

## ***Interactive comment on “Mangroves in peril: unprecedented degradation rates of peri-urban mangroves in Kenya” by J. O. Bosire et al.***

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Q: MAJOR COMMENTS: Peri-urban mangrove has to be defined. Peri-mangrove in Kenya can has the same definition of others peri-urban mangrove areas? How distant mangroves sites are located from the urban areas? How about Chaania and Miritini sites? They are very populated areas? How many? They are really close to mangrove areas, including the Mombasa international airport. Your mangrove study sites are peri or urban mangroves? At Google Earth it seems to be very close, suggesting that's urban mangrove... What is the difference between peri-urban and urban mangroves?  
A: Peri-urban used here and as defined by Webster Online dictionary means ..of or relating to an area immediately surrounding a city or town. This definition accurately captures the intended meaning regarding the location of these mangroves i.e. adjacent

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to the city. To the contrary, urban would mean mangroves, which are literally found within a city and that isn't the case here. The reviewer seems to have completely missed the actual definition and thus has even referred to small urban centers which can't be compared with Mombasa, which is the main coastal city. And even without indicating the population density, the fact that Mombasa is the main coastal city and the rest of the cities much smaller, definitely/unequivocally means that the former has by implication greater human pressure typical of big cities, which in tropical countries is compounded by informal settlements. The reviewer even uses the term peri-mangrove, which means surrounding mangrove and thus completely doesn't refer to the nature of mangroves discussed here.

Q: 'Vegetation samplings were carried out using standard 10 x 10m quadrats.' The size of quadrats has to be related to the mangrove forest density, according to Cintron & Schaeffer-Novelli (1984). For example, 100m<sup>2</sup> quadrats are used to study lower density of mangrove forests (mature mangrove forests) and 4m<sup>2</sup> quadrats can be delimitate higher density of mangrove forests (initial colonization). The size of each quadrat has to be defined according to the studied forest. Then, you can't standardize it. A: In forest mensuration, the size of plot/sub-plot used depends on the study purpose and/or stand structure. 10m<sup>2</sup> plots are fairly standard for adult trees and smaller plots whose size does vary used for regeneration (saplings/seedlings) sampling and in our case we used 5m<sup>2</sup>. There is no contention here or disagreement of the reviewer's comment with our methodology at all. He actually agrees with our use of varying plot sizes.

Q: Which color composition of Landsat images was used? Which bands were used? You used UTM coordinate, on Garmin GPS. Which Datum was used? A: All of the images were SPOT 4 for years 1994, 2000 and SPOT 5 for 2009. The band combination (false colour) for these was 3-2-1 for Near InfraRed (Band 3), Red (Band 2) and Green (Band 1). The datum used for the GPS was WGS 84

Q: Minor Comments A: The Reviewer has raised a number of minor comments, which we'll deal with during revision of the manuscript. They are all easily manageable.

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