**Biogeosciences
Discussions**

Interactive comment on "Integrating field sampling, spatial statistics and remote sensing to map wetland vegetation in the Pantanal, Brazil" *by* J. Arieira et al.

Anonymous Referee #1

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This is an interesting application of geostatistical methods to map wetland vegetation communities. I think, however, that the title is somewhat misleading. The authors seem to be equating 'spatial statstics' with geostatistics and I suggest "geostatistics" or more specifically 'regression kriging' be added in place of 'spatial statistics'. Another misused term in the paper inolves the authors' treatment of uncertainty– I think they are simply testing accuracy in the first metod (cross-validation), and the simulation example they provide is not clear (has it been used in similar studies?). Also it's difficult to synthsize these results without having some kind of benchmark for comparison purposes. The authors seem to categorize this study as one type of a species distribution model (given their citing of Guisan and Zimmermann and Miller at el), but it's not really the

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same conceptâĂŤSDM are based on relationships between environmental gradients, whereas what the authors describe is more related to image classification applications in remote sensing. Many of the technical methods (particularly on uncertainty) are not clear, and specific details of the technical methods should be justified (for example, why was a specific variogram model used?). I think this paper could be a nice contribution to mapping wetlands methods literature, but I suggest revisions along the lines described above.