Response to feedback from Anonymous Referee #1, #3, and the editor

We would like to thank and express our appreciation to the positive feedback from the reviewers and the editor to our revised manuscript that we have submitted March 30, 2022. Below, we would like to respond to the remaining point of suggestion for revision raised by anonymous referee #3 (comment of the referee in **black**, our response in **blue**). It includes references in **green** to where changes have been made in the newly revised manuscript.

Comment by anonymous referee #3
The authors have mostly addressed my comments and questions; however, I am not convinced with the answer to my question about the lack of air temperature in the analysis of section 3.4.
The authors think that the effect of air temperature is included in the vertical vapor pressure gradient. This is correct but air temperature is a key parameter directly affecting sensible heat exchanges of the surface with overlying air and thus surface temperature and energy balance of the water body. I would not thus limit the role of air temperature to VPD and vertical gradients.

Additional comment by editor:
Referee #3 pointed out one remaining issue about not including air temperature in the analysis and I agree with him that your explanation is not clear enough. It would be good to clarify to the reader that the fundamental driver for evaporation is considered to be the water-air vapour pressure gradient, whereas air temperature affects the water temperature through sensible heat flux, and hence affects the evaporation indirectly through its effect on the vapour pressure gradient. Since VPD is a function of vapour pressure and air temperature, the reader may wonder why it was included as a separate variable in addition to the vapour pressure gradient (P8L19), while air temperature was not.

In this study we have not included air temperature as a separate variable in the regression analysis. Air temperature affects the surface temperature through the sensible heat flux. In turn, the surface temperature affects the vapour pressure gradient and thus evaporation. For a land surface we expect that air temperature indeed affects surface temperature in a direct way through the sensible heat flux. However, due to the large thermal buffer we expect that for a water body there is a less direct coupling between sensible heat flux and latent heat fluxes at short timescales, meaning that there is little direct influence of air temperature on open water evaporation. For instance, if you would have very dry air that has the exact same temperature as the water temperature evaporation would take place, but the sensible heat flux would be zero. Additionally, variables that are included in the regression analysis should ideally be as different as possible. In this case, air temperature correlates to an extent with both the surface temperature and VPD. Therefore we chose to not include air temperature additional to the water temperature and VPD.

We have changed/added the following texts in the manuscript:

P8.L21: *"Air temperature was not included as a separate variable in the regression analysis. Air temperature affects the surface temperature through the sensible heat flux. In turn, the surface temperature affects the vapour pressure gradient and thus evaporation. For a land surface we expect that air temperature indeed affects surface temperature in a direct way through the sensible heat flux. However, due to the large thermal buffer we expect that for a water body there is a less direct coupling between the sensible heat flux and latent heat flux at short timescales. Additionally, variables that are included in the regression analysis should ideally be as different as possible. Here, air temperature correlates to an extent with both the surface temperature and VPD. Therefore we chose to not include air temperature additional to the water temperature and VPD."*

P14.L9: *"As explained in Section 2.5 air temperature was not included in the regression analysis because we expect that the large thermal buffer of a water body results in a less direct coupling between the sensible heat flux and the latent heat flux at short timescales."*