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Discussions

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Interactive comment on "Vegetation Cover Change Detection and Assessment in Arid Environment Using Multi-temporal Remote Sensing images and Ecosystem Management Approach" *by* Anwar Abdelrahman Aly et al.

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Anonymous referee 2 Comment: Section 2.3 (line 126) should be renamed to "Remote sensing images characterization". Respond: Renamed.

Comment: Section 2.4 (line 153) should be renamed to "Delineation of Vegetation cover changes". Respond: Renamed.

Comment: What is the need for section 2.5 "image classification" using supervised classification for NDVI images??? Converting NDVI images to classified images is a simple straight forward process that doesn't need a supervised classification pro-

cess. Respond: Thanks for comment; however, different methods are adopted in Remote Sensing (RS). In general, there are three main image classification techniques in RS: âǍć Unsupervised image classification âǍć Supervised image classification âǍć Object-based image analysis The image classification uses the reflectance statistics of individual pixels (smallest image unit). Unsupervised and supervised image classification techniques are the most common approaches used in RS.

Comment: The section named "Coordinate & GIS Analysis" (line 189) has no GIS analysis at all, and the authors did not mention anything about which interpolation method they used to get the groundwater salinity distribution map. Respond: The kriging, geostatistical method, interpolation in Fig 9 was carried out using kriging interpolation tool of Geostatistical analyst in ArcGIS 9.3. This is included in the section of Coordinate & GIS Analysis.

Comment: The paragraphs at lines 217 and 220 should be moved to methodology section. Respond: The paragraphs moved.

Comment: The authors didn't mention anything in the methodology about the statistical analysis of the data. Respond: Statistical analysis of the data is included in the materials and methods.

Comment: What basis did the authors classify the ecosystem into eastern, middle and western??? Respond: According to local classification.

Comment: Classification accuracy should be removed from table 1. Respond: Removed.

Comment Figure 3: is missing the letters A and B for the images. Respond: A and B for the images included.

Comment: Figure 5 is missing the distinction between soil samples and groundwater samples. Respond: Soil samples locations included in figure 5.

Comment: What is the meaning of different white shapes in figure 6?? Respond:

Locations of the vegetation cover changes.

Comment: What is the relation of figure 9 to figure 5, and how the polygon of the interpolated salinity is obtained?? Respond The interpolation of groundwater EC carried out using the EC of actual samples located in Fig 5. The interpolation in Fig 9 was carried out using kriging interpolation tool of Geostatistical analyst in ArcGIS 9.3.

Comment: In figure 10, why the authors selected 33 samples to plot soil salinity instead of the total 50 samples??? Respond: Illustration 50 samples in one figure is unacceptable; furthermore, the samples of uncultivated soils have an EC up to 140 dS/m. (this is illustrated in the tables and discussion section).

Comment: Figure 11 is not clear. What is the meaning of the white shapes, and do the letters A B and C fall inside the shapes or not????? Respond: The white shapes means the locations of VC changes, and the letters A, B and C fall inside the shapes showing the location of investigated fields. This is also explained using figure 5.