

Thank you for taking up the comments that were made to a previous version of this manuscript. The methods that were used are now clearly presented so that the results can be interpreted better by the readers.

Concerning the  $R^2$ , you used the definition that quantifies the linear relation between mEC and pEC. This is however different from the more general definition of  $R^2$  that quantifies the 1:1 relation between mEC and pEC and that is defined as follows:

$$R^2 = 1 - \frac{\sum_i (mEC_i - pEC_i)^2}{\sum_i (pEC_i - \overline{pEC})^2}$$

You also included statistics for parts of the dataset:  $R^2$  per location, soil layer, and measurement time. To some extent, these statistics better unravel the impact of time and location, but, not yet entirely. For location, there is still variation with depth and for layer, there is still variation with location next to the variation over time. I understand that this is done so as to have sufficient data points to calculate statistics. If only the time effect is to be represented, you could look at the relation between the deviations from the mean over time in a certain layer and location and calculate the MSE between the predicted and observed deviations or the  $R^2$  between mean and observed deviations. The variance of these deviations would give an impression about the temporal variability of the ECE and how it compares with the spatial variability.

Ln 240: add mS after 128.08

Ln 360: reformulate: At location 4, an increment of salinity along the entire profile is visible during the dry season.

Ln 370: 'This validation resulted in lower prediction ability than that previously resulting from cross-validation' Add maybe the RMSE from the previous cross validation as comparison.