Hydrology and Earth System Sciences Discussions

Interactive comment on "Structured hydrological analysis for targeting fallow evaporation toimprove water productivity at the irrigation system level" *by* S. Khan et al.

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Received and published: 3 April 2007

[a4paper,twoside,10pt]article

Reviewers comments on the article **"Structured hydrological analysis for targeting fallow evaporation to improve water productivity at the irrigation system level"** by **S. Khan, M. Hafeez, T. Rana, and S. Mushtaq (MS-NR: hessd-2007-0016)**

General comments

The paper describes a lot of scientific work and shows the possibility of reducing water

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loss and the risk of salinization by taking simple measures. Its readability is good, however some corrections should be made to improve it. Figures are clear but should be printed in color.

Specific comments

- In the paper you take a certain horizontal grid (500 x 500 m). What would happen if you increase the grid size to 1000 x 1000 m? How much water can you save then? And if you decrease it to 250 m x 250 m?

- You take one satellite image for winter crops and one image for summer crops. How certain are you these crops won't change in the simulation period?

- In my opinion the satellite images only present momentary data. You apply these data in combination with SEBAL to obtain the actual evaporation from a plot. How accurate are the results of these data? How will they influence the results if they have an uncertainty of say 10%? Or 20%?

Technical corrections

- Please reconsider the parts "Materials and methods" and "Results and discussions". The latter contains text that should be moved to Materials and Methods.

- You use a lot of abbreviations that I don't see used after they are defined. Do not bother your audience with these abbreviations any more than strictly necessary.

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Table 1: Minor corrections

Page	Line	It says	It should say
328	22	entire model	entire system
328	28	LIS system	LIS
329	25	hereafter known as "ARL"	called "ARL" hereafter
329	26	seepage loss	percolation loss
329	27	whole	entire
329	28	hereafter known as "BRL"	called "BRL" hereafter
331	12	rang	range
331	13	the frost-free	the number of frost-free
331	14	Mean	The mean
331	15	are	is
331	27		Describe precipitation data here
332	8	to know whether how much water	to gain insight in the volume of water
332	11	of	of the
332	13-20		Move these lines to page 331. Add the range of the values for both precipitation and evapotranspiration.
333	4		Delete this sentence as it is repeated two lines below.
334	10	The ISODATA	An ISODATA
334	19	through land	through the land
335	6	thermodynamically based model	model based on thermodaynamics
336	6	evaporation)	evaporation (W/m2))
336	16	mm/day	mm/d
337	9	said	considered
339	9	area has	area in LIS has
339	15	MCM .	MCM
339	16	as summarized in Table 3	(Table 3)
342	6	map and ETs map	map