Hydrol. Earth Syst. Sci. Discuss., 10, C4617–C4619, 2013
www.hydrol-earth-syst-sci-discuss.net/10/C4617/2013/

Hydrology and Earth System Sciences
Discussions

Interactive comment on "Ensemble projections of future streamflow droughts in Europe" *by* G. Forzieri et al.

Anonymous Referee #1

Received and published: 3 September 2013

This is a nice study dealing with the evolution of lowflows in Europe until the end of the century. I think this topic is very important as water scarcity is projected to aggravate with climate warming. Therefore, an accurate assessment of temporal and spatial patterns of the respective changes is of crucial importance to local decision makers. I especially like this study as it also assesses several sources of uncertainties of the lowflow projections and hence their robustness, which is also a critical information for decision makers.

General comments:

The paper needs only minor revisions.

It is nicely written and well structured. The presentation of the results is very clear and easy to follow and to understand.

Specific comments:

page 10720 line 3: change "global change" to "climate change" line 23: remove "virtually" –> Droughts (if defined as *comparatively* dry conditions can occur everywhere) lines 24-26: mention increased ET as another potential cause of droughts

page 10727 lines 17-18: this is an important assumption, since I could imagine that during dry periods (weeks-months) when water availablity is low anyway, the demand may increase even stronger than on the annual average –> this would mean the water scarcity may be even more intensified by human water use, especially during dry conditions

page 10734 lines 1-3: Please explain.

Would the hydrological model perform similarly well if plain daily streamflows would be considered instead of 7 day average minimum flows?

page 10740 line 14: replace "more rare" with "extreme" lines 15-19: I cannot follow this argumentation. (I find the explanation on page 10744 lines 4-11 easier to understand)

page 10745 line 14: replace "Balkans" with "Balkan"

page 10749 line 6-7: why 60-38% instead of 38-60%?

page 10750 line 5: replace "southern most" with "southernmost"

Figure 1: Is there no water management in the considered catchments? Or do you account for this in the model to achieve such good agreement with observations?

Figures 9&13: replace "80s" with "2080s"
