This document-response refers to the following comment from Reviewer #2:

"Given the high variability between regional model outputs and the historical series for each model which indicates considerable uncertainties (as described in the manuscript) the manuscript's use of the Linear Scaling Method (LSM) for bias correction of climate model outputs presents notable limitations.
LSM's simplistic approach assumes stationarity and may inadequately represent extreme weather events and the intricate interactions between various climatic factors. The effectiveness and limitations of the bias correction methods used need a more critical examination."

The Quantile-mapping adjusts the quantiles of the model data distribution to match those of the observed data distribution, potentially providing a more nuanced correction. The observed differences in evaporation patterns between dry (may to dec) and rainy (jan to apr) seasons could be related to the inherent variability of the climate system. In the rainy season, factors such as increased cloud cover, humidity, and precipitation may influence evaporation rates differently compared to the dry season. Quantile-mapping might better capture these seasonal variations compared to Linear Scaling, resulting in more pronounced differences in evaporation patterns between seasons. The differences could also be related to how well each method handles extreme climatic conditions. Quantile-mapping may be more effective at preserving extreme values or capturing non-linear relationships between variables, potentially leading to different evaporation patterns during periods of climatic extremes.

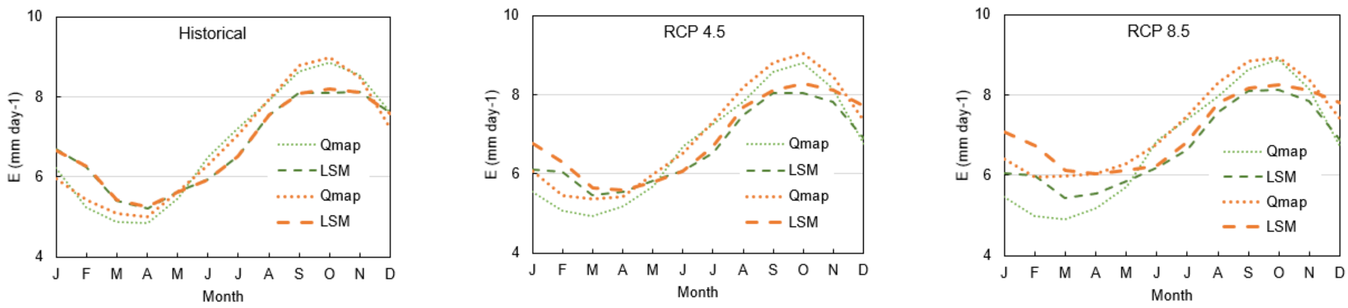

Fig 1: Monthly evaporation after bias correction using two methods. The **orange** lines refer to the Eta-CanESM-2 model and the **green** lines refer to the Eta-MIROC5.

The difference (see Tables A and B) is greater in the scenarios from the CanESM-2 model (C4 and C8). The bias correction made after reviewer #2's suggestion (with the more sophisticated Quantile-Mapping (QMP) method), shows an increase of around 1% in the results compared to the previous method (LSM). The scenarios from the Eta-MIROC5 model (M4 and M8) show no more than a 0.4% difference, but still a decrease pattern in the evaporation rate.

A) Annual evaporation after the **Linear Scaling** method

	Eta-CanESM2			**Eta-MIROC5**		
	Historical	**C4**	**C8**	**Historical**	**M4**	**M8**
Average	2472.4	2520.1	2597.0	2469.9	2434.2	2444.6
Change %		+1.9%	+5.0%		-1.4%	-1.0%

B) Annual evaporation after the **Quantile-Mapping** method

	Eta-CanESM2			**Eta-MIROC5**		
	Historical	**C4**	**C8**	**Historical**	**M4**	**M8**
Average	2493.2	2559.2	2644.1	2495.9	2451.5	2463.4
Change %		+2.7%	+6.1%		-1.8%	-1.3%

It is noticeable that the behaviour of evaporation after bias correction with the QMP does not differ much from what was obtained earlier in the investigation: there is a scenario of higher increase in the evaporation rate (C8), two scenarios of reduction (M4 and M8) and a scenario of stabilisation (C4). Although the results do not differ substantially and we have demonstrated that the LSM method is adequate to correct the bias of the data from our study area, we will opt for the QMP method in the final manuscript, given that the impact of these changes on future water availability remains to be assessed, since the effects of the evaporation rate are not linear (as described in the paper in the section covering elasticity). In addition, the impact on evaporation shall be quantitatively estimated using Mann-Kendall trend analysis.

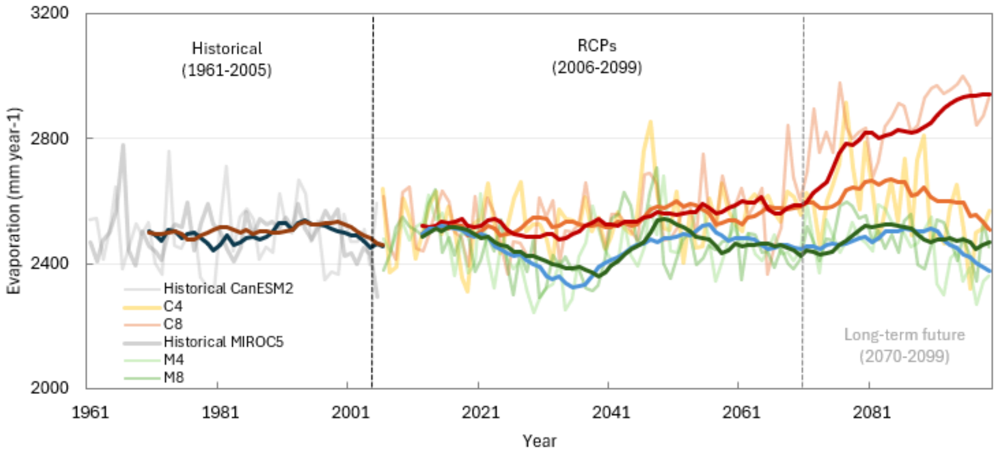

Fig 2: Annual evaporation after four scenarios of climate change and bias-correction using the Quantile-mapping method. Bold lines are 10-year moving average.