

***Interactive comment on “Spatial heterogeneity in mangroves assessed by GeoEye-1 satellite data: a case-study in Zhanjiang Mangrove National Nature Reserve (ZMNR), China” by K. Leempoel et al.***

**Anonymous Referee #1**

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Comments:

Overall the effort is very good however methodology section needs to be strengthened. In particular the paper talks about Corona, Landsat, and GeoEye analysis but detailed methods of analyzing these diverse data are not given. For example, How did they handle the issue of multiple resolution? What are the pre-processing steps before image classification?

Besides, I have the following comments.

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1. Title is almost misleading, focussed on GeoEye-1 only. Suggest revise it to reflect the whole study.
2. Define clear objectives in the abstract.
3. Paddy and rice is mentioned, be consistent
4. Page 2593, Line 18: define what is tall and what is small?
5. Page 2594, Line 21, consider reviewing the paper Myint, S. W., C. P. Giri, L. Wang, Z. Zhu, and S. Gillette. 2008. Identifying mangrove species and their surrounding land use and land cover classes using an object oriented approach with a lacunarity spatial measure, *GIScience and Remote Sensing*, 45(2), 188-208
6. Page 2596, line 5 and 8: avoid using two "In addition"
7. To my surprise, the resolution of Landsat is wrongly stated.
8. Explain how 113 GCPs were selected.
9. Page 2601 Line 1, describe 2-22 ha?
10. Page 2601 Line 9: the statement that "corona image did not support both supervised and unsupervised classification" is wrong unless the authors got the data in hardcopy form. Digital corona data are available. In any case, explain.
11. In Fig 2. change the color of mangrove (1967) and add mangrove in 2000.

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