



**SDI Review Form 1.6**

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| Journal Name:            | <a href="#">American Journal of Experimental Agriculture</a>                                                           |
| Manuscript Number:       | 2015_AJEA_16572                                                                                                        |
| Title of the Manuscript: | GIS-Based Assessment of Land Suitability for Industrial crops (cotton, sesame and groundnut) in the Abyan Delta, Yemen |
| Type of the Article      | Original Research Article                                                                                              |

**General guideline for Peer Review process:**

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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**PART 1: Review Comments**

|                                            | <b>Reviewer's comment</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Author's comment</b> (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)                                                                                              |
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| <b><u>Compulsory</u></b> REVISION comments |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                   |
| <b><u>Minor</u></b> REVISION comments      | <p>Only some minor and optional corrections to complete.</p> <p>1. Lines 10 to 15: Paragraph too long, change expression as proposed below<br/>The present study was therefore carried out with the objective of investigating the potential and capability of Geographic Information System (GIS) as a modern technique to integrate spatial and attribute data for producing land suitability evaluation maps of the main industrial crops (cotton, groundnut and <b>sesame</b>). <b>Those</b> latter are cultivated in the study area under irrigation system based on an integration of land qualities and land characteristics as related to crop requirements.</p> <p>2. Lines 30 to 32: add a point<br/>The Land suitability evaluation forms a pre-requisite for land use <b>planning</b>. <b>Each</b> plant species requires specific soil and climatic conditions for its optimal growth. (Sys et al., 1991).</p> <p>3. Line 33 : add the complete name for the first</p> | <p>1. This is a good suggestion made by the reviewer. So that, it is accepted and corrected in the manuscript and highlight in yellow colour.</p> <p>2. This suggestion also accepted and corrected in the manuscript and highlight in yellow colour.</p> <p>3. Ok corrected.</p> |



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|  | <p>one<br/><b>Food and Agriculture Organisation</b> FAO guideline<br/>on the land evaluation ...</p> <p>4. Line 44: add a comma<br/>With the advent of remote <b>sensing, the</b> database<br/>generation became fast, cost effective and reliable</p> <p>5. Line 55: remove the entire name, it's already<br/>mentioned in line 33<br/>The model used is based on the <b>Food—and<br/>Agriculture Organisation</b> FAO land classification<br/>for</p> <p>6. Line 61: remove “in”<br/>agricultural research and <b>in</b> advisory programs.</p> <p>7. Lines 63 and 64: expression to verify<br/>The paper summarized the present state of soil<br/>survey in terms of digitally available soil data <b>and</b><br/>applied digital soil mapping<br/><u>OR</u><br/>The paper summarized the present state of soil<br/>survey in terms of digitally available soil data <b>for</b><br/>applied digital soil mapping</p> <p>8. Line 66:<br/>overly of thematic <b>gigital digital</b> maps that is able to<br/>spatially</p> | <p>4. Ok corrected.</p> <p>5. Ok accepted and corrected.</p> <p>6. Ok accepted and corrected.</p> <p>7. The second suggestion is accepted and<br/>corrected.</p> <p>8. Ok corrected.</p> <p>9. The first suggestion is accepted and<br/>corrected.</p> |
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|  | <p>9. Line 69: it's better to change the expression "enhance" in one of the two places<br/>enhance our understanding about the role of land evaluation in <del>enhancing</del> improving the agricultural productivity in...</p> <p>OR</p> <p>enhance our understanding about the role of land evaluation in <del>enhancing</del> upgrading the agricultural productivity in...</p> <p>10. Line 85:<br/><del>agro-climatic</del> zone 12, which <del>the</del> representative</p> <p>11. Line 87: replace "o" by "°"<br/>31.6 °C</p> <p>12. Line 88: add space and complete the sentence<br/>200-700 mm to ... ? depending on</p> <p>13. Figure 1<br/>Lacks coordinates and it's better to add a geographical position relative to the Gulf region or continent.</p> <p>14. Lines 110 and 111: remove the comma and "and"<br/>Its current situation <del>is then evaluated</del> to formulate the main findings, <del>and</del> conclusions and recommendations.</p> <p>15. Line 112: remove the comma<br/>... preparation of topo <del>layers and</del> (d) calculation</p> | <p>10. Ok corrected.</p> <p>11. Ok corrected.</p> <p>12. it is corrected as: 200 to 700 mm depending on ...</p> <p>13. Figure 1 changed and coordinates is given and geographical position relative to the Gulf region also added.</p> <p>14. Corrected.</p> <p>15. Corrected.</p> <p>16. Corrected.</p> |
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|  | <p>16. Figure 2<br/>It's not very clear, the resolution and clearness must be increased<br/>May be, there is some connections missed, for example: a connection must be between the soil data and the soil map and between topographic data and DEM/slope map...</p> <p>17. Line 135: add a comma<br/>Calcium carbonate (<math>\text{CaCO}_3</math>), Soil Texture or particle size distribution...</p> <p>18. Line 139: Remove the space<br/>...(ANNEX 1).</p> <p>19. Designation of abbreviations<br/>In tables 1, 2 and 3, most of abbreviations are not detailed before, for example "DD, MS,WE, PO...."</p> <p>17. Line 167: Remove the repeated word "for"<br/>The use of the weighted overlay technique was for the purpose of producing the land suitability maps for <del>for</del></p> <p>18. Lines 187 to 189: Expression to change<br/>The output data is expressed as a raster (grid) file which contains the suitability classes. So, <del>that</del> each cell in a grid is considered as a numerical storage of suitability classes for that cell.<br/><u>OR</u><br/>The output data is expressed as a raster (grid) file which contains the suitability <del>classes</del> so that each cell</p> | <p>17. Corrected.</p> <p>18. Corrected.</p> <p>19.</p> <p>17. Ok corrected.</p> <p>18. The first suggestion is accepted and corrected.</p> |
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|  | <p>in a grid is considered as a numerical storage of suitability classes for that cell.</p> <p>19. Line 190 : Add a space<br/>...system in a condition</p> <p>20. Line 192 : add a comma<br/>...values, is schematically</p> <p>21. Text in Figure 4 it's not clear, increase resolution and clarity</p> <p>22. Line 202: Remove one of the two verbs<br/>Classification of land suitability for sustainable <del>use</del><br/><del>requires</del> an understanding of condition</p> <p>23. Line 220: replace the "T" in capital by "t" in miniscule<br/>.... production, <del>The</del> the data set were</p> <p>24. Figure 6<br/>First, I observe only 4 classes in the slope map, and according to your explanation above, every thematic map has 5 classes??!!<br/>Second, In the literature, we find that only slopes between 3 and 5 can cause water erosion, and slopes between 5 and 10 can cause gully erosion, while slopes more than 30% can cause landslides, of course added to other factors. I think you must review the slope classes for better results. You can see a lot of reports on the modeling of erosion, specially in USA, France and Europe.</p> | <p>19. Corrected.</p> <p>20. Corrected.</p> <p>21. Corrected.</p> <p>22. I think the original sentence is quite right. <u>(Classification of land suitability for sustainable use requires an understanding of conditions</u></p> <p>23. Corrected.</p> <p>24. Corrected.</p> <p>25. Corrected.</p> |
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|  | <p>25. Lines 238, 244, 247, 251, 255, , : correct the typo<br/>.....<del>Figoure</del>→ Figure</p> <p>26. Homogenize the figures:<br/>Remake the figures 5 to 9 like the other figures, or the inverse</p> <p>27. Line 250: correct the typo<br/><del>Determi-nation</del> → Determination</p> <p>28. Maps of figures 11, 12 and 13<br/>These maps contain more than 5 classes, it was better to make 5 classes maps from the beginning.</p> <p>29. Line 278<br/>...under <del>irrigated condition</del> in a condition... → ... under irrigation in a condition....</p> <p>30. Line 295 and 296: Incomplete sentence<br/>...the majority of the <del>areas. In addition, soil chemical</del> properties such as low organic carbon content, calcium carbonate etc.<br/><b>Replace by</b> → ...the majority of the <del>areas, in addition to soil</del> chemical properties such as low organic carbon content, calcium carbonate etc.</p> <p>31. Lines 300 and 301: Add commas<br/>The land suitability for <del>cotton, an</del> important fabric crop grown in large areas of Abyan <del>Delta, has</del> been carried out.</p> | <p>26. Corrected.</p> <p>27. Corrected.</p> <p>28. Corrected.</p> <p>29. Corrected.</p> <p>30. Corrected.</p> <p>31. Ok corrected.</p> <p>32. Ok corrected.</p> |
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|                                         | <p>32. Lines 310: add commas<br/>The land suitability for <b>sesame</b>, <b>an</b> important oil crop grown in command areas of Abyan <b>Delta</b>, <b>has</b> been</p> <p>33. References<br/>In the text (line 29) you write Rossiter (1996<b>a</b>), but in the reference list, you write Rossiter, D. G. 1996<b>b</b></p> | <p>33. Ok corrected.</p> |
| <b><u>Optional/General</u></b> comments |                                                                                                                                                                                                                                                                                                                              |                          |