

General comments:

Interesting and original dataset produced with a promising land streamer prototype for rapid combined acquisitions of ERT and MASW data. The data cover a 4km case study along a Po river earth levee. The acquisition methodology and the geophysical dataset are well documented. An example of a very preliminary analysis of these data is also included. Very useful dataset made available to the scientific community for evaluating the methodology and for developing and testing customized analysis procedures or data processing techniques.

Thank you for the positive opinion about the overall work.

Specific comments:

Geophysical data are sensitive to meteorological conditions. And the state of the levee is affected by rainfalls. I did not find any indication about the weather conditions during the week of the survey activities. I suggest to include the meteorological data (temperatures and rainfalls) from one month before the date of the survey to the last day of the survey using the meteo stations closer to the survey area.

Thank you for the precious observation. We have now included in a specific paragraph the available meteorological data during the period preceding and following the geophysical surveys and also briefly commented them.

Introduction

Lines 87-89: I suggest moving the reference to Arosio et al. 2017 into the group of references concerning the detection of seepages and leakage problems since this work shows nice examples of this ERT application, while I suggest the following reference from the same research team for the group about ERT use for monitoring water saturation, since this work provides a better description of the prototype monitoring system named GRETA specifically designed for that.

Tresoldi, G., Hojat, A., Zanzi, L., 2020, G.RE.T.A. installations for real-time monitoring of irrigation dams and canals, Procedia Environmental Science, Engineering and Management 7 (2) 271-276.

Thank you for the interesting paper suggestion, we have included it in the reference list and performed the suggested modification.

Line 116: There is a more recent and mature work from Hojat about how to deal with 3D effects produced by the levee geometry. I suggest citing this in substitution of Hojat et al. 2019, which is older and an expanded abstract rather than a journal paper.

Hojat, A., 2024. An iterative 3D correction plus 2D inversion procedure to remove 3D effects from 2D ERT data along embankments, Sensors, 24(12), 3759, doi: doi.org/10.3390/s24123759.

Thank you for the interesting paper suggestion, we have included it in the reference list.

Section 2

Figure 1: A scale might be useful. Or indicate the length of the yellow line (4km?).

Thank you for the observation, the length of the yellow survey line was indicated in the figure caption.

Section 3.1

Figure 7: I presume that inverted resistivities are shown in these images but I suggest to specify it in the caption and/or in the text.

Yes, these data refer to inverted resistivities. A clarification was added both in the figure caption and in the text.

Lines 309-312: This statement should be expanded and better described. The point is not very clear.

The statement was reformulated, hope it result clearer now.

Section 4.1

Figure 10: Black dots are too big and they hide the color of the pixel. I suggest using either smaller symbols or circles rather than black filled circles.

Thank you for the suggestion, the figure was modified as suggested and improved with a zoomed view in order to be more visible.

Technical corrections

Section 2

Correct the title “.....TOPORAPHIC...”

Thank you for noticing the typo, it was corrected.

Section 2.1

Figure 3: Eastern and western attributes in the caption are probably inverted.

Section 3.1

Figure 8: Western and Eastern indications are probably inverted both in figure caption and text (Line 332).

Thank you for noticing the typo, geographical indications were corrected.

Line 315: I suggest changing “above number 49” into “beyond 49 m from the source”.

Corrected.

References

The alphabetical order has to be checked. Some papers at the beginning of the list should be moved down after the works from authors with names starting with “A”. The position of the publication year is not homogeneous: sometimes after the author list, sometimes at the end or elsewhere. References to Borgatti et al. 2017 and to Busato et al. 2016 are duplicated. The reference to Al-Fares 2014 is missing in the reference list. The reference to the Brodic et al. paper (2015) is missing in the manuscript text.

Thank you for double checking, the alphabetical order was modified as suggested, the publication year position was uniformed, the missing and duplicated references were corrected and all the references were double checked.