In this work, Zongxing et al., has quantified the soil water sources in the Three-River Headwater Region under different ablation periods used two thousand six hundred samples of soil water, precipitation, river water, ground ice meltwater, supra-permafrost water, and glacier snow meltwater samples. The topic of this paper was new and original and the method was reasonable. The analysis of this article also was perfect. In general, the outcome of this work can be interesting for the scientific community. I suggested that this manuscript should be published after moderate modifications.

1. In abstract ： Some sentences are too colloquial, please revise them. For examples the sentence of "So it is crucial to understand the spatial-temporal changes in soil water sources." and "So there is an urgent need to monitor soil water, warn of vegetation degradation associated with soil moisture loss, and identify reasonable water-soil conservation and vegetation restoration patterns."

Thank you very much for your comments. We have modified such sentences as suggested.

2. Line 36：Change "Soil water is a vital water resource, a link between precipitation, surface water, soil water, and groundwater" to "Soil water is an important water resource, also a link between precipitation, surface water, soil water, and groundwater"

Thank you very much for your comments. We have Changed "Soil water is a vital water resource, a link between precipitation, surface water, soil water, and groundwater" to "Soil water is an important water resource, also a link between precipitation, surface water, soil water, and groundwater"

3. Line 46: Change "Tetzlaff, & Soulsby" to "Tetzlaff and Soulsby"

Thank you very much for your comments. We have Changed "Tetzlaff, & Soulsby" to "Tetzlaff and Soulsby"

4. Line 107: Change "followed by air temperature and wind speed in the sources region of the Yellow river" to "followed by air temperature and wind speed in the source region of the Yellow River"

Thank you very much for your comments. We have Changed "followed by air temperature and wind speed in the sources region of the

Yellow river" to "followed by air temperature and wind speed in the source region of the Yellow River"

5. 4. Line 117-118 Change "The TRHR is undergoing a glacier retreat, permafrost degradation, precipitation increase, snowfall decrease, water conservation decrease" to "The TRHR is undergoing a glacier retreat, permafrost degradation, precipitation increase, snowfall decreases, water conservation decrease"

Thank you very much for your comments. We have Changed "The TRHR is undergoing a glacier retreat, permafrost degradation, precipitation increase, snowfall decrease, water conservation decrease" to "The TRHR is undergoing a glacier retreat, permafrost degradation, precipitation increase, snowfall decreases, water conservation decrease"

6. Line 122-123: Change "So there is an urgent need to quantify the soil water sources to improve the effectiveness of ecological restoration in permafrost regions." to "Thus there is an urgent need to quantify the soil water sources to improve the effectiveness of ecological restoration in permafrost regions."

Thank you very much for your comments. We have Changed "So there is an urgent need to quantify the soil water sources to improve the effectiveness of ecological restoration in permafrost regions." to "Thus there is an urgent need to quantify the soil water sources to improve the effectiveness of ecological restoration in permafrost regions."

7. Line 241: Change "**Glaciers snow meltwater**" to "**Glacier snow meltwater**"

Thank you very much for your comments. We have Changed "Glaciers snow meltwater" to "Glacier snow meltwater"

8. River names in manuscripts should be capitalized. For example "Lancangjiang River"

Thank you very much for your comments. We've capitalized all the river names that appear in the manuscript.

9. Line 298: Change "heavy ablation period" to "strong ablation period"

Thank you very much for your comments. We have Changed "heavy ablation period" to "strong ablation period"

10. Please change all tables to triple table.

Thank you very much for your comments. We have replaced all the tables in the manuscript with three-line tables.

Table.1 The average values of stable isotopes and relationship between $\delta^{18}O$ and d-excess for soil waters in TRHR

	Relationship between $\delta^{18}O$ and d-excess/ R^2	average values for: $\delta^{18}O$, $\delta^{2}H$ and d-excess in June	average values for: $\delta^{18}O$, $\delta^{2}H$ and d-excess in August	average values for: $\delta^{18}O$, $\delta^{2}H$ and d-excess in Sepetember
All soil water samples	Y=-0.16x+3.87, R^2=0.0065	-12.00, -89.78, 6.30	-13.26, -100.0, 8.58	-13.04, -98.11, 6.24
0-20cm	Y=-0.43x+0.98, R^2=0.065	-11.91, -90.07, 5.18	-13.24, -101.44, 8.87	-14.23, -108.14, 5.71
20-40cm	Y=-0.4564x+0.7948, R^2=0.0392	-12.07, -90.74, 5.84	-12.96, -99.01, 11.23	-12.42, -92.72, 6.61
40-60cm	Y=-1.05x-7.33, R^2=0.1667	-12.38, -90.38, 8.68	-13.63, -101.46, 5.67	-12.33, -92.06, 6.55
60-80cm	Y=-0.32x+2.5781, R^2=0.0167	-11.36, -83.77, 7.09	-13.32, -98.51, 4.17	-12.42, -92.88, 6.45
Northern slope	Y=-1.1944x-7.3393,	-12.33, -90.61, 7.99	-13.07, -98.34, 12.45	-12.05, -91.64, 4.75
Eastern slope	R^2=0.1584	-11.96, -91.15, 4.54	-13.06, -99.61, 6.04	-18.163, -137.38, 7.93
Southern slope	Y=-0.7x-2.2479, R^2=0.0956	-11.31, -85.49, 5.028	-13.77, -103.422, 6.16	-12.17, -89.9, 7.47
Western slope	Y=-0.4337x+0.8866, R^2=0.0543	-12.62, -93.63, 7.36	-12.92, -96.89, 11.99	-12.2,-91.5, 6.15
Grassland	Y=-0.4921x-0.5722, R^2=0.0715	-10.39, -77.66, 5.45	-12.13, -89.28, 27.06	-9.62, -71.87, 5.13
Meadow	Y=-0.6067x+0.8133, R^2=0.0615	-12.15, -90.36, 6.87	-13.45, -101.94, 5.25	-12.82, -96.56, 6.02
Forest	Y=-1.4013x-12.706, R^2=0.2283	-13.6,-103.66, 5.1	-13.66, -103.16, 5.24	-15.82, -118.98, 7.60

Table.2 The LEL for soil waters in study region

	EL/ R^2 in June	EL/ R^2 in August	EL/ R^2 in September
2900-3500	$\delta 2H=5.7\delta^{18}O-21.18$ $R^2=0.90$	$\delta 2H=6.8\delta^{18}O-7.83$ $R^2=0.95$	$\delta 2H=7.43\delta^{18}O-2.59$ R2=0.98
3500-4000	$\delta^2H=7.58\delta^{18}O-1.34$ $R^2=0.83$	$\delta^2H=6.48\delta^{18}O-16.54$ $R^2=0.9$	$\delta^2H=7.67\delta^{18}O+3.1$ $R^2=0.97$
4000-4500	$\delta^2H=7.27\delta^{18}O-3.46$ $R^2=0.88$	$\delta^2H=6.5\delta^{18}O-15.09$ $R^2=0.93$	$\delta^2H=7.04\delta^{18}O-6.8$ $R^2=0.96$
4500-5100	$\delta^2H=6.05\delta^{18}O-12.4$ $R^2=0.85$	$\delta^2H=6.69\delta^{18}O-8.68$ $R^2=0.93$	$\delta^2H=6.9\delta^{18}O-6.6$ $R^2=0.87$
grassland	$\delta^2H=6.4\delta^{18}O-11.07$ $R^2=0.83$	$\delta^2H=6.62\delta^{18}O-9.07$ $R^2=0.96$	$\delta^2H=6.44\delta^{18}O-9.91$ $R^2=0.92$
meadow	$\delta^2H=6.55\delta^{18}O-10.67$ $R^2=0.84$	$\delta^2H=6.4\delta^{18}O-15.83$ $R^2=0.90$	$\delta^2H=7.14\delta^{18}O-5.05$ $R^2=0.95$
forest	$\delta^2H=6.97\delta^{18}O-8.9$ $R^2=0.73$	$\delta^2H=7.61\delta^{18}O+0.85$ $R^2=0.97$	$\delta^2H=7.46\delta^{18}O-0.97$ $R^2=0.97$
Northern slope	$\delta^2H=7.33\delta^{18}O-0.22$ $R^2=0.84$	$\delta^2H=6.8\delta^{18}O-9.46$ $R^2=0.91$	$\delta^2H=6.86\delta^{18}O-8.95$ $R^2=0.90$
Eastern slope	$\delta^2H=6.92\delta^{18}O-8.38$ $R^2=0.88$	$\delta^2H=6.33\delta^{18}O-16.9$ $R^2=0.89$	$\delta^2H=6.78\delta^{18}O-14.253$ $R^2=0.93$
Southern slope	$\delta^2H=6.44\delta^{18}O-13.22$ $R^2=0.81$	$\delta^2H=6.84\delta^{18}O-9.28$ $R^2=0.96$	$\delta^2H=6.8\delta^{18}O-7.0$ $R^2=0.93$
Western slope	$\delta^2H=6.14\delta^{18}O-16.14$ $R^2=0.91$	$\delta^2H=6.46\delta^{18}O-13.4$ $R^2=0.92$	$\delta^2H=7.33\delta^{18}O-2.07$ $R^2=0.98$

11. Line 300-301: Change “Again it becomes higher in September, while it exhibits an opposite trend for d-excess (Table.1).” to “It again becomes higher in September, while it exhibits an opposite trend for d-excess (Table.1).”

Thank you very much for your comments. We have Changed “Again it becomes higher in September, while it exhibits an opposite trend for d-excess (Table.1).” to “It again becomes higher in September, while it exhibits an opposite trend for d-excess (Table.1).”

12. Line 319: Give the terms “LWML” and “LEL” a definition when they first appeared

Thank you very much for your comments. “LWML” and “LEL” were defined on line 291: “In addition, the global meteoric water line (GMWL), local meteoric water lines (LMWLs), and evaporation line (LEL) have been used to analyze the relationship between soil water and other waters in the TRHR.”

13. Line 323-325 Change “The slope and intercept of LEL for the 0–40 cm layer were the lowest during the heavy ablation period” to “The slope and intercept of LEL for the 0–40 cm layer was the lowest during the heavy ablation period”

Thank you very much for your comments. We have Changed “The slope and intercept of LEL for the 0–40 cm layer were the lowest during the heavy ablation period” to “The slope and intercept of LEL for the 0–40 cm layer was the lowest during the heavy ablation period”

14. Line 354: “snow meltwater” or “glacier snow meltwater”?

Thank you very much for your comments. It is “glacier and snow meltwater”. We have modified it.

15. Line 354: “supra-permafrost” or “supra-permafrost water”?

Thank you very much for your comments. It is supra-permafrost water. We have modified it.

16. Line 437: please change “Based on the calculation, precipitation, ground ice, and snow meltwater account for approximately 72%, 20%, and 8% of soil water, respectively” to “Based on the calculation, precipitation, ground ice water, and glacier snow meltwater account for approximately 72%, 20%, and 8% of soil water, respectively”

Thank you very much for your comments. We have Changed “Based on the calculation, precipitation, ground ice, and snow meltwater account for approximately 72%, 20%, and 8% of soil water, respectively” to “Based on the calculation, precipitation, ground ice water, and glacier snow meltwater account for approximately 72%, 20%, and 8% of soil water, respectively”

17. Please make sure the citation appeared in the article are consistent with those listed in the Reference part.

Thank you very much for your comments. We have checked all the references to make sure that the manuscript is consistent with those listed

18. The conclusion part is too long. I recommend rephrase this paragraph and state the importance of the findings.

Thank you very much for your comments. We will revise the conclusions as suggested.

19. Please refer to the journal requirements to modify the format of the references

Thank you very much for your comments. We will carefully modify the format of the references according to the requirements of the journal.

20. English writing: The English writing of this manuscript should be improved thoroughly. The issues include the choice of word, grammar issue and the structure of sentence.

Thank you very much for your comments. We will spend a great deal of time for improving the language and general presentation again.