

***Interactive comment on “Unsupervised  
classification of saturated areas using a time  
series of remotely sensed images” by  
D. A. DeAlwis et al.***

**Anonymous Referee #2**

Received and published: 3 August 2007

I believe this paper is of scientific merit and contributes to the existing literature. My review comments agree fully with those of reviewer #1; in addition I offer the following technical comments.

Pg 1665: connection between lines 10-11 and 12-13 is not clear. It seems implied that the remotely sensed observations capture the expanding and contracting of the HAAs. Please explain/clarify connection.

The clarification provided on pg 1669 ln4-6 is needed in the objectives paragraph of section 1.

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The use and discussion of NDVI seems to lack continuity. It is mentioned and defined in sections 2.3 and 2.4 and otherwise appears only in one paragraph just before section 3.1.

Please define LAI (unless I missed a mention of it before pg 1667 ln 20). To broaden reader understanding, consider a defining phrase for “pixels” (pg 1667 ln 22). Perhaps “aggregating pixels of landuse maps into” Also it would be helpful to define “unsupervised clustering,” “producer accuracy,” and “user accuracy.”

The writing is frequently repetitious or circular. Making the writing more straightforward and yet not redundant would greatly assist the reader in focusing on the research and not its presentation. For example: pg 1668 ln 11-13 is a bit circular in reasoning; pg 1671 ln 10-14 is redundant; pg 1672 ln 15-17 are somewhat redundant with previous text and ln 12-14 more logically follow “is exceeded.” on ln 6, I think. Why the mention of TOPMODEL on pg 1673? Is it necessary in understanding the SMDR model for this study?

Manuscript needs to be reviewed carefully for proper comma usage, consistent use of tense, and intended word choice. In some cases the grammar, word choice, or punctuation makes the intended content unclear. For example, on pg 1665 ln 18-22: Is the signal separated from the soil (signal?) or is it difficult to distinguish between the two types of signals emitted by saturated and unsaturated soils; on pg 1669 ln 25: which images were used? On pg 1673 ln 7: does “in the landscape” refer to Town Brook specifically or landscape in general?

In other cases it just unnecessarily distracting and “sloppy,” as mentioned by reviewer # 1. For example, on pg 1665 ln 16: write out “centimeter”; ln 23: “required” might be a better word choice than “known”; ln 25: unbold “s” in “soil”; ln 25-26: consider “are not adequate/appropriate/sufficient” to replace “cannot be used”; pg 1675 ln 28: replace “become much less” with “decreased substantially.” Also, a large quantity of unnecessary “the”s and extra phrasing can be removed throughout the manuscript:

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for example, “sense greenness” and “affect growth” on pg 1665 ln 28-29; “one disadvantage” on pg 166 ln 6; delete “among others” on pg 1666 ln 10. On pg 1668 ln 8 change “of the runoff and thus pollutants” to “of runoff and water-borne pollutants”. On pg 1669 ln 5 consider “where flatter slopes reduce the hydraulic gradient.” Consistent use of split words and hyphenation is also important. For example: “thirty year” or “30 year” (pg 1669 ln 20-25); “land cover” or “landcover”; “inter-flow” or “interflow.” make scientific publications freely accessible.

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Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 4, 1663, 2007.

**HESSD**

4, S675–S677, 2007

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