

Interactive comment on “Satellite data interpretation of causes and controls on groundwater-seawater flow directions, Merseyside, UK: implications for assessing saline intrusions” by S. Mukherjee et al.

A. Bronstert (Editor)

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Dear authors,

Sorry, but your reply on my editorial comment does not give the answers to the questions or concerns states by reviewer #2, which I fully support.

For your convenience, I summarize again the main concerns:

- the validity of the remotely sensed data (SPOT) values to be used as a signal for different vegetation cover, which is assumed to stand for different fractions of clay and sand.

- The paper does NOT really explain the findings which are stated in the text of chapter 5, e.g. where and how to derive the faults from the remotely sensed data. The cited figures 6 and 7 do not give an explanation. What does the inset at Fig 7 show us and at what location ? (you can not argue: just “look into scientific journals” or “go through the software” !!). The question is how valid are your findings (different fractions of sand and clay derived from SPOT) and what are the uncertainties.

- The statement “above the fault zones, it is likely that the reduced permeability of the underlying rock has led to locally enhanced soil moisture since the water cannot drain away as quickly” sounds logical, but one should prove it by ground truth.

- Groundtruthing both, vegetation data and soil moisture, would be the best, vegetation only should be a minimum requirement.

- You state that “Faults could be identified in, and directly adjacent to, the intertidal region using the high pass filter of ERDAS software in the SPOT data”. But, again, one should add information about reliability/uncertainty of the procedure to identify faults directly adjacent to, the intertidal region

- Further below an equation is given to relate NIR to clay-percentage, possibly based on a regression. Can you show these data in a graph or so ?

So either you can improve the paper as suggested or I have to keep my evaluation that the paper should not be published in the form. By the way: reviewer #2 is VERY wellknown and has published in the highest ranked journal of this field.

Interactive comment on Hydrology and Earth System Sciences Discussions, 2, 887, 2005.

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