



The Nineth session of East Asia Winter Climate Outlook Forum



Review of 2021 Summer Climate over Mongolia

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Characteristic of circulation in summer 2021

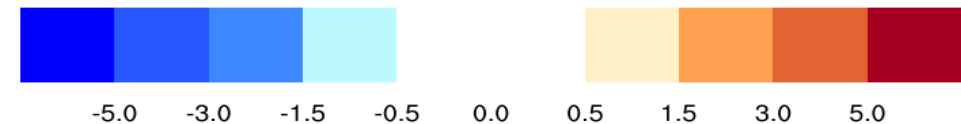
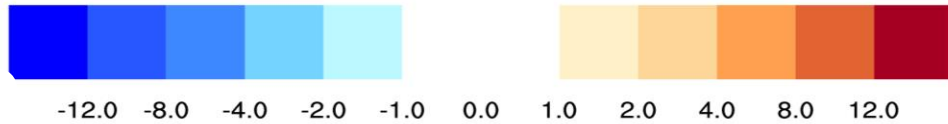
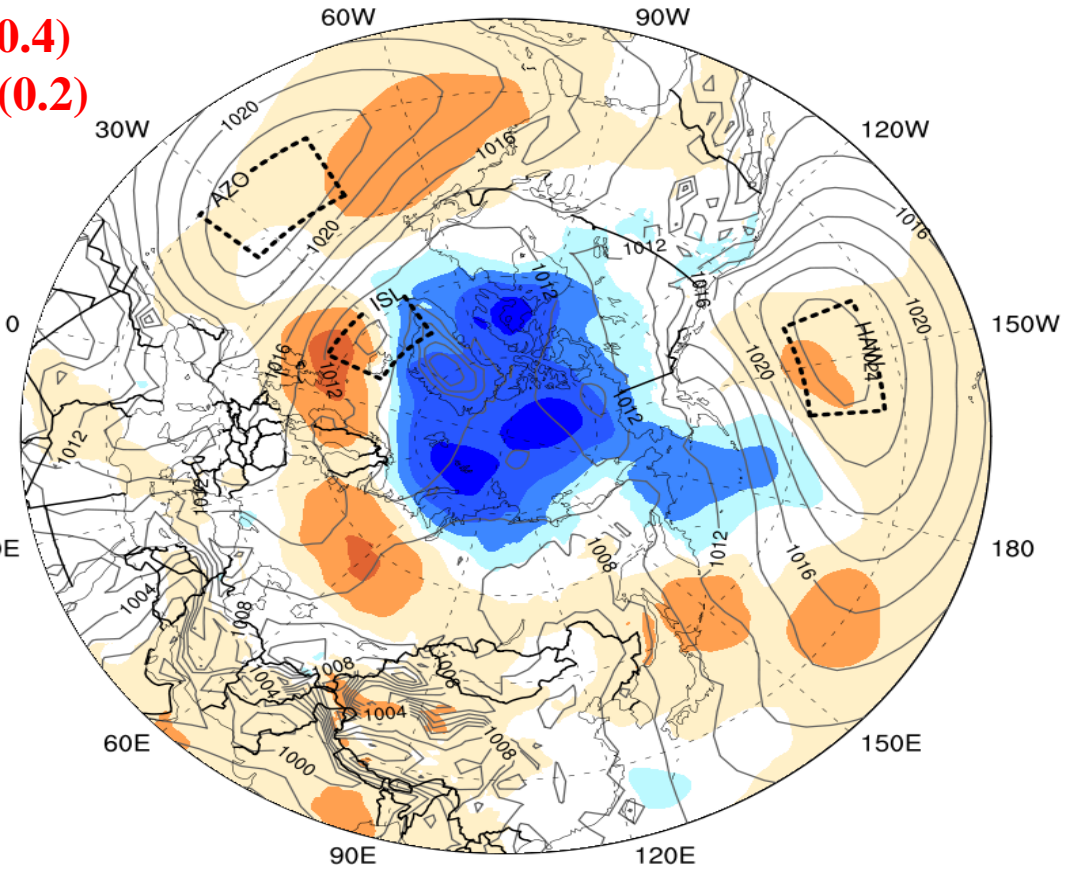
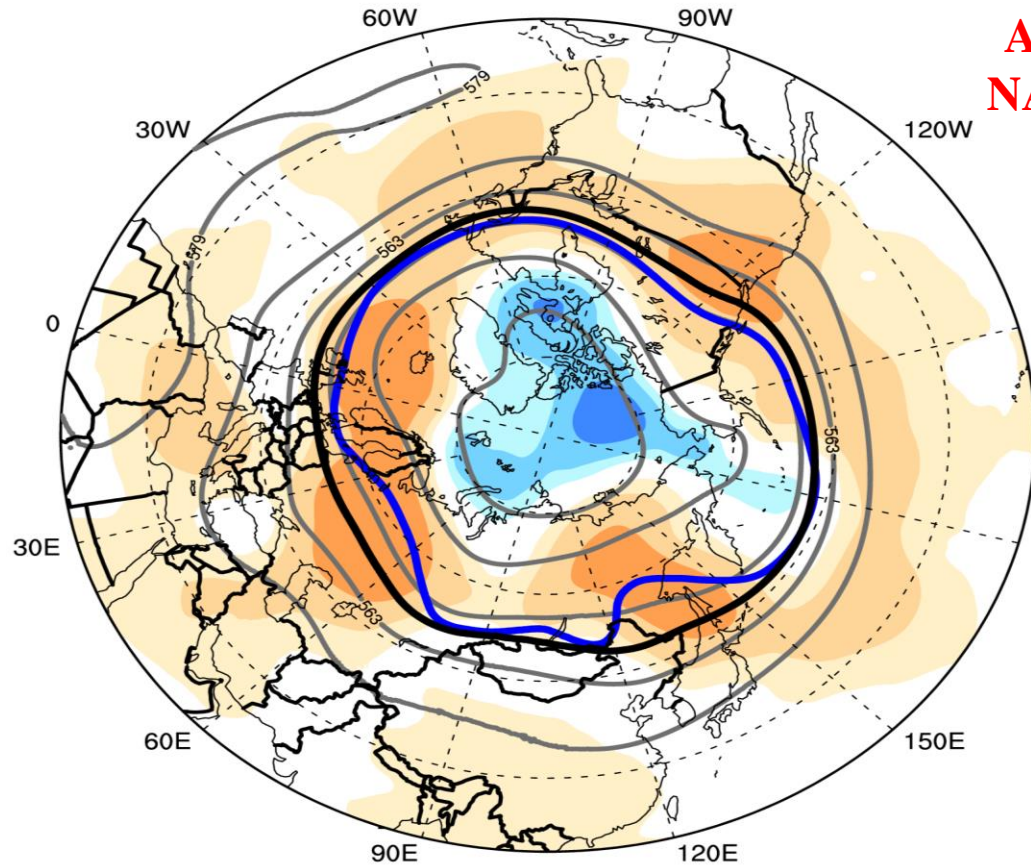
JJA anomalies of geopotential height at 500hPa and SLP

JJA 2021

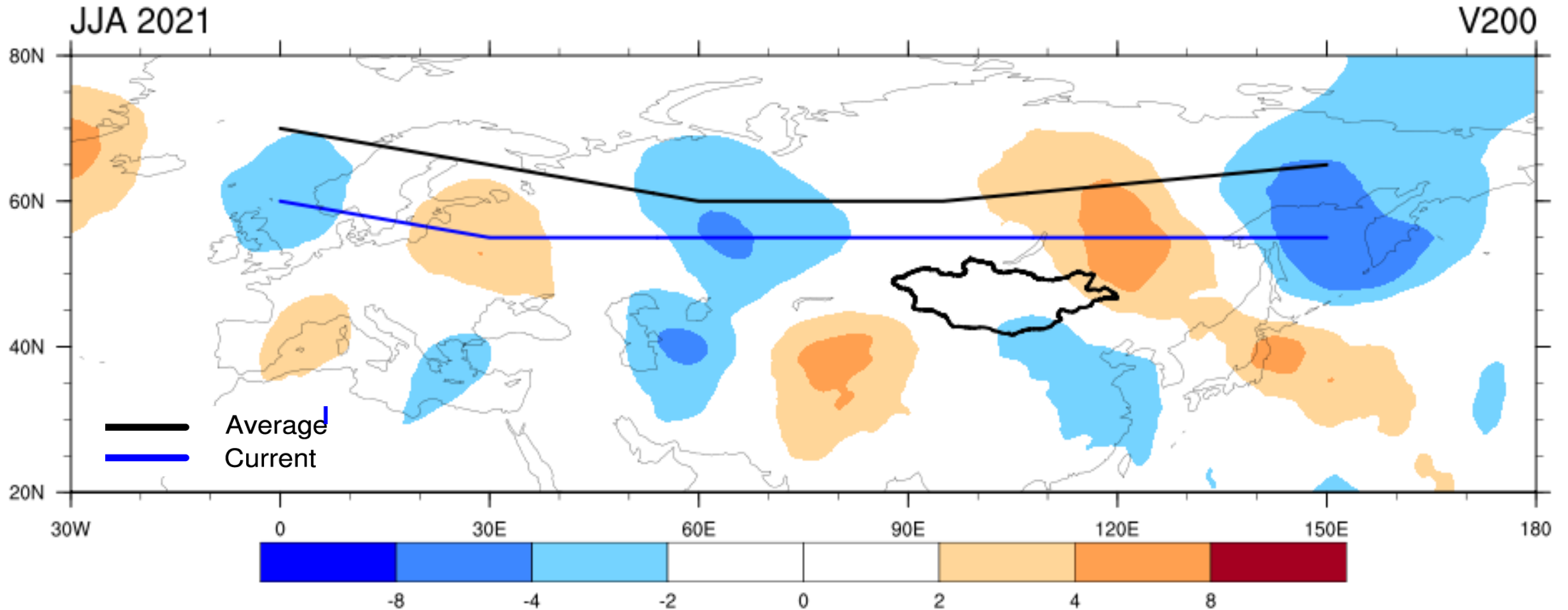
500 hPa

slp

AO + (0.4)
NAO + (0.2)



JJA anomalies of meridional wind component at 200 hPa



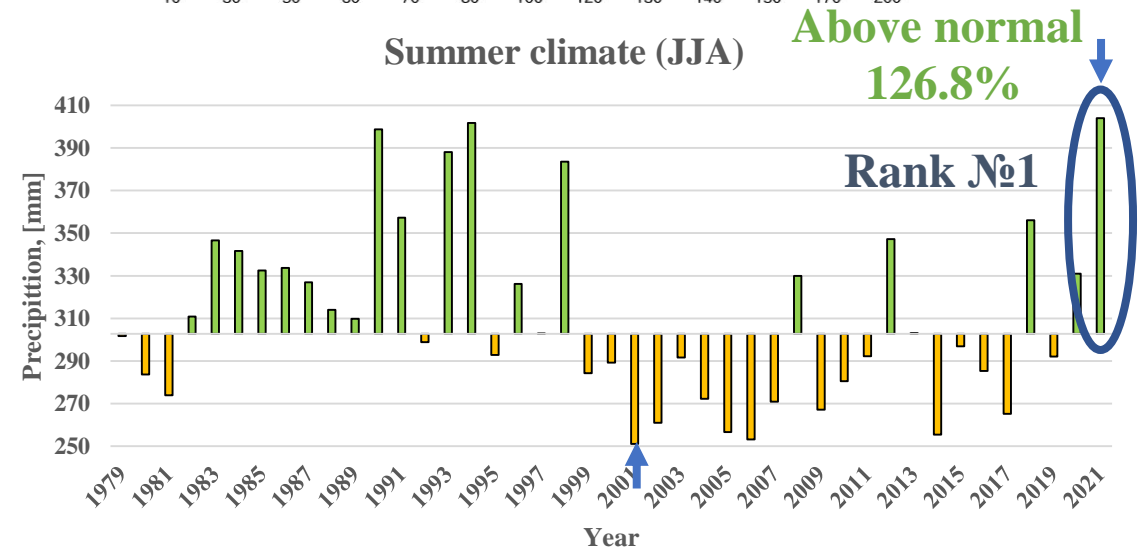
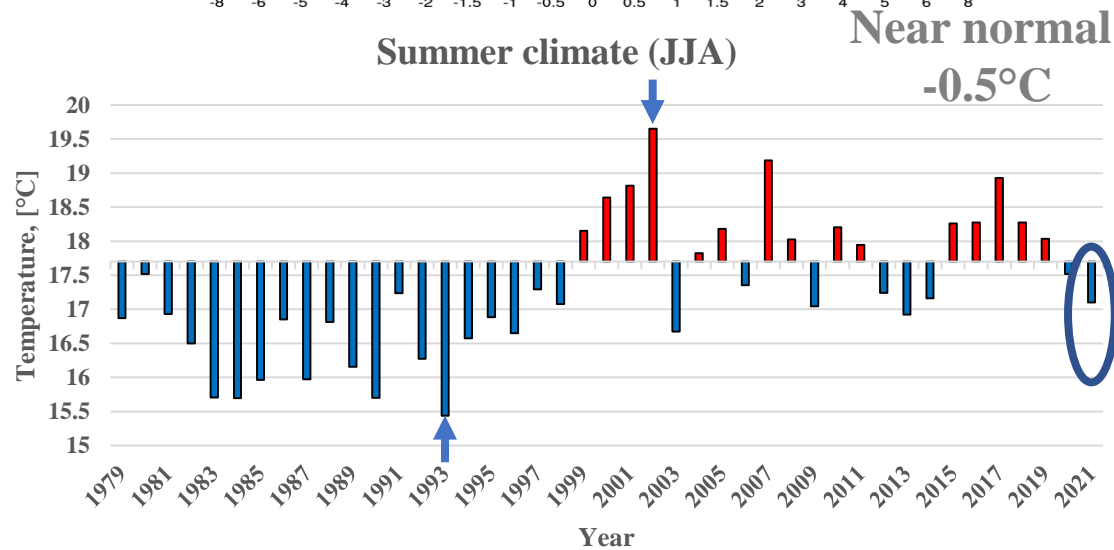
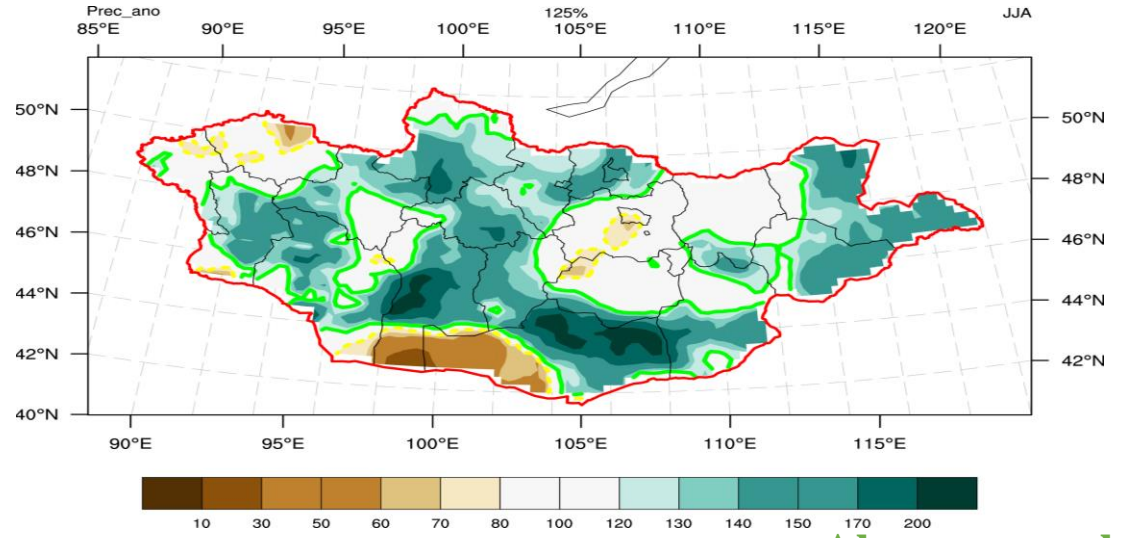
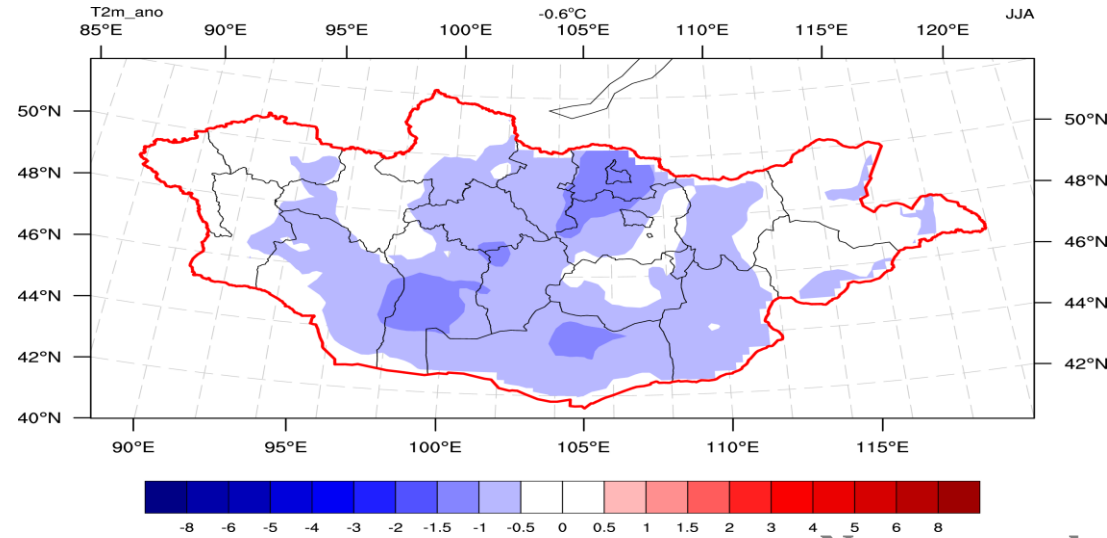
Xu, P., Wang, L., and Chen, W. (2018), “ The British–Baikal Corridor: A Teleconnection Pattern along the Summertime Polar Front Jet over Eurasia”, *Journal of Climate* 32(3), DOI: 10.1175/JCLI-D-18-0343.1

2021 Summer Climate over Mongolia

2021 Summer Climate – JJA mean

Temperature

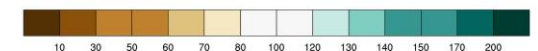
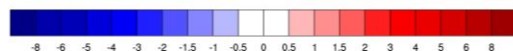
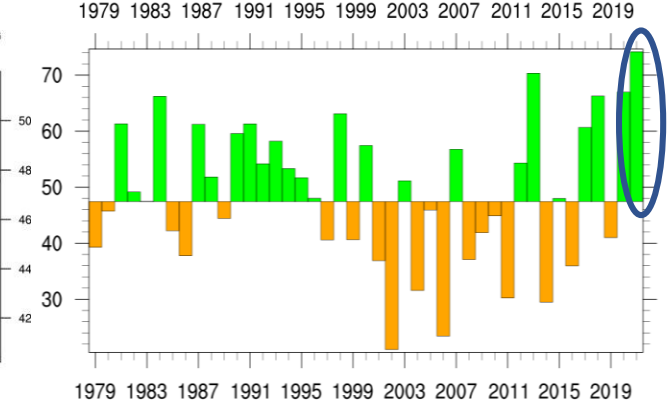
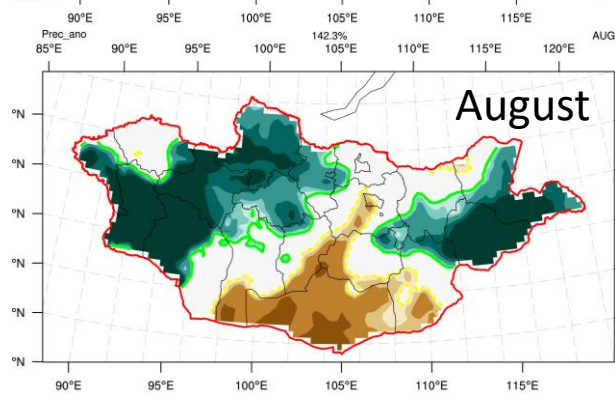
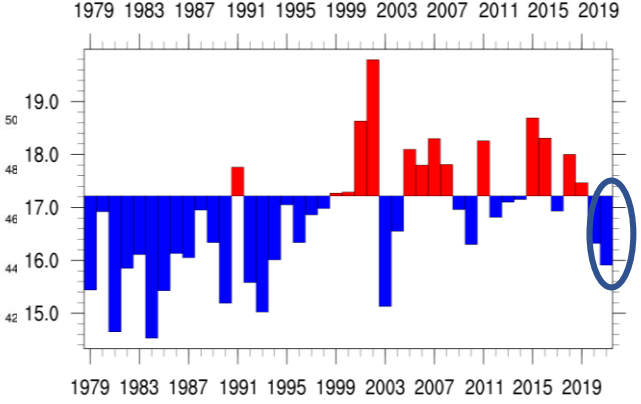
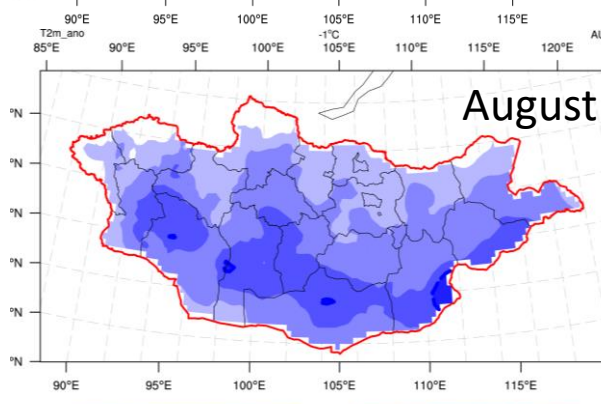
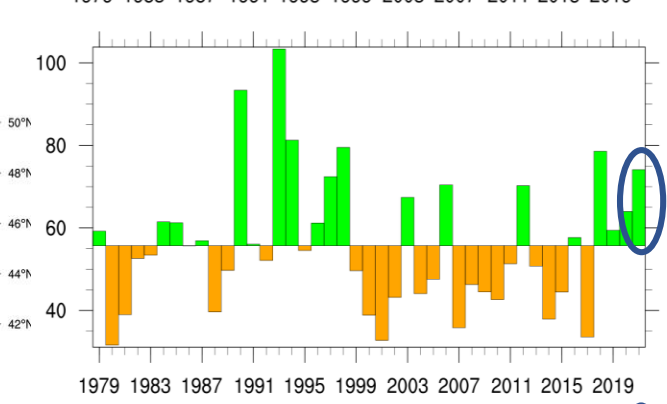
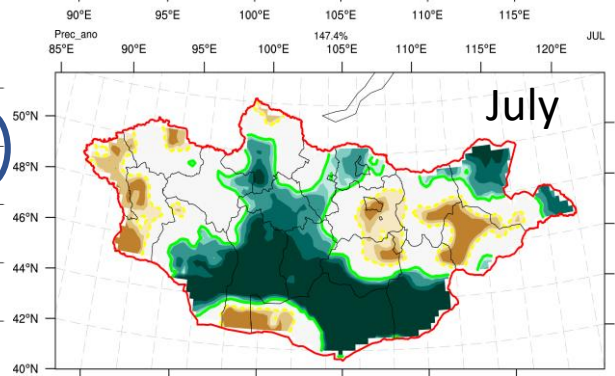
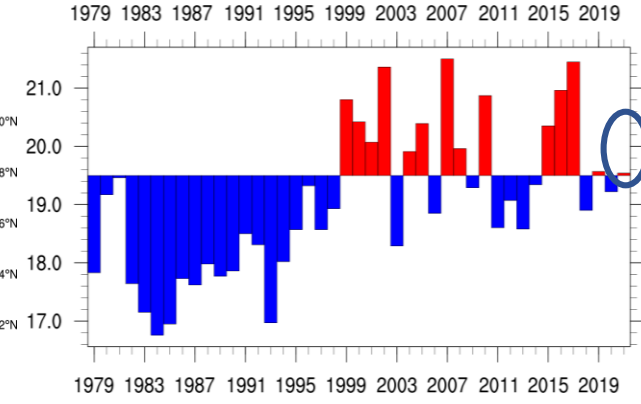
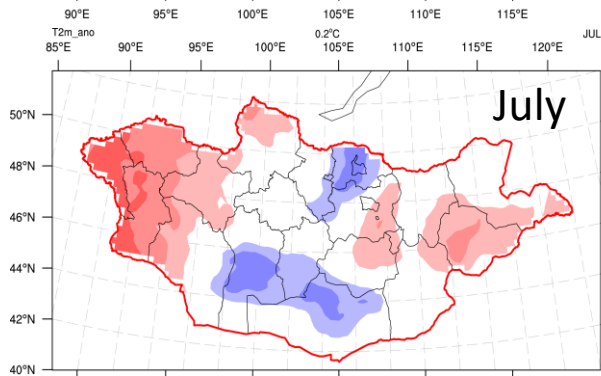
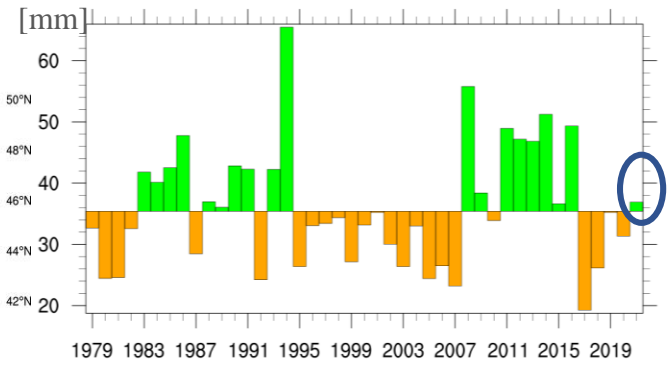
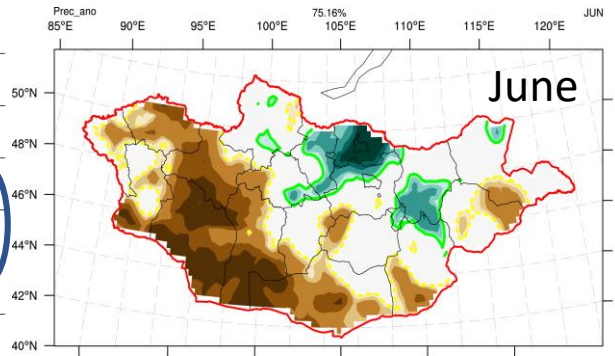
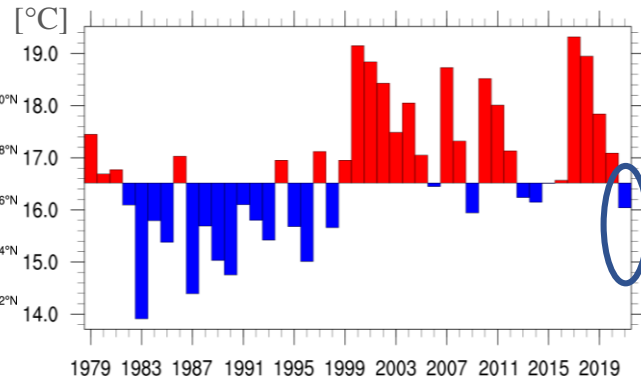
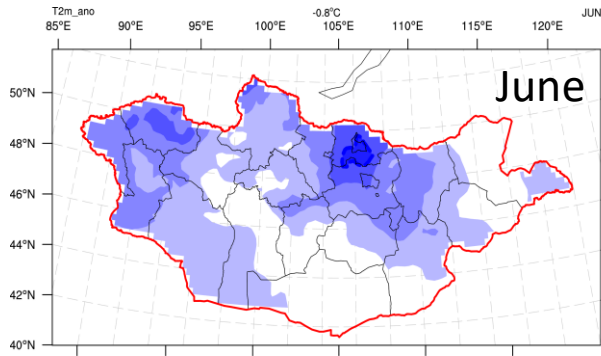
Precipitation



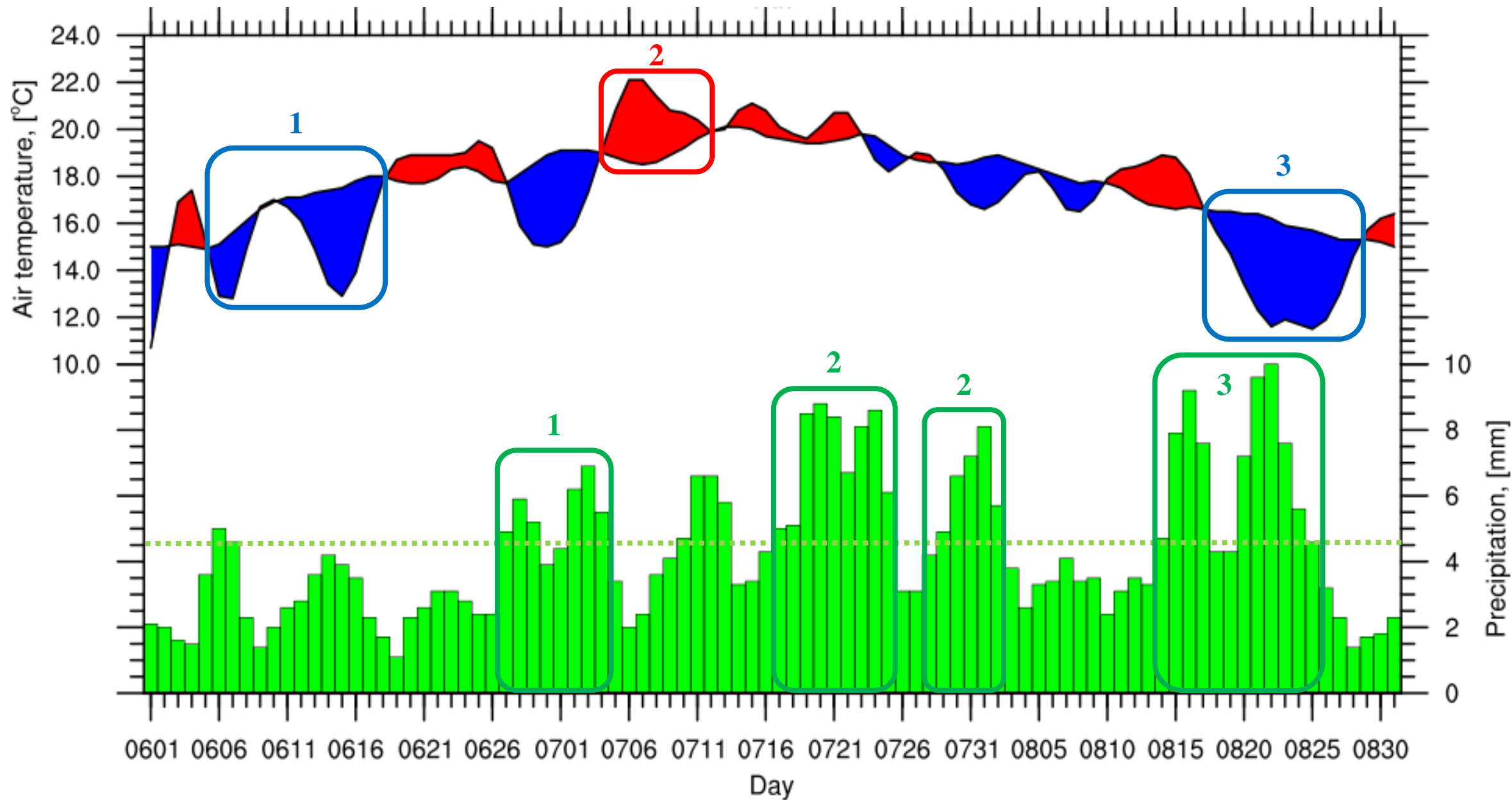
2021 Summer Climate over Mongolia

Temperature

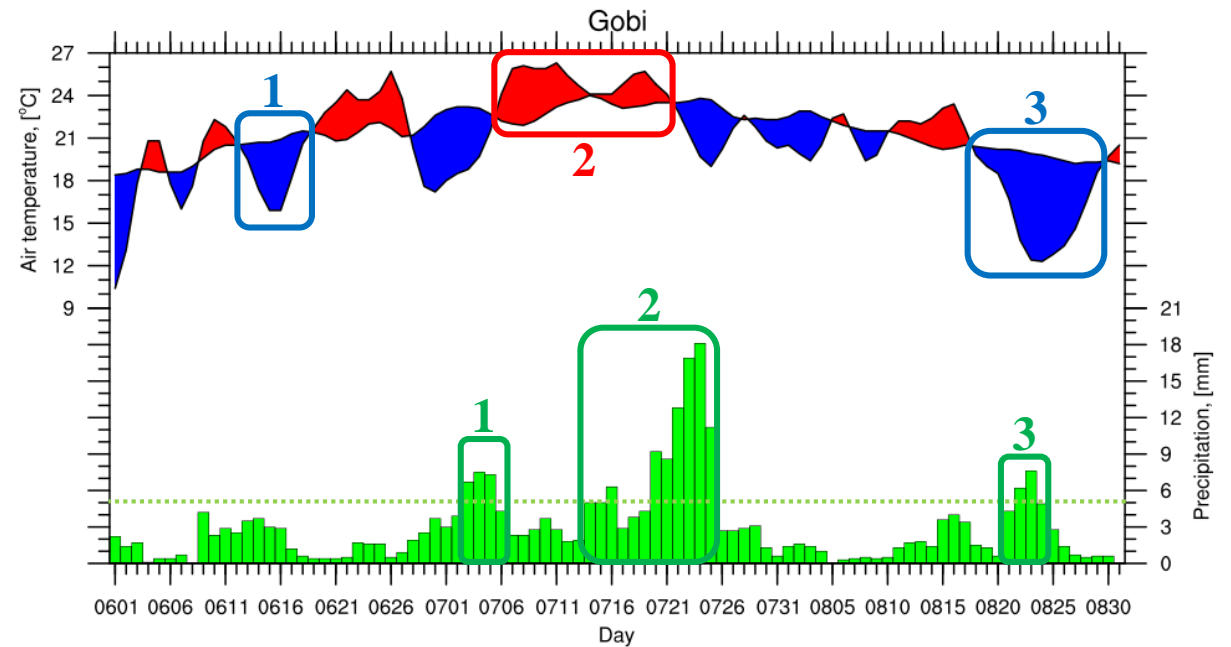
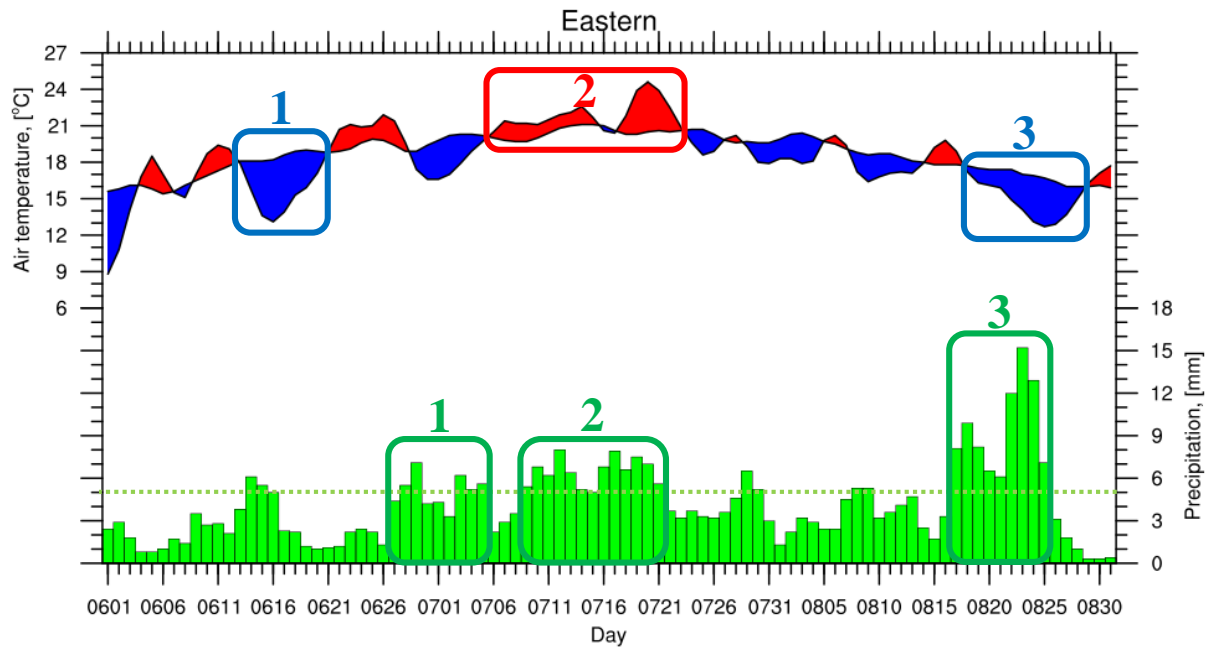
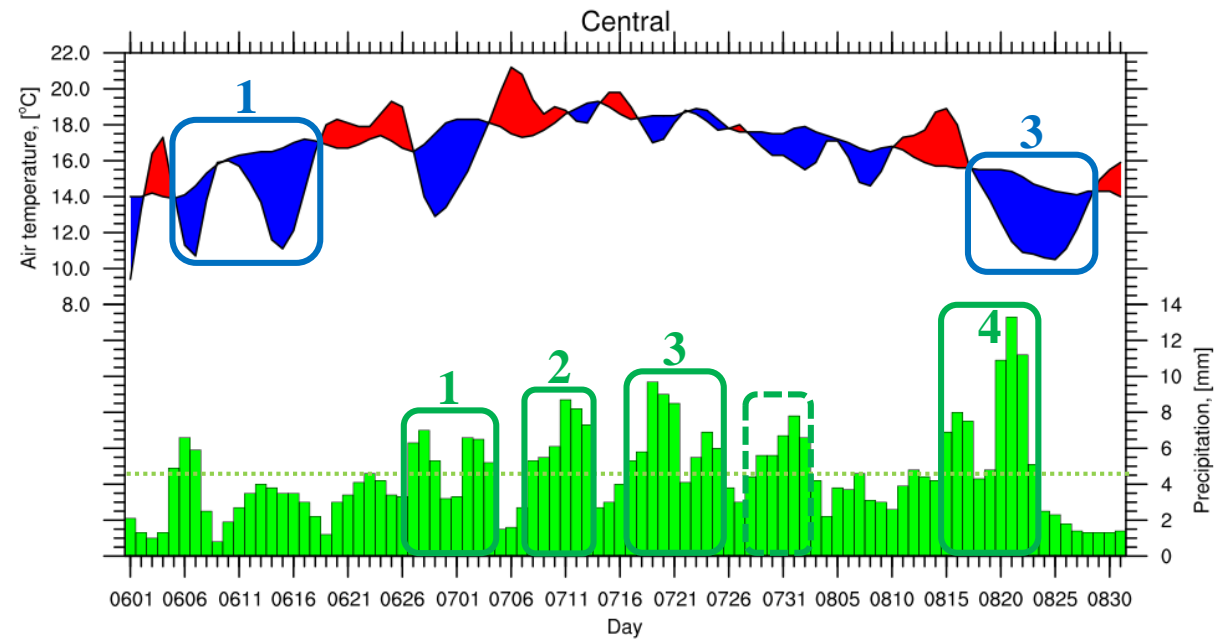
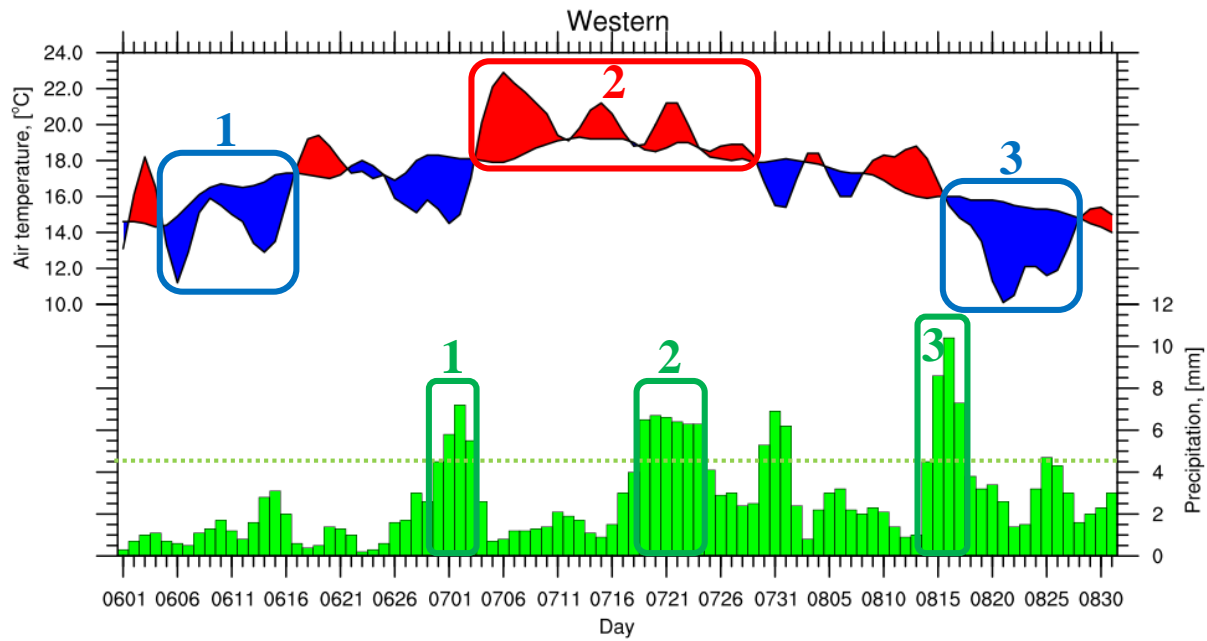
Precipitation



Monthly timeseries



Monthly timeseries

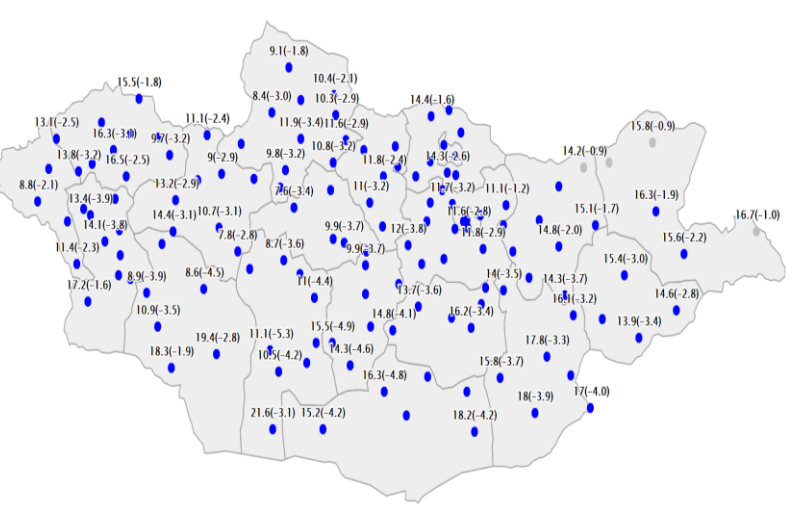
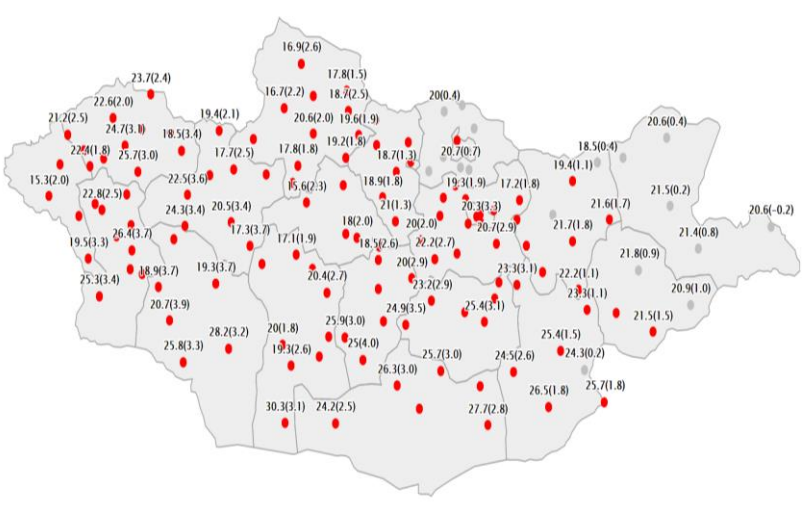
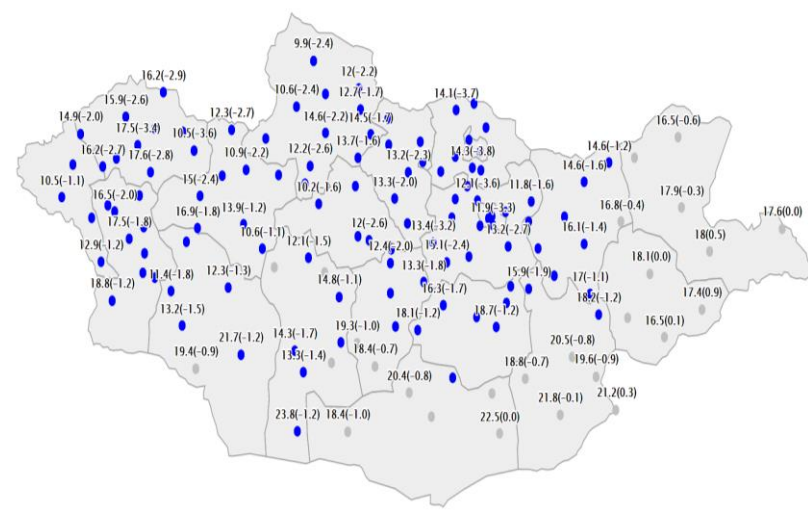
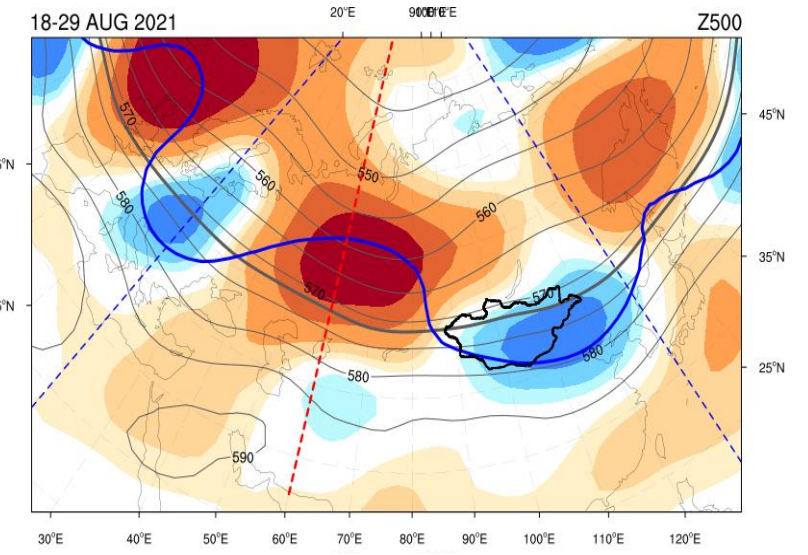
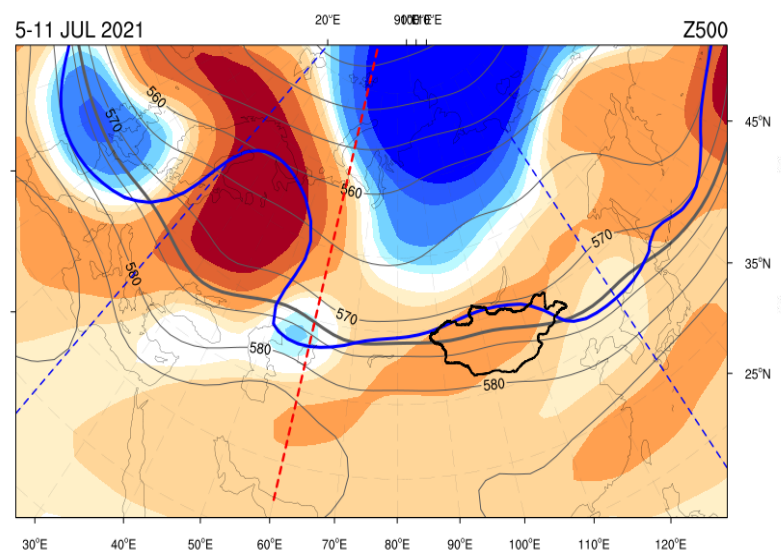
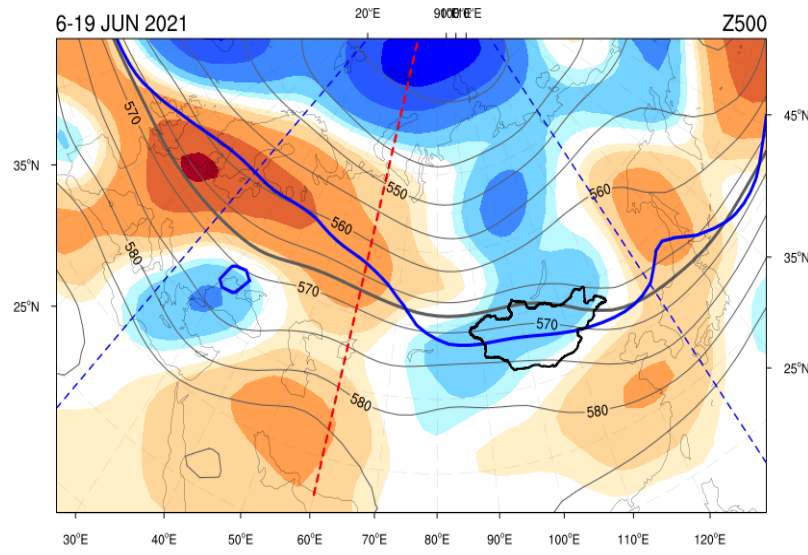


Composite map of cold and hot events

06-19 JUN

05-11 JUL

18-29 AUG

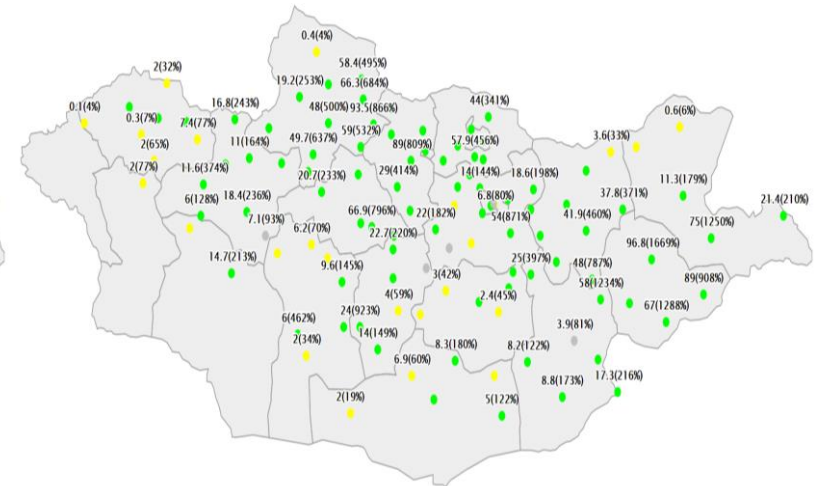
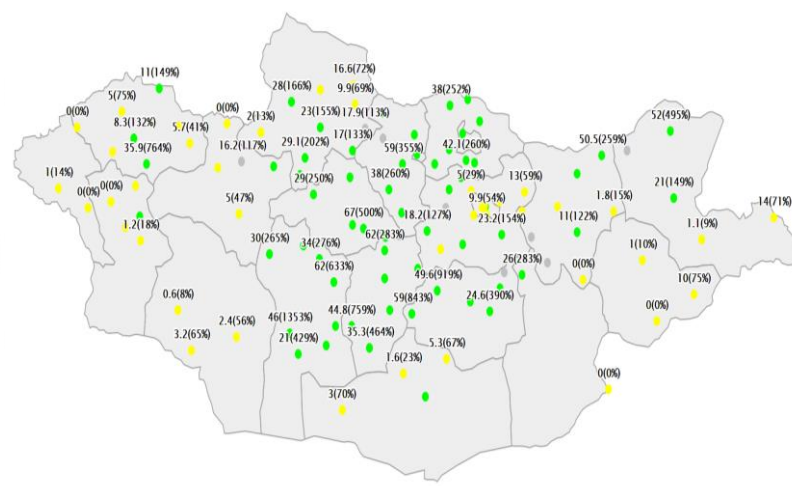
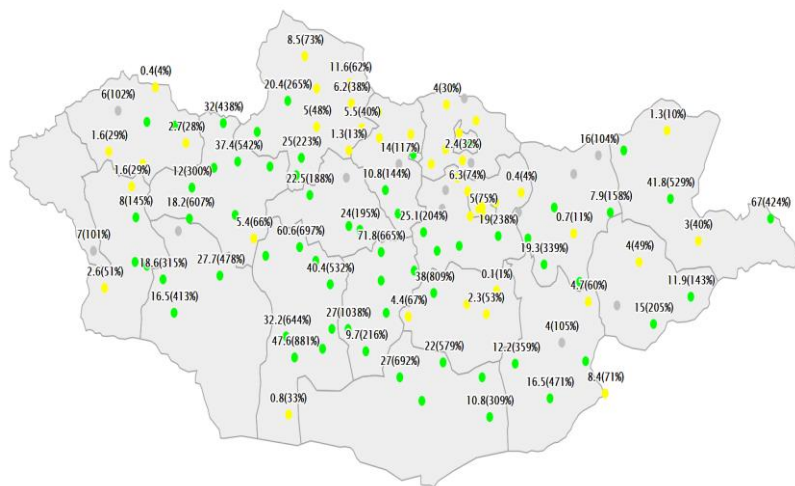
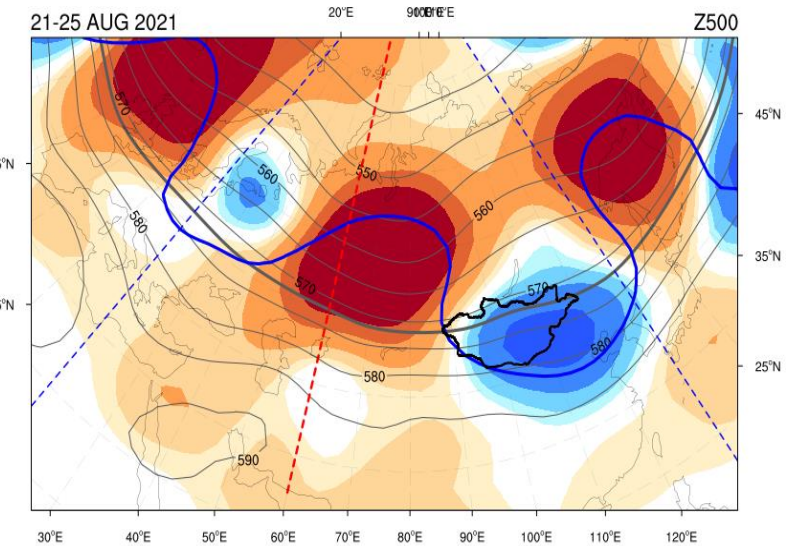
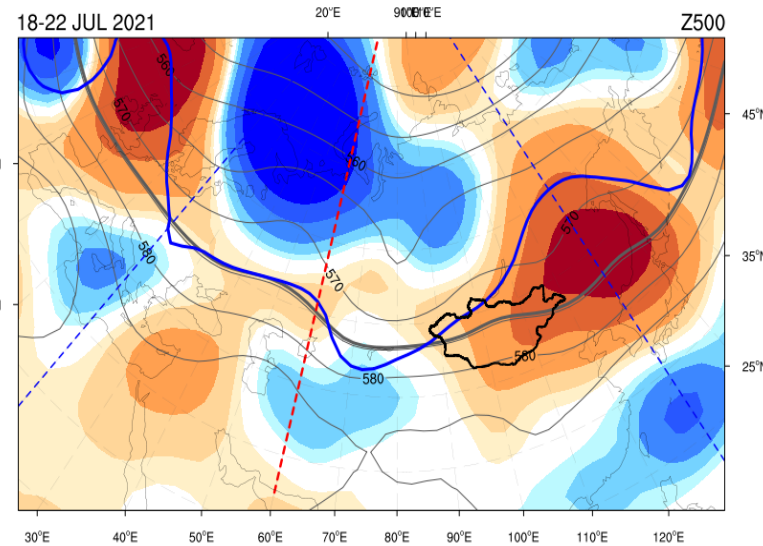
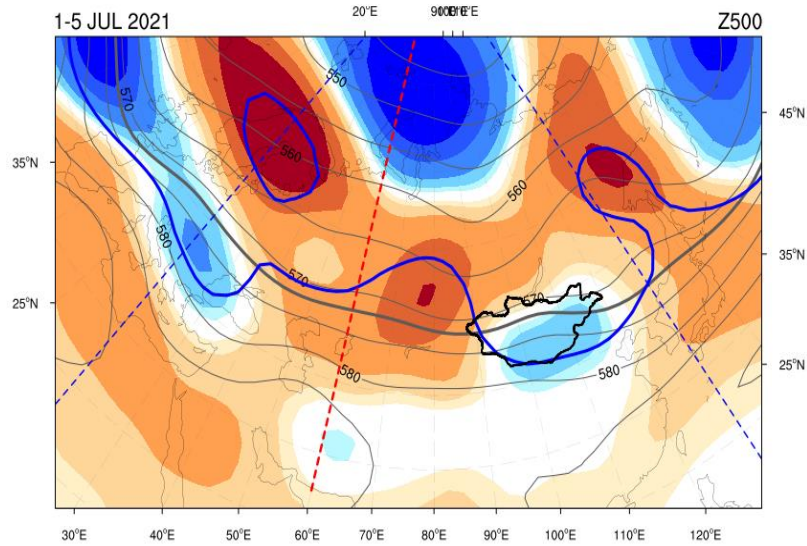


Composite map of heavy rainfall events

01-05 JUL

18-22 JUL

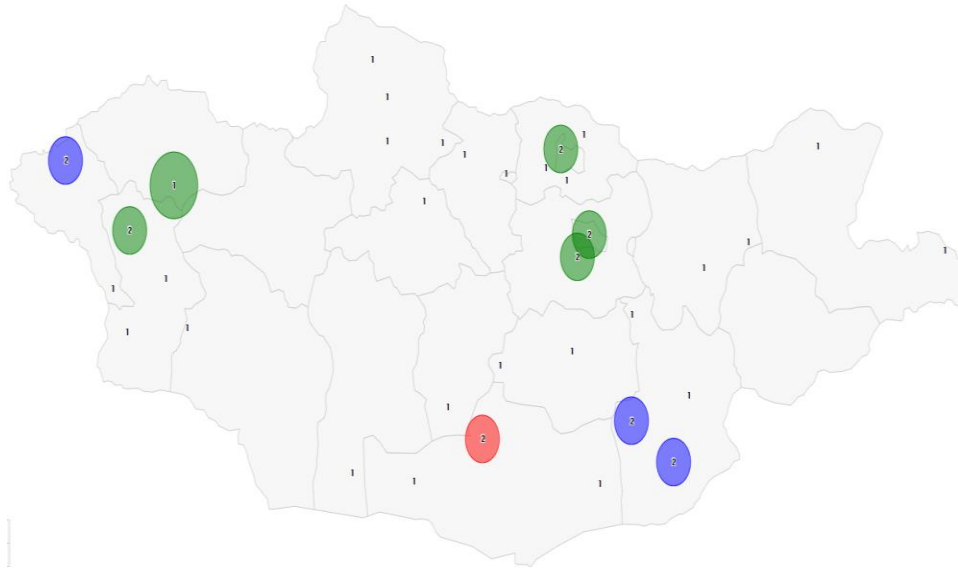
21-25 AUG



Record-breaking and Extreme events

Record-breaking events

June



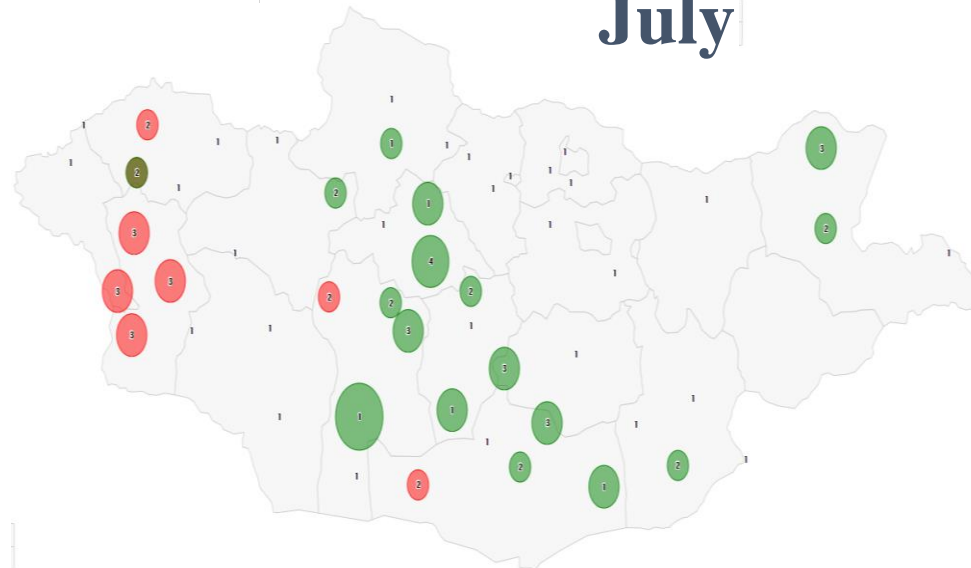
Daily MIN Temperature
Total 15 stations; 1-2 times
Daily MAX Precipitation
6.0 ... 64.4 mm on 30 Jun
(south western and central part)
Record-breaking:
Total 28 stations; 1-3 times

Daily MAX Temperature
34.0 ... 39.0°C, on 7-8 Jul
(south western)

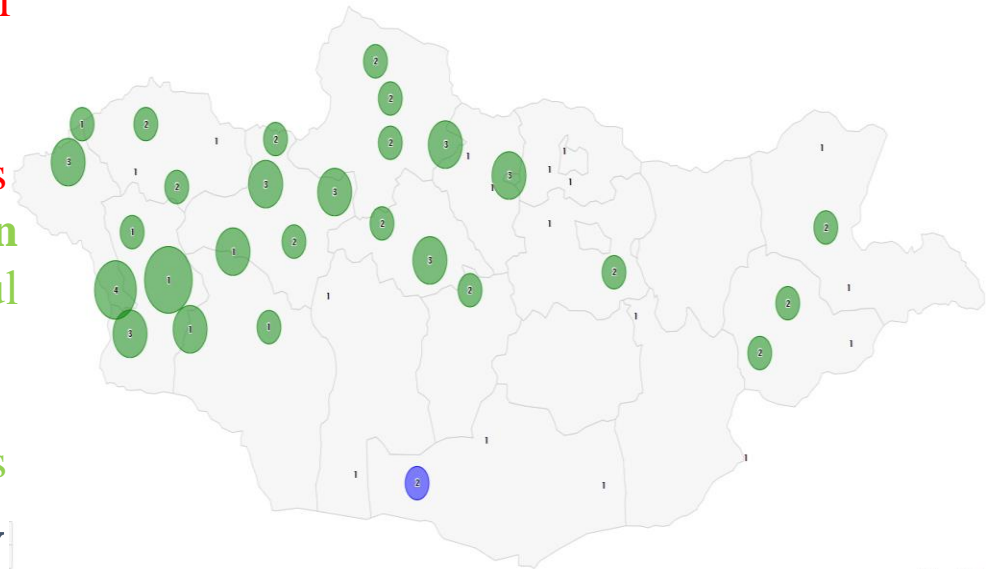
Record-breaking:
Total 28 station; 1-3 times
Daily MAX Precipitation
15.0 ... 84.0 mm on 13 Jul
(northern part)

Record-breaking:
Total 43 station; 1-3 times

July



August



Daily MIN Temperature
Total 11 stations; 1-2 times
Daily MAX Precipitation
15.0 ... 74.0 mm on 22 Aug
(central part)
Record-breaking:
Total 42 station; 1-3 times

Extreme event

Dust storm

13-15 March

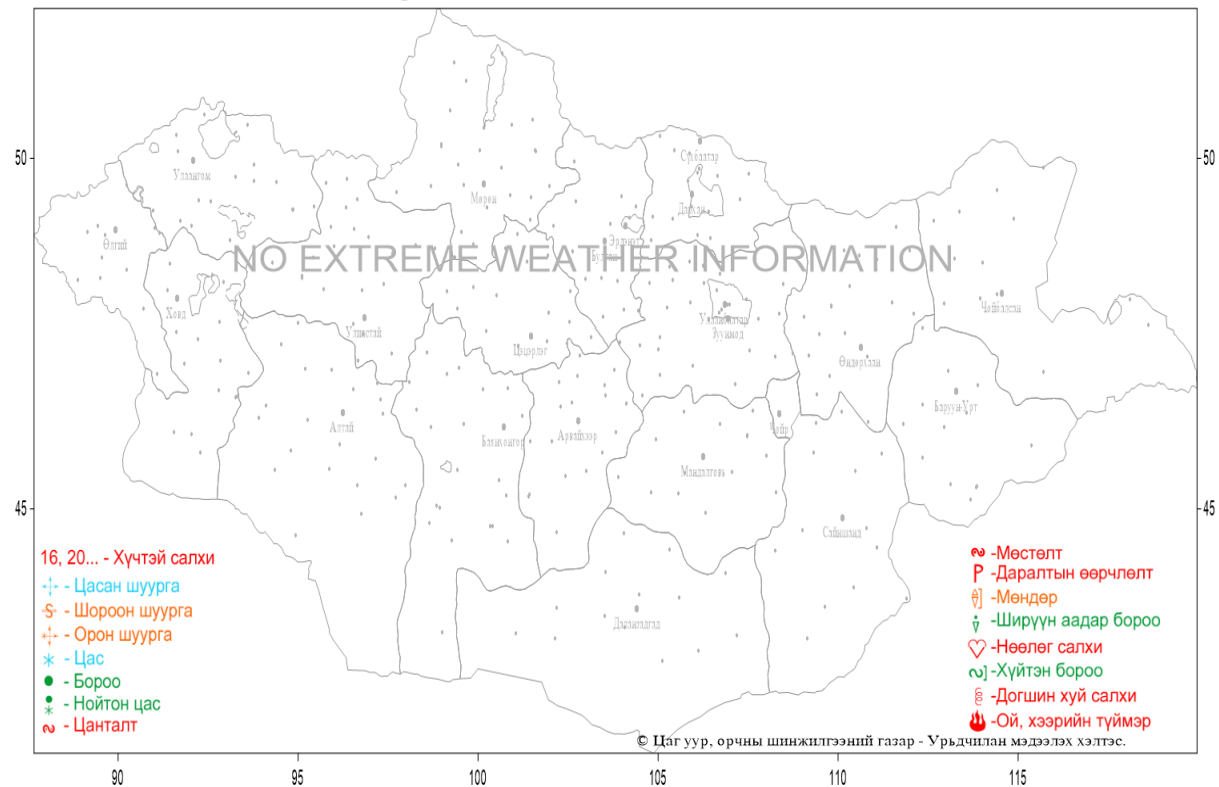
Damage:

706 people missing and 696 found, 10 people dead

Total cost:

1.322.900000 ₮ (464,175.4 \$)

Цаг агаарын аюултай үзэгдлийн мэдээлэл (2021-03-12 20:00 - 2021-03-13 08:00)



Extreme events

Natural disasters

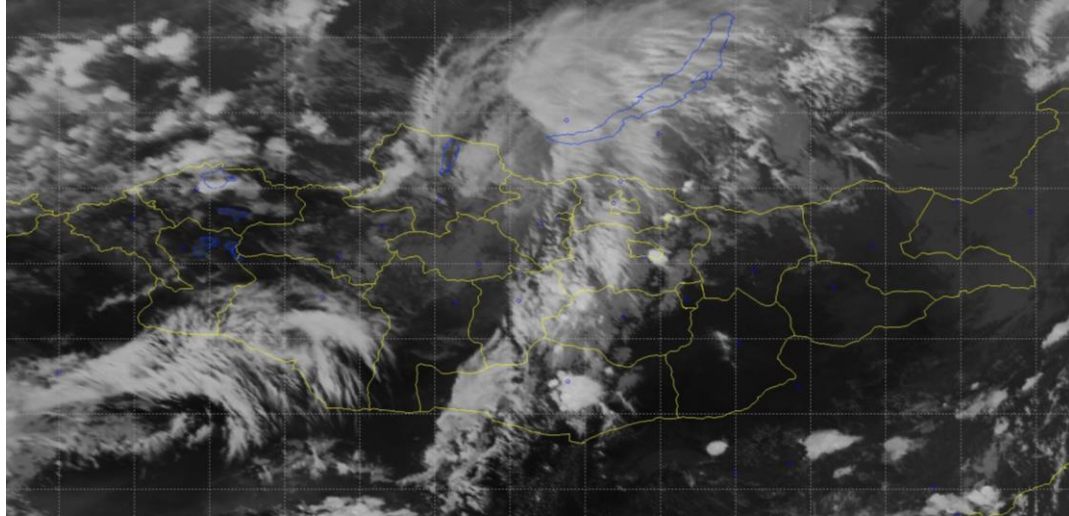
Month	Day	Phenomenon	Area
June	5, 6	Cold spell > -5°C	Northern west
	15, 16		Southern west
July	1...5	Hail < 25cm, squall < 23 m/s	East and center
	4	Heavy rain < 60mm	Center
	10, 11	Hail < 27cm	Center
	17, 18		
	20		
	12, 13	Thunderstorm < 89mm, squall, flash flood	Center
	19	Thunderstorm < 47mm, flash flood	Center
	21	Thunderstorm < 65mm, flash flood, hail	Center
	24, 25	Heavy rainfall < 68mm	South
August	21, 22	Cold rain < 44mm ($\leq -5^{\circ}\text{C}$) continued 8.5 hours,	North
		Heavy rainfall < 57mm	
	21, 22	Cold spell < -5°C	Northern west
	26, 27	Cold spell < -5°C	North

← **Damage:**
2979 sheep, 1459
goats flooded

Extreme events impact

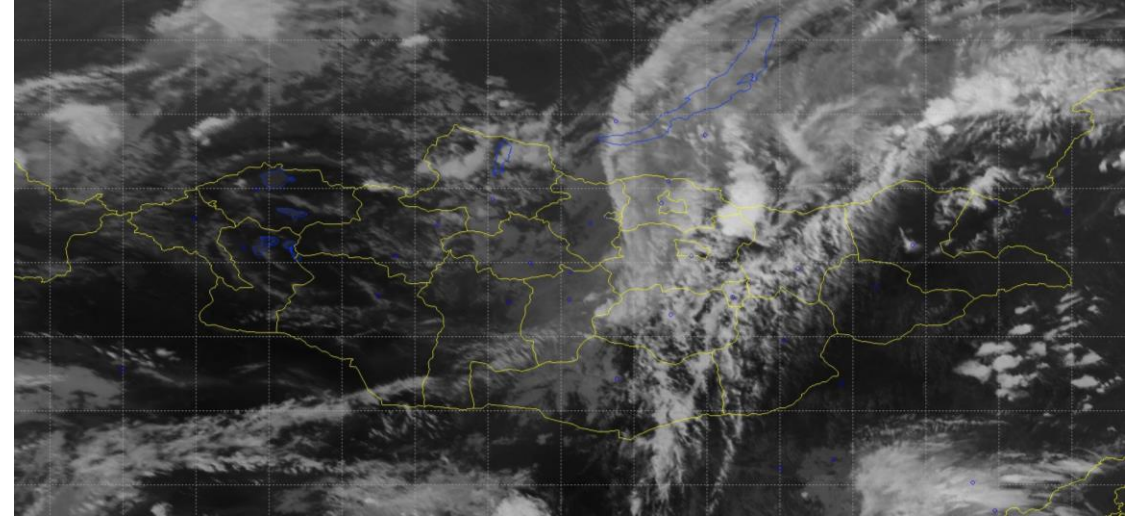
19 Jul

Evacuation: 17 adults, 10 children



21 Jul

Evacuation: 5 adults, 3 children



Thank you

