

### **Review of the manuscript esd-2015-33**

The manuscript “Potential impact of climate and socioeconomic changes on future agricultural land use in West Africa” addresses role of climate change and socioeconomic changes for possible future changes in land use in Western Africa. This assessment is conducted using a particular algorithm that considers both societal and physical drivers in the attempt to meet all demand for food with an adequate local/regional supply. Results are presented for the middle of the 21<sup>st</sup> century using climate scenarios from two different sources. These are compared to the current situation.

In my first review of this manuscript I raised several issues that I thought needed some clarification, particularly with regard to model setup and some justifications of assumptions. When reading through the second version of the manuscript, it now became clearer what the model is designed for to do and how it operates to obtain the results. As this paper demonstrates the key traits of a new algorithm, I think this should be the main take-away message of the paper.

The concerns mentioned in the previous review have been addressed and explanations of critical aspects have been added. This improves the quality of the paper as the reader now gets the point what is possible with this model and what isn't. In this form the paper may now be published, provided the editor finds that the comments and suggestions of the other reviewers have also been adequately addressed.