



**SDI Review Form 1.6**

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| Journal Name:            | <a href="#">International Journal of TROPICAL DISEASE &amp; Health</a>                |
| Manuscript Number:       | 2013_IJTDH_7337                                                                       |
| Title of the Manuscript: | Application of Remotely-sensed Data for Modeling Malaria Infection in Lokoja, Nigeria |
| Type of the 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.

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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)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Compulsory</b> REVISION comments | <p>1) This study tries to model malaria infection in Lokoja (Nigeria) using remotely-sensed data. The authors used land use types, NDVI, LST and LSE to characterise the urban core and the surroundings of the city. Then, as a separate issue, malaria cases reported in 2006 from different neighbourhoods are presented. Unfortunately, the true is than both data sets were not formally linked. There is no model in the manuscript, just a good description of the study area based on remotely-sensed data. Moreover, malaria vectors (Anopheles mosquitoes) were not surveyed to partially validate the findings, and therefore, the relationship between environmental features and mosquitoes infestation are merely speculative and not results.</p> <p>2) The objective/aims are truly different in the Abstract and in the Introduction, and both have serious problems. In the Abstract: Land use, NDVI and LST were used to intend explaining the differences in malaria records trough the city, but not to estimate the incidence of malaria infection. The latter was made using hospital records. Then, in the Introduction (lines 77-79) malaria infection was not mentioned as part of the objectives.</p> <p>3) In addition, the authors stated that the study intends to identify mosquito larvae breeding sites and relate UHI to the infestation of mosquitoes. However, there is no survey of mosquitoes during the study. In other words, when the authors find some environmental characteristics that enhance mosquito breeding</p> | <p><b>Much of the reviewer comments are general and not specific based. The study is an attempt at understanding the interplay of LST, NDVI and LSE as they may play a possible role in providing information on the presence of mosquitoes and in turn the high incidence of malaria in Lokoja.</b></p> <p><b>The study may not be completely perfect but it provides an insight into the problem we are facing here on mosquitoes infestation.</b></p> <p><b>Also, the study is not interested in the enumeration of mosquito species, and which of them inhabits the study area, per se.</b></p> <p><b>However, attention has been taken by authors to effect the corrections that are specifically listed by Reviewer comments.</b></p> |



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|  | <p>(example: vegetation cover and water bodies) they consider that mosquito breeding sites were identified. This reasoning through the entire section Results is circular and has no sense.</p> <p>4) The main conclusion of the study (Line 242: The interplay of NDVI, LST and land use/cover types of Lokoja provides the impetus for the rising incidence of malaria in Lokoja town) is not formally supported by the data showed in the manuscript.</p> |  |
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| <p><b><u>Minor</u></b> REVISION comments</p>  | <p>5) LST was mentioned across the entire manuscript but never was explaining in extend (land surface temperature)</p> <p>6) Lines 134-142 are Methods and not Results.</p> <p>7) Line 69: "Of the four species of <del>mosquito</del>, Plasmodium falciparum is the most common species" (?)</p> <p>8) The mosquito vector of malaria was not presented or mentioned in the introduction! Which species of Anopheles were previously reported in Lokoja? All have the same habitat requirements?</p> <p>9) One of the main conclusions of the study is: "At the household levels, extensive use of bed nets and periodic fumigation appear to be the most appropriate short-term measures for curtailing the incidences of malaria at the study area."; I really can't imagine which part of this study is related or conduce to such conclusion.</p> | <p><b>Correction effected</b></p> <p><b>Correction effected</b></p> <p><b>Correction effected</b></p> <p><b>This aspect is not the focus of this work, this is why little attention has been paid to it.</b></p> <p><b>Statement re-casted to address your comments</b></p> |
| <p><b><u>Optional/General</u></b>comments</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                             |