

## ***Interactive comment on “Comparison of empirical models with intensively observed data for prediction salt intrusion in the Sumjin River estuary, Korea” by D. C. Shaha and Y.-K. Cho***

**HHG Savenije (Editor)**

h.h.g.savenije@tudelft.nl

Received and published: 28 April 2009

Review of Shaha and Cho paper.

This paper is interesting, but far from publishable. I agree with the detailed observations by both editors. I shall add a few myself. I also attach an annotated pdf as a supplement, which the authors may use for corrections of the text.

1. What is said in lines 18-20 of page 1881, is not true. A combination of a hydraulic model and a salt balance model does not give a predictive model that generates salt intrusion curves for different boundary conditions (river discharge and tide). What is needed as well is a predictive equation for the dispersion, which provides estimates for  
C442

the dispersion ( $D$ ) as a function of space, time, river discharge and tide. The Van der Burgh equation ( $dD/dx = -K Qf/A$ ) is such an equation combined with equations (3) and (4) presented in the paper.

2. In lines 8-15 of page 1889 there is a very confusing story about another linear regression. It is not at all clear which regression that is: are you citing somebody else's work, then give the reference; does it relate to the work presented in this paper, then be clearer and say who did it and where this relationship can be found. The subsequent mentioning of Uncles and Stephens does not make it easier to understand what the authors intend to say.

3. In general the text is poorly written. A major re-work of the text is necessary. I have attached an annotated copy of the first draft that I received, which the authors can use to make corrections.

4. If the authors would like to submit a revised paper, then major work is required to bring the paper up to the required level. Make sure you ask the help of an experienced English editor before submitting a revised version.

Please also note the Supplement to this comment.

---

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 6, 1879, 2009.