Pereira et al describe the extension of an existing land surface model ED2 with a river routing scheme which, results show, improves the simulation of river flows for a tributary of the Amazon. With use of global or regional land surface models advancing to the more local scale, often beyond the original scope of the models, better representation of the lateral flows and a better understanding of delays and losses in the surface water section, is essential and relevant.

Unfortunately, it remains unclear what the novel scientific findings are that would make it interesting for others to read this technical note. The river routing linkage is in itself not that novel (as mentioned in the introduction, but then again ignored in the discussion - P15L6), though the redistribution of lateral flows from the land surface model in combination with the number of calibration parameters might set it apart from some other approaches. A comparison with other models – preferably as parts of the results, or else more quantitatively in the discussion - could add necessary depth.

The main finding - a better model fit - is no surprise when adding 5 more calibration parameters. The manuscripts remains vague about what hydrological processes the new 3-way redistribution represent, though, and what the selected parameter values mean. Why does part of the runoff from ED2 become intermediate flow? (is ED2 runoff not calculated well?) Where along the lateral trajectory would or could this occur? What would be realistic 'hydrological' boundaries to parameter values, if they can be defined? How representative are the selected ranges/values for other basins? Would a better representation of surface water processes not also lead to more (or possibly less) losses because of increased (or reduced) evapotranspiration, something not incorporated by this extension? Especially in regions with a very seasonal rainfall pattern this might be an issue. More explanation and discussion on the meaning of parameters and their selected values, would make the results and discussion much more relevant for others dealing with similar issues.

With regard to the improved river flow results; it seems that peaks are moved to the low flows, which actually then show a worse fit, as described on page 14 and shown in figure 6 and figure 9g. Is that an acceptable outcome? I guess this would depend on what the improved model is intended to be used for. The text could be clearer on this.

Overall, because the authors seem to have difficulty defining its main aim and novelty, the paper confuses: In the introduction the "modeling framework that represents changes in inland surface waters (e.g. surface water area and volume)" P4L13-15, is introduced as the novelty, but this is not what is done, as the basic routing scheme does not cover changes in water area and volume of inland surface waters. Please rephrase and don't raise expectations that will not be met. On P3L3-6 a similar 'need' is introduced (hydraulic dynamics, features, inland waters) followed by rather vague reasoning why this is partly not possible. Please delete or make clearer where this leads to. On page 5 three research questions are then presented but they are not being answered. Better leave out or summarize in one sentence, e.g. as an indication of the need for models like this. Then, in the discussion, the authors ignore their own introduction and the fact that there are already various routing schemes applied and tested stating that other models 'typically (have) "no river representation"' as a main reason for this research (P15L6). Please adjust and use consistent reasoning throughout the paper.

Clearly a lot of work has gone into the research and the paper has improved compared to earlier version. Results are quite well represented in graphs and table. If the authors manage to define the main aim of their paper yet more clearly/sharper and discuss their findings better, keeping this aim in mind, the manuscript might add value. Else I guess there is enough opportunity to publish it just as a technical note on the web for those who want to use ED2-R.

Some smaller comments:

P1L27 a verb is missing before 'to hydrological predictions'

P4L5-6 it is unclear to me what this adds to the paper or why it is mentioned

P6L22 this first sentence is not required

P8L3 It is somewhat unclear to me how the 90m SRTM resolution, and flow paths, relate to the ~55km gridcell resolution of the ED2-R model.

P15L22-29 I'm not sure about this. The 6 m soil depth seems a indeed simplification that could have been avoided, but apart from that I wonder how a soil depth of 6 meters would be a mayor issue explaining deviations between simulated and observed flows downstream when subsequently lateral flows are redistributed and residence times are calibrated. This, I assume, would overrule some (or most?) of the effects of a too shallow soil. Exploring such issues further, showing the added value of the routing scheme, would exactly be the kind of work that would make this an interesting scientific paper.

P17L6-8 The 'could' and 'would' in the conclusion paragraph would better fit the discussion.