Author's response to reviews

Title: Spatial and temporal variation and hotspot detection of kala-azar disease in Vaishali district (Bihar), India

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Author's response to reviews:

To
Philippa Harris, PhD
Executive Editor
The Editor-in-Chief
BMC Infectious Disease

Subject: Regarding resubmission of our 2nd re-revised manuscript (MS: 8395604987201717) entitled “Spatial and temporal variation and hotspot detection of kala-azar disease in Vaishali district (Bihar), India” for publication in your esteemed journal.

Sir,

We are resubmitting our 2nd re-revised manuscript (MS: 8395604987201717) entitled “Spatial and temporal variation and hotspot detection of kala-azar disease in Vaishali district (Bihar), India” for publication in your esteemed journal. We are very much thankful to the respected reviewer for their valuable comments to improve the manuscript. The point-wise answer has been given raised by the respected reviewer for your kind consideration. It is for your kind perusal and future course of action.

Thanks and regards,

Yours faithfully,

(Corresponding Author)
Dr. Pradeep Das
RMRIMS (ICMR)
Answers to the Reviewer’s Comments

Comment 1: When describing the Voronoi statistics (lines 131-132) authors say "However, using this procedure a series of polygons formed around the location of VL affected villages that yield a less heterogeneous thematic layer, usually referred to as smooth." I do not think this is a correct description of smoothing. The Voronoi approach just divide the space in polygons and then the smoothing appears when you apply some rule (spatial weights) to recalculate incidence rates for each area using information from neighbors. Actually, this phrase could be deleted without any loss of information.

Answer: The phrase has been deleted from the revised manuscript. Modified as suggested.

Comment 2: When detailing the "spatial weights" (lines 135-140), you say "Specifically, spatial weights we used, is based on the inverse geographical distance between the centroids of the kala-azar affected and non-affected villages." Do you really mean just between the centroids of affected and non-affected areas? Wouldn't the smooth procedure apply to any neighboring area independently of being affected or not? Please clarify. If you agree with my observation please change "between the centroids of the kala-azar affected and non-affected villages"by "between the centroids of neighboring villages." The would have to do the same in lines 137-138 and 138-139.

Answer: I agreed with the Respected reviewer’s comment........spatial weights is based on the inverse geographical distance between the centroids of neighboring villages. It has been corrected in the re-revised manuscript (page 7, line 135 - 137).

Comment 3: I would suggest just to remove the lines 215-217 (starting on "However..."), this info is not necessary and actually makes thing a bit confusing for the reader.

Answer: Modified as suggested.

Comment 4: Line 258: remove "percentage of".

Answer: It has been removed in the re-revised manuscript. Modified as per suggestion.
Comment 5: Line 324: you say "... but their application to kala-azar has very limited". There are actually many studies on visceral leishmaniasis in Latin America and Africa (and you quote some of them). So maybe you want to say "but their application to kala-azar has been less common, particularly in the Indian subcontinent."

Answer: It has been rectified in the re-revised manuscript (page 15, line 321-322)

Comment 6: Table 2: need to check the "0" values for variance, seems not correct.

Answer: It has been modified in the re-revised manuscript (Page 32, table 2).