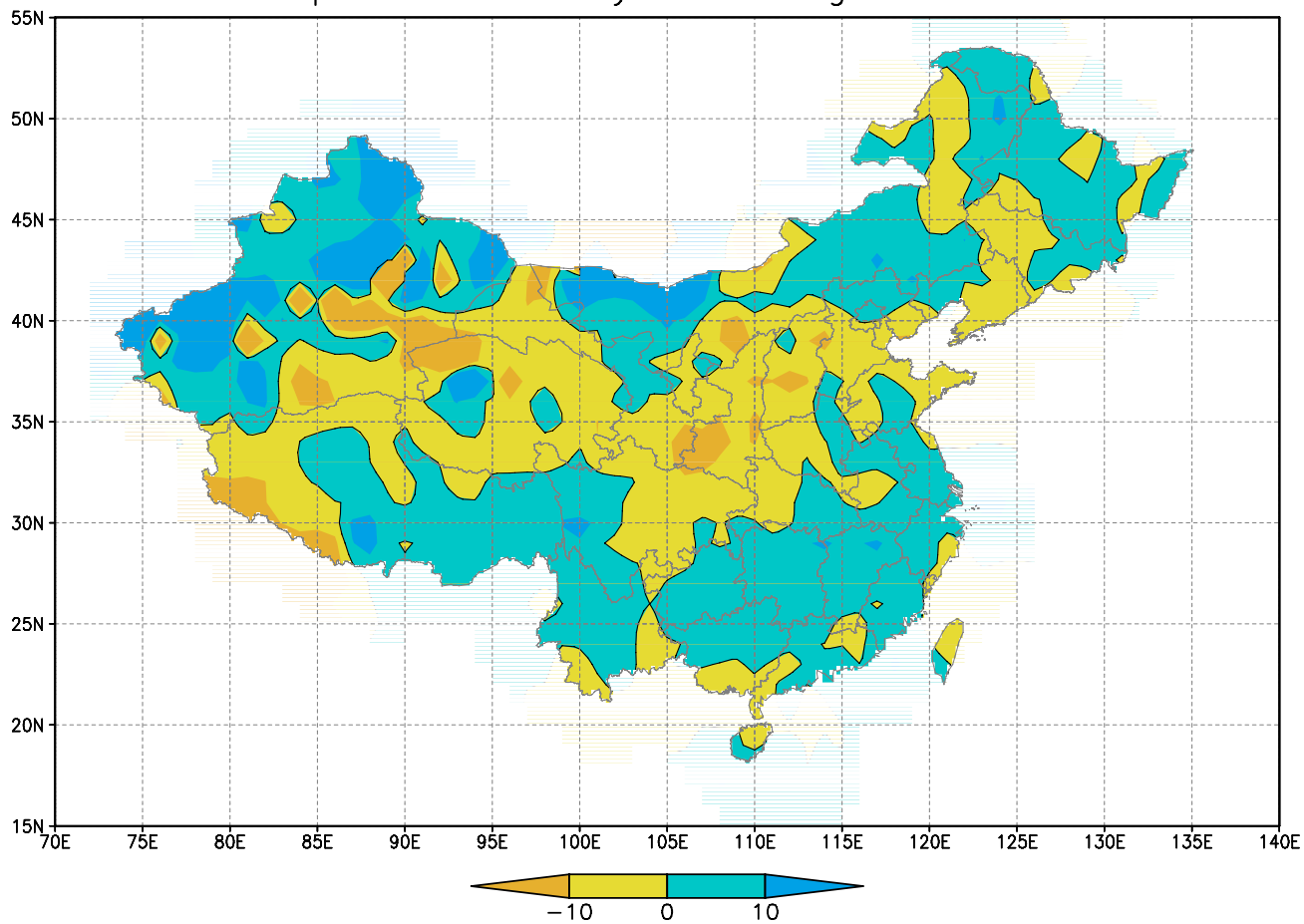




Annual Precipitation Anomaly Percentage at Decadal Scale

10年尺度年降水距平百分比

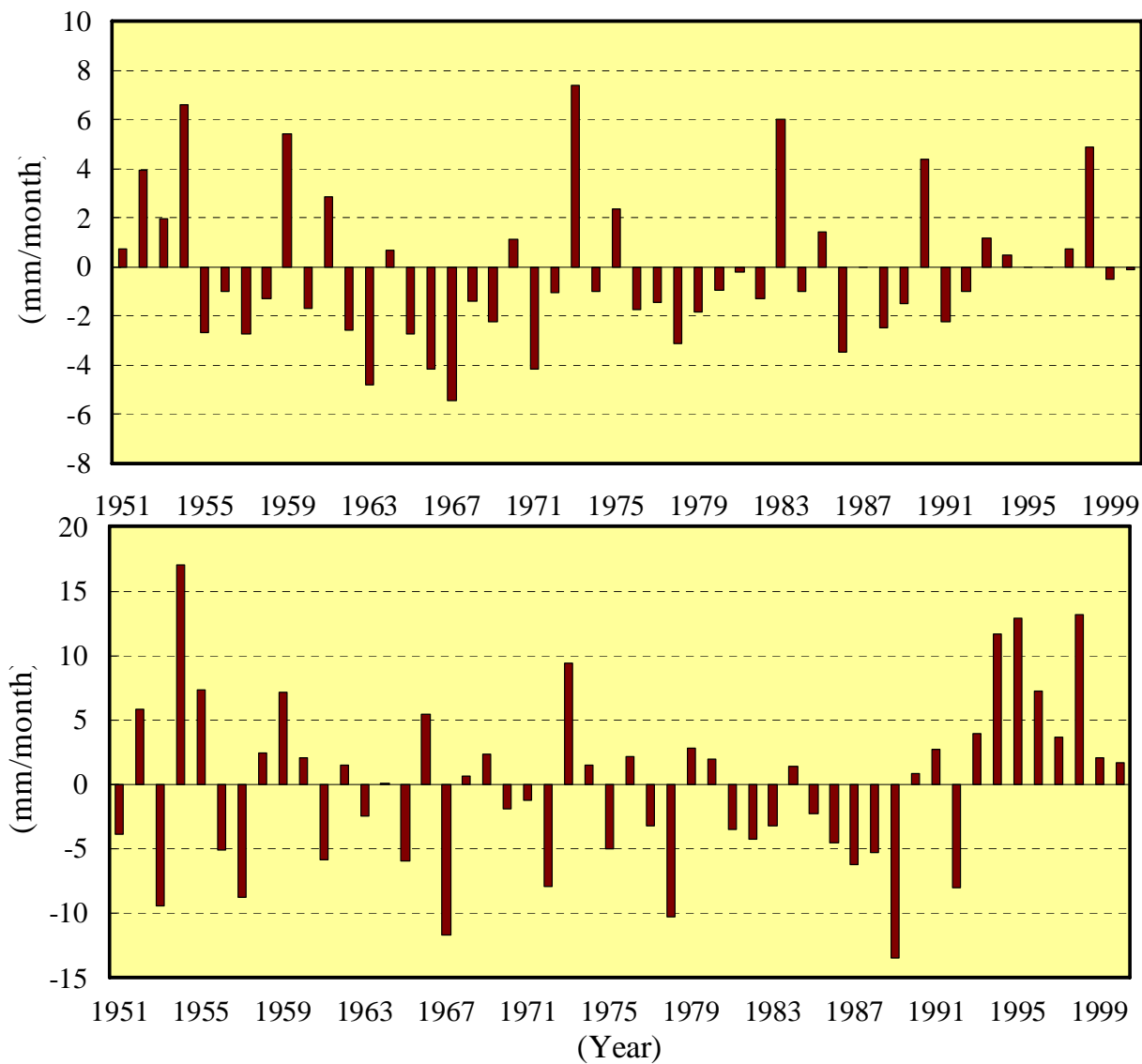
Precipitation Anomaly Percentage 1991–2000





Rainfall Anomaly Variation in China (Decadal Variation)

中国降水异常变化



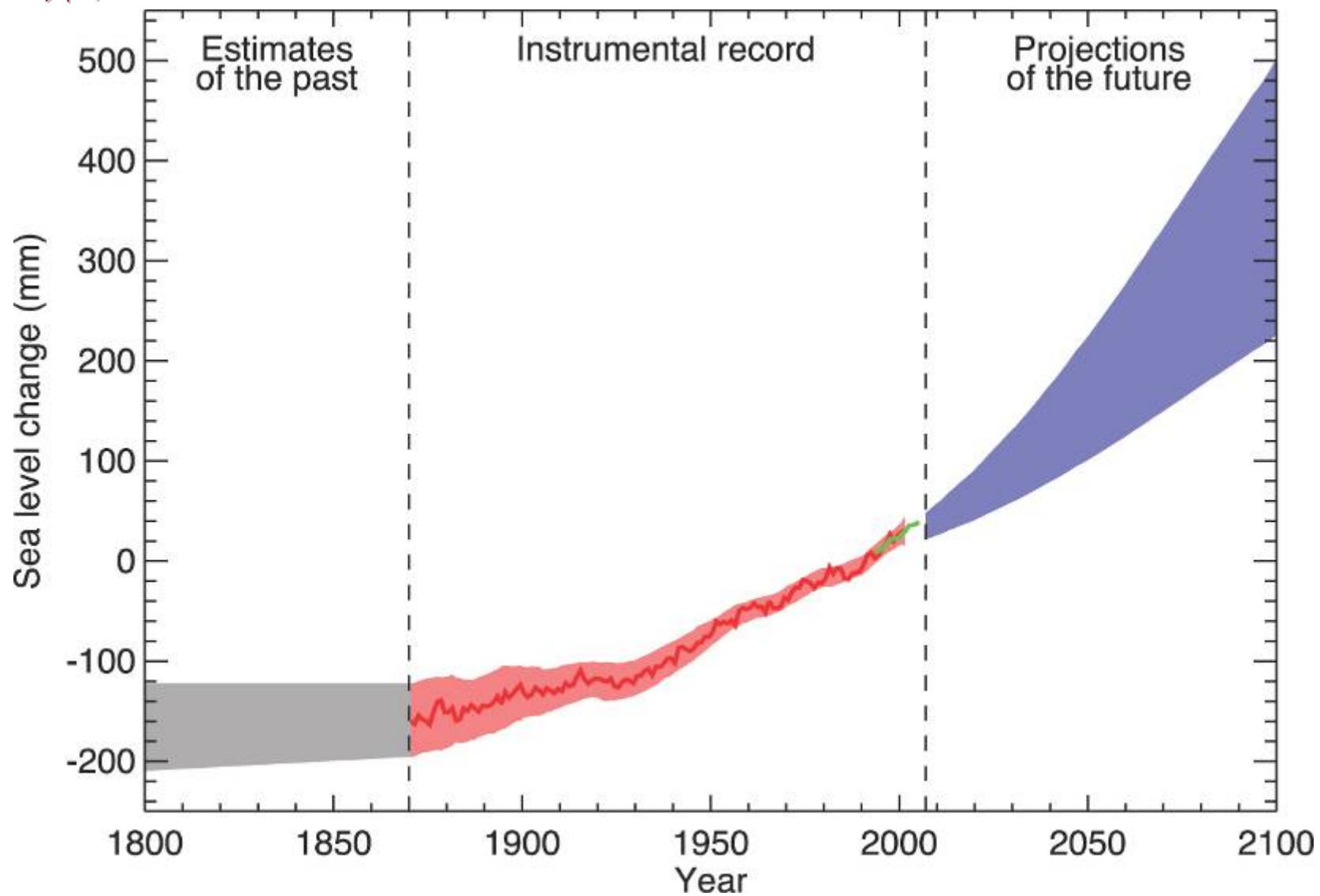
Annual Mean

Summer

- ❑ There has been a trend toward the **increased summer floods in South China and increased drought in North China, especially in late 1990s.**
(华南夏季洪涝、华北干旱)
- ❑ This unique pattern is different from the global pattern of precipitation change. (独特的降水类型)
- ❑ During the past 20 years, the prominent change in rainfall pattern was found not only in China but also in other areas of Asia and the Indian

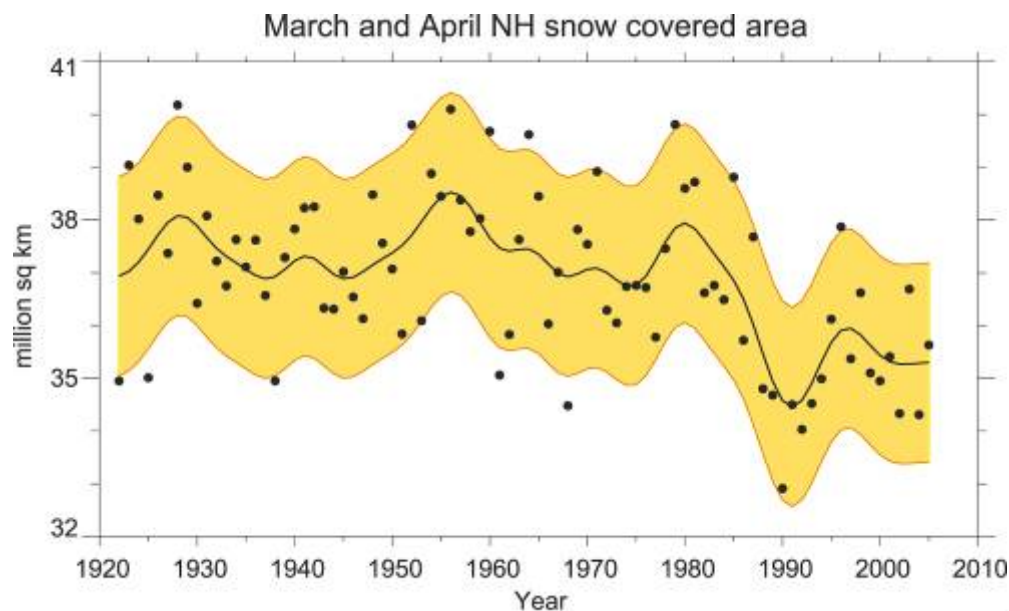


Other events (Sea Level Change) 其他事件 (海平面上升)



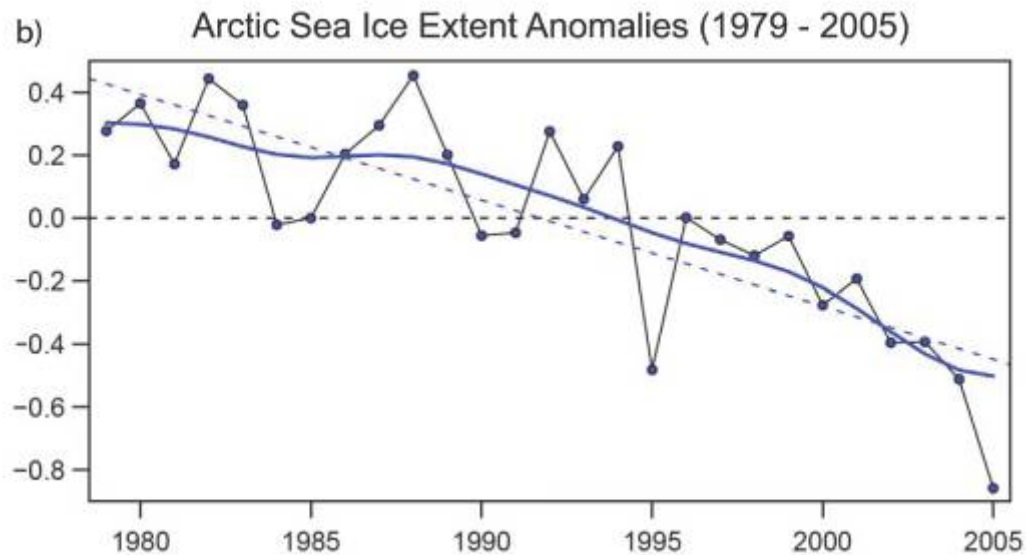
Other events (Snow cover and Arctic sea ice are decreasing)

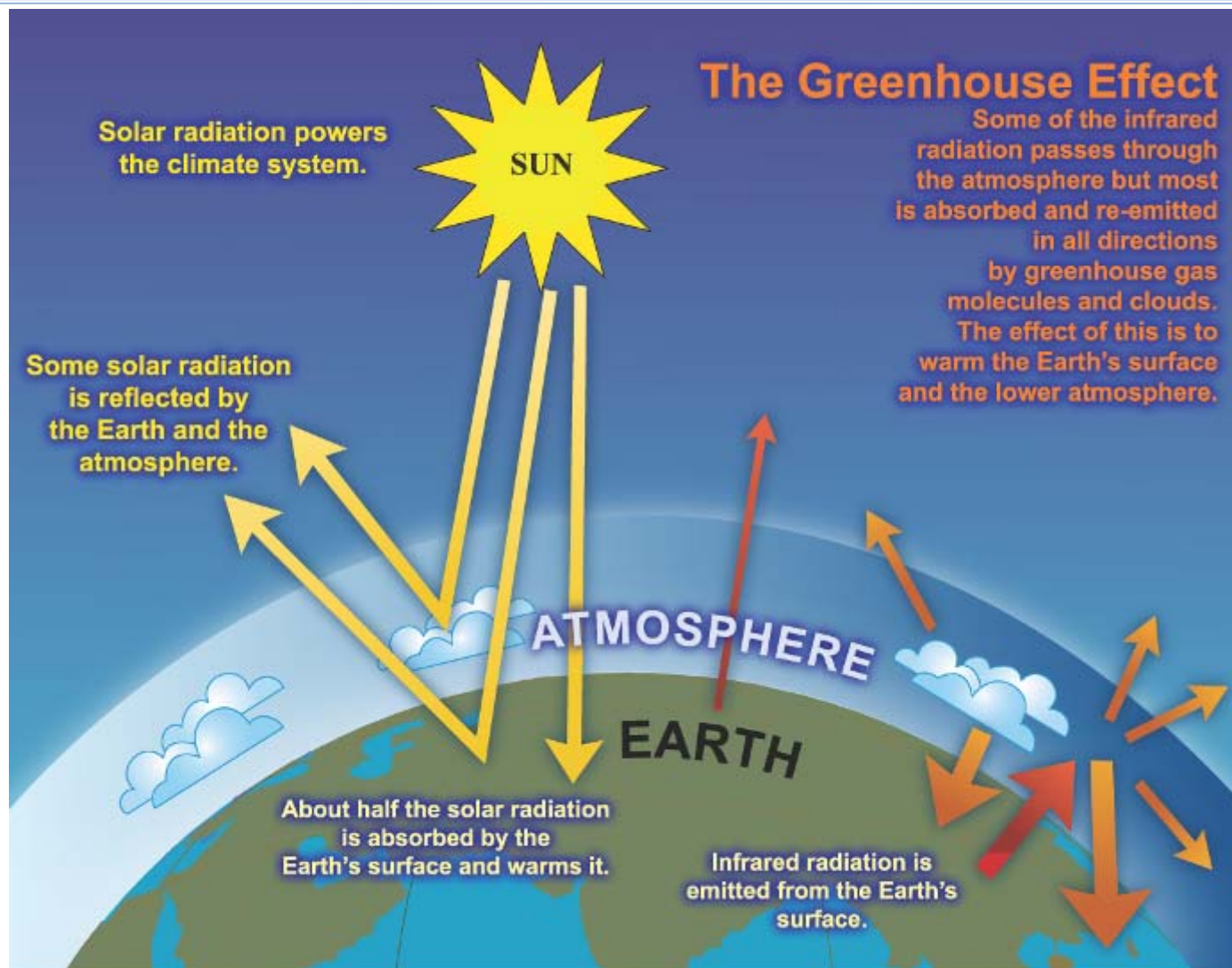
其他 (雪盖和南极海冰消退)



Spring snow cover shows 5% stepwise drop during 1980s

Arctic sea ice area decreased by 2.7% per decade (Summer: -7.4%/decade)





AR4 WG I (2007)