

Hydrol. Earth Syst. Sci. Discuss., 9, C3517–C3518, 2012

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HESSD

9, C3517–C3518, 2012

Interactive
Comment

***Interactive comment on* “Quantifying freshwater resource in coastal barriers: the joint use of transient electromagnetic and magnetic resonance soundings” by J.-M. Vouillamoz et al.**

J.-M. Vouillamoz et al.

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We thank the reviewer for his comments that will be helpful for improving our manuscript.

1/ General comments.

We agree with your comments: our paper aims at presenting an integrated approach to both the geophysical and the hydrogeological communities for quantifying groundwater resources in coastal area. Because of the great need to improve the knowledge and the management of groundwater resources in developing countries, we intended to

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develop an approach based on available and affordable ready-to-use tools. As you noticed, our approach is based on a more comprehensive joint-use of geophysics and hydrology (including the promising MRS method and various time lapse measurements) than previous published studies.

2/ Technical corrections.

We agree with all your suggestions and we will correct the manuscript accordingly.

* Everywhere: consider using CAPITAL letters for N,S,W E or not, but do not change.
-> OK

* p5263, L26:the relationships between geophysical parameter and hydrogeological properties are usually site specific and valid only [for] "inside" their calibration range -> OK

* p5264, L4: complimentary -> complementary -> OK

* p5268, L11: (TDEM), has been extensively used in coastal areas to map sea water intrusion be-cause of its high sensitivity to electrically conductive target "such" as saline water sat-urated layers -> OK

* p5270, L23: sea water [ingresses] "invades" into the river up to about 12 km inland
-> OK

* p5272, L15: a 5 resistivity layers "model" -> OK

* p5274, L12: Total porosity [less] "minus" bound water -> OK

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 9, 5261, 2012.

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