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Discussions

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Interactive comment on "Determining the variation of soil properties in the Batumi Delta" *by* Bülent Turgut and Merve Ateş

Bülent Turgut and Merve Ateş

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Thank you very much for your kind comments on our manuscript. The following are our responses to your comments:

The main purpose of this study was to compare areas with different formation times in terms of some basic soil properties. For this reason the detailed analysis of the relationships between the properties studied has not been done because it takes up a lot of space. However, some analyzes that you recommended have been used and added the results to the manuscript.

C1: Are the significant relationships among between soil basic properties and soil water retention statistically significantly different in different geomorphological units? Are there significant correlations between the same variables in different units? Which

unit-specific processes might impose, enhance, or weaken such correlations?

R1: The relationships between the water retention and other properties were analyzed separately in each sampling area and graphs showing the differences were formed (Figure 3 and Figure 4).

C2: Can standard multidimensional classification methods group soil samples according the geomorphological units where they were taken? Which soil variables are most suitable for grouping soil samples into groups corresponding to the geomorphological positions?

R2: Yes of course the standard multidimensional classification methods (for example cluster analysis) could be used. But, it is thought that it would be better not to give these analysis results because the analysis results and graphical representations would distract the reader from the point of view and the main purpose of the article.

C3: What are the factors/variables controlling the available water content that is an important variable in crop production?

R3: Factor analysis was performed to determine the influencing factors on AS, FC and WP.

C4: Does the accuracy of water retention estimation depend on the landscape position? Will it be beneficial to use the multiple regression? How about logistic regression?

R4: Since the basic properties such as slope and aspect that define the landscape position were homogeneous in the study area, it is thought that the accuracy of water retention estimation do not depend on the landscape position.

C5: A very high water contents at -1500 kPa were observed. What is special about these samples? What is their origin?

R5: It is observed that the organic matter content was also very high at points where the WP value was too high.

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