In this paper a runoff evaluation of a global vegetation model using different observational datasets is presented. I thank two reviewers for revising this manuscript and providing many valuable comments. I also thank the authors for their detailed reply.

Dieter Gerten raises 4 main area of concerns, centering around the quality of the science presented and the depth of the analysis. Reviewer #2 major comments are very similar, however the reviewer also points out points out that s/he recommends the manuscript to be published as it is a well written manuscript contributing to the evaluation of the LPX model. The authors reply indicates that significant revisions have been undertaken to address the reviewers concerns.

The reviewers have been split about whether the paper can be accepted in its current state, with one reviewer suggesting technical corrections and another major revisions. I decided to give this paper major revisions, after evaluating the paper myself and given the fact that both reviewers judged the scientific quality as fair.

Florian Pappenberger

Ratings:

1) Scientific Significance
Does the manuscript represent a substantial contribution to scientific progress within the scope of this journal (substantial new concepts, ideas, methods, or data)?
0xExcellent   2xGood   0xFair   0xPoor

2) Scientific Quality
Are the scientific approach and applied methods valid? Are the results discussed in an appropriate and balanced way (consideration of related work, including appropriate references)?
0xExcellent   0xGood   2xFair   0xPoor

3) Presentation Quality
Are the scientific results and conclusions presented in a clear, concise, and well structured way (number and quality of figures/tables, appropriate use of English language)?
0xExcellent   1xGood   1xFair   0xPoor

For final publication, the manuscript should be:
0xaccepted as is
1x accepted subject to technical corrections
0xaccepted subject to minor revisions
1x reconsidered after major revisions
0xrejected