

***Interactive comment on “HESS Opinions  
“Crash tests for a standardized evaluation of  
hydrological models”” by V. Andréassian et al.***

**V. Andréassian et al.**

vazken.andreassian@cemagref.fr

Received and published: 4 August 2009

Dear colleague,

Thank you for your very honest review. We realize that we will not be able to convince you that the approach we advocate is the right one. But let us be frank: we are not sure that there is a "right one". In our paper, we just wanted to develop our ideas on what we believe is necessary to keep progressing in hydrological modeling. We understand that it does not seem you to be a "convincing solution": indeed, we consider the crash-test approach to be just necessary and in no way sufficient.

You did write that "the fact that cars are built to satisfy many needs makes them often

C1736

over-accessorized and unnecessarily expensive". We agree with you to a large extent, especially when you rightly point out that the excess lies in the accessories. The opinion we have precisely be trying to promote is that a model should have a generic power in order to hold some robustness, as well as some extrapolation capacity. But as far as its 'customization' is concerned (i.e. with making generic model elements catchment specific), accessories are indeed needed: "full options" models/cars can be a good selling argument but as you rightly mention it, they may well result in a poorly efficient and unnecessarily expensive solution. But since accessories will be used, we do believe that it can be useful to check that they do not interact numerically with the base elements. To that extent, they should probably still be included in some way in the crash-test, in order to check that they do not turn the complete model "unsafe" or "unstable".

Also, we believe that in hydrology, developing a generic, robust modeling solution could contribute to reduce the costs (very often, modelers consider that they need to start from scratch when working on a new catchment).

---

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 6, 3669, 2009.

C1737