The authors provide an overview of four statistical methods together with code for the development of proxy reconstructions. I agree with the first reviewer that the paper (and code) provide a valuable contribution to the literature, particularly by making the statistical tools easily accessible and comparing their performance. However, I also share the second reviewer's concerns about the content, presentation, and format of the paper. In particular, the authors need to highlight the value-added of their manuscript compared to existing work already documenting the implementation of existing software packages.

Main Comments

1. Calling R-code a 'computer device' seems strange. Why not release a formal R-package on CRAN? Or alternatively, call it 'software' or just 'R-code'.

2. Please clarify more carefully what the value-added of the paper is. There already exist R-packages (which are used within CliMoRec) that run PCR, Lasso, Elastic Net etc. What additional benefits does CliMoRec provide over the existing packages and their standard implementations? This would be important to highlight for potential users who have to choose between just using e.g. the 'glmnet' package for Elastic Net, vs. CliMoRec.

3. Please provide a bit more detail on important tuning parameters. For example, the section on choosing the penalty terms lambda and alpha (in Elastic Net) is very brief and it is not clear for practitioners whether the particular form of cross-validation employed is generally applicable.

4. More generally, please clarify why the particular model selection procedures are chosen? Why PCR, Elastic Net and Random Forests? There are many other alternatives (see e.g. adaptive Lasso, general-to-specific selection, etc.). The manuscript would benefit from being placed in the wider context of other methods being available as alternatives.

5. CliMoRec appears to use R-code based on existing packages implementing PCR, Lasso, Elastic Net, etc. rather than developing these functions itself. These existing packages have to be cited and credited in the methods sections (such as 'glmnet' in R for elastic net). Not citing the software packages is poor practise and particularly important for a paper that discusses software. Most packages used in CliMoRec have a corresponding *Journal of Statistical Software* (JSS) paper that should be cited.

   For example, 'glmnet' used by the authors (in the first line of code of CliMoRec on Github) is documented in Friedman, Hastie, and Tibshirani (2010) https://www.jstatsoft.org/article/view/v033i01 and should be cited as such.

   If there is no JSS paper available, then the R-packages should be cited through CRAN.

6. On Lasso and Elastic Net: Lasso is not a consistent model selection method with oracle properties, instead, the authors may want to refer readers to the Adaptive Lasso and Elastic Net. See e.g. Zou, H. (2006). The adaptive lasso and its oracle properties. *Journal of the American Statistical Association*, 101(476), 1418-1429., or Zou, H., & Zhang, H. H. (2009). On the adaptive elastic-net with a diverging number of parameters. Annals of statistics, 37(4), 1733.

Minor Comments

1. P14. Line 1: “most simple” replace with “simplest”
2. Section 2.3: the title “Mathematical Formalism” seems strange and not entirely clear.
3. P 13, the sentence “For Enet method” is missing a word, maybe “For *the* Enet method”?