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
Dear respective Reviewer

Thank you very much for valuable comments, below you will find our responds to the comments point by point:

Comment: After deep reviewing of the literature for NDVI calculation, I suggest the following modifications for the remote sensing part. Since NDVI is a calculated index,
you do not need to prove the accuracy of the results you get. This will increase the scientific value of your good research.

Respond: Thanks for comment, the accuracy removed.

Comment: Remove the last sentence of section 2.4, and replace it with the following: The NDVI images could be classified into three classes, namely dense vegetation cover (NDVI > 0.5), moderate vegetation cover (NDVI 0.25 – 0.5), and sparse vegetation cover (NDVI < 0.25), as shown in Fig (4).

Respond: The last sentence removed and replaced with the required sentence.

Comment: Section 2.5 should be removed completely Section 2.6 becomes 2.5.

Respond: The section 2.5 removed and the section 2.6 became 2.5.

Comment: N.B. you can choose different threshold values other than these values, according to the literature you have.

Respond: Ok, thanks.

Comment: N.B. you can add the area of each vegetation class, for each satellite image date in a table to show the changes in the vegetation cover (you do not need to convert the NDVI data into vector format for further analysis).

Respond: Table 1 include the vegetation class (Table 1 included below)

Comment: Regarding table 1, the title of the table should be renamed to “spatio-temporal characteristics of Al-Kharj ecosystem.

Respond: Table 1 renamed

Thanks Again and Kind Regards.

Please also note the supplement to this comment:
http://www.solid-earth-discuss.net/se-2016-31/se-2016-31-AC4-supplement.pdf
Interactive comment on Solid Earth Discuss., doi:10.5194/se-2016-31, 2016.
Table 1. Spatio-temporal characteristics of Al-Kharj ecosystem

<table>
<thead>
<tr>
<th>Reference Year</th>
<th>Classified image</th>
<th>Vegetation cover areas (Km²)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Dense (NDVI &gt; 0.5)</td>
<td>Moderate (NDVI = 0.25 – 0.5)</td>
<td>Sparse (NDVI &lt; 0.25)</td>
<td>Total</td>
</tr>
<tr>
<td>1987 Landsat4 TM</td>
<td>36</td>
<td>69</td>
<td>58</td>
<td>163</td>
<td></td>
</tr>
<tr>
<td>2000 Landsat7 ETM+</td>
<td>8</td>
<td>156</td>
<td>174</td>
<td>338</td>
<td></td>
</tr>
<tr>
<td>2013 Landsat8</td>
<td>6</td>
<td>91</td>
<td>148</td>
<td>245</td>
<td></td>
</tr>
</tbody>
</table>

Fig. 1.