Reviewer's report

Title: Spatiotemporal clustering, climate periodicity, and social-ecological risk factors for dengue during an outbreak in Machala, Ecuador, in 2010

Version: 3 Date: 13 August 2014

Reviewer: Elvina Viennet

Reviewer's report:

Minor Essential Revisions

Abstract> Methods
be consistent with the numbers 1,673 vs 1673

Background
I am a bit confused:
are you doing predictions or trying to explain dengue cases (outcome) according to weather, entomological, social ecological variables?
please clarify and correct if needed. If here you are explaining; not predicting, then you can't say that "this is the first of such studies conducted in Ecuador" because it is not what you are aiming/doing.

Data sources
you reported in the abstract 1,673 dengue cases georeferenced but here in data source you report 1,674. Please clarify.
also clarify in the same paragraph if it was monthly, yearly weekly dengue cases?
in section social-ecological risk factors:
You refer to Table S1, I am not convinced we need a supplementary info in Spanish. Please remove the table if you agree.
in section entomology data
I would propose Entomological data instead of entomology
You found a Pearson Correlation r=0.2 and stated ' strongly associated" ; 0.2 is not really strong. Please rephrase.
in the same sentence ' accordingly....multivariate model (BI_12)"
this is the name of the variable not of the multivariable model. Clarify or modify the sentence as it is a bit confusing. Ultimately refer to table 1

In climate information
it might be worth writing entirely metres above sea level instead of m.a.s.l.
In Statistical Analysis, wavelet analysis interpolation from monthly dengue cases to weekly dengue cases? that is acceptable but if it is from yearly dengue cases, it is certainly underestimating seasonality. Please explain.

same paragraph line 18; "Dengue incidence and rainfall time series' had non normal probability density functions, thus they were percentile transformed." do you have any ref to illustrate the methodo and reasons?

in Results page 15 line 4
'more likely to report 'instead of 'more likely report'

page 16 line 2
'as' to remove?

page 16 line 16 : I would add 'transmission' to "the climate variables with respect to dengue"

In discussion
check examples of research articles published in BMC Infectious Diseases, they don't have sections in Discussion
I advise removing the bold titles

In Discussion>Spatial Dynamics line 12
I understand it is important for you to show you have a paper in review on this topic, but check the BMC ID author guides.
"Only articles, datasets, clinical trial registration records and abstracts that have been published or are in press, or are available through public e-print/preprint servers, may be cited"

"Any in press articles cited within the references and necessary for the reviewers' assessment of the manuscript should be made available if requested by the editorial office."

I would advise to remove the reference or add the reference if it has been accepted.

same paragraph line 13, add a point at the end.

page 21, line 11, point to add at the end of the sentence

In References
could you homogeneise your title of journal. Some are with upper case for each word and some title don’t

in reference 18, Aedes aegypti to put in italic
Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests