

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

Anonymous Referee #2

Received and published: 12 January 2014

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?

MINOR COMMENTS p. 16373 (line 9): include ‘...conversion for agriculture and shrimp farming...’ (Valiela et al., 2001).

p. 16375: Include how many people have in each urban area. This information will be imperative to characterize peri-urban mangroves in Kenya. Certainly, they are very

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distinct of peri-urban mangroves in Brazil, China and India, for example.

p. 16375 (line 23): Include author and date after each mangrove species (*Rhizophora mucronata*, *Avicennia marina* and *Sonneratia alba*), only the 1st time.

p. 16376 (line 4): include ‘...basin and riverine mangroves, according to the physiographic classification proposed by Lugo & Sneadaker (1974)’

p. 16376 (line 5 and along the hole article): replace *Rhizophora mucronata* (cited the 2nd time) to *R. mucronata*. Do the same to the other mangrove species.

p. 16376 (line 6): What's a ‘zonation pattern typical’ of mangrove in Eastern Africa? Described it and indicate the reference.

p. 16376 (line 22-23): ‘stratified sampling techniques’ Which reference?

p. 16376 (line 27) – 16377 (line 1) ‘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, 100m² quadrats are used to study lower density of mangrove forests (mature mangrove forests) and 4m² 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.

p. 16379 (line 6): correct ‘photograph’

p. 16379: You didn't use the help of the high resolution images from Google Earth? Why not? Please, read Friess et al. (2011).

p. 16379 (line 17): Which color composition of Landsat images was used? Which bands were used?

p. 16380 (line 12): You used UTM coordinate, on Garmin GPS. Which Datum was used?

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p. 16382 (line 19): include 'cm' after values of diameter class: 5.0-7.0 cm and 7.0-9.0 cm

p. 16383 (line 14): correct (Table 3).

p. 16383 (line 24-25): *Xilocarpus granatum* Koenig, 1784, cited 1st time in the article; have to be cited on complete form, including author and date.

p. 16387 (line 16): replace 'extinction' for 'local extinction'

p. 16399 (Fig. 1): indicate urban areas on map, using polygons, not just points, to indicate the how close mangrove and urban areas are.

p. 16401 (Fig. 3): replace 'cm' for 'm'

Articles suggested: Friess, D.A.; Kudavidanage, E.P. & Webb, E.L., 2011. The digital globe is our oyster. *Frontiers in Ecology*, P. 542.

Valiela, I.; Bowen, J.L. & York, J. 2001. Mangrove forests: one of the World's most threatened major tropical environment. *BioScience*, 51 (10): 807 – 815.

Interactive comment on *Biogeosciences Discuss.*, 10, 16371, 2013.