

Dear Professor Fang,

We extend our sincere gratitude to you for your invaluable comments and constructive suggestions. Having thoroughly reviewed your feedback, we have gained valuable insights and identified areas where improvements were necessary. Notably, we have taken the initiative to address several deficiencies, including the revision of Figure 1a and b, which have been amalgamated into a single figure. Additionally, we have meticulously revised the aspects related to the concepts of time and space, as highlighted in your comments. We have also rectified other inappropriate elements that you brought to our attention.

It is indeed a privilege for us to have had the opportunity to receive your comments and suggestions. Below, we provide a comprehensive point-to-point account of the specific modifications made, with corresponding updates within the original paper. Thank you for your invaluable guidance.

Professor Fang, 01 Aug 2023

This study presents a comprehensive reconstruction of the 1759 drought in NWAR, from the spatial-temporal distribution, to the impacts of the drought, and the societal responses. The historical records in NAR are arranged well to illustrate the drought process. The research draws three main conclusions, that is from spring to summer in 1759, the NAR experienced a severe drought due to the continuous low rainfall in spring and summer, the Qing government adopted a series of disaster relief measures to response the severe drought in the NWAR and the long-term climate fluctuations impact on the capacity of a society to respond to climate disasters. The results are valuable for disaster prevention, reduction and relief in modern society.

The title of “4.2 The impact of drought on society at the time”, could not cover the contents of the part. The impacts of the drought were beyond the time and out of the region. It is suggested to change the title and focus the topic on the subsequent long-term impacts and the impacts out the connected regions.

A: Suggestion taken. We revised the title according to the actual time and space mentioned in Section 4.2 to: “The impact of the 1759 drought on a larger spatial and temporal scale”.

1. Line 27. “Asia, Brazil, and Africa” are different scale units. Did only Brazil in South America suffer from the drought in 1877-1878?

A: Thank you for your reminding. We reviewed and studied the article cited here again, and modified the area involved in Line 27. The original sentence has been changed to, “Historically, simultaneous multi-year droughts in China and India in Asia, Southeast Africa, and Northeast

Brazil in South America during the period 1875–1878 caused widespread crop failures and triggered famines on a global scale that killed more than 50 million people (Singh et al., 2018).”

Singh D, Seager R, Cook B I, Cane M, Ting M, Cook E and Davis M. Climate and the Global Famine of 1876-78[J]. 2018, Journal of Climate: 31(23): 9445-9467.

2. Line 60. “a hundred-year agricultural failure” should be “a once-in-a-century”..

A: Thank you, changed as suggested. The above-mentioned mistake has been corrected as suggested.

3. Line 61-62. Why “the 1759 drought event did not cause serious social unrest” is a topic to be answered in the paper. So, the statement of “It can be seen that the societal adaptability at that time resolved the negative impact of the drought-driven agricultural failure” is not suitable be used here.

A: Suggestion taken. We have changed this inappropriate statement to, “It can be inferred that there must have been some reasons that have offset the negative impact of this drought.”

4. Line 70. At present, Qinghai Province generally belongs to the Tibet. According to Figure 1, only part of Qinghai is included in the Northwest China.

A: Suggestion taken. We have changed it to, “At present, Northwest China includes Shaanxi Province, Ningxia Hui Autonomous Region, Gansu Province, Xinjiang Uygur Autonomous Region, and the area east of Qinghai Lake in Qinghai Province.”

5. Line 71. It should be rainfed “crops can be planted in the eastern part of Northwest China”. In the oases in Northwest China, if there is irrigation, crops can also be planted.

A: Suggestion taken. We have changed it to, “rainfed crops can be planted in the eastern part of Northwest China.”

6. Figure1 a and b is suggested to combine into a single one.

A: Suggestion taken. We have redrawn Figure1 a and b and merged them into Figure 1. The NAR and NWAR previously shown respectively on Figure 1a, and b are both presented now on Figure 1, using different color outlines to indicate different areas. The redrawn figure is shown as follows.

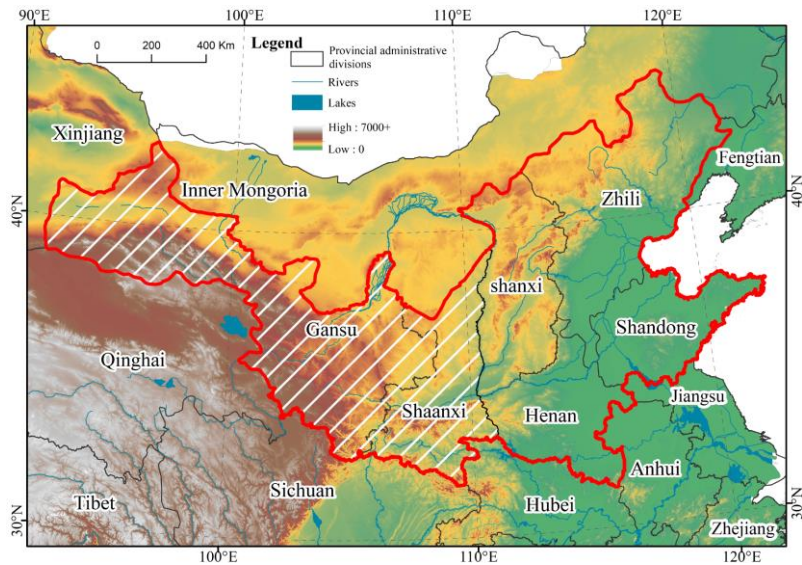


Figure 1. The area inside the red border is NAR and the two provinces of NWAR (the area covered by the white oblique lines) during the Qing Dynasty. The provincial boundaries shown are those from the Qing Dynasty, drawn according to the Concise Historical Atlas of China (Tan, 1991).

7. Line 311. “drought, (1759)” is “drought (1759)”.

A: Thank you, changed as suggested. The above-mentioned mistake has been corrected as suggested.

8. Line 369. “By 1759, the territory of the Qing Dynasty expanded further to Kashgar, ……”, does it mean “the Kashgar , …… had under been controlled by central government of the Qing Dynasty” .

A: Thank you for your comments. We have changed it to, “By 1759, as soldiers of the Qing Dynasty continued to march westward, Hotan, Kashgar and the eastern part of the Pamirs, for example the Badakhshan (Badakhshan: now the Badakhshan Province in eastern Tajikistan and Wakhan Corridor in northeastern Afghanistan), had been controlled by the central government of the Qing Dynasty.”