Response to Reviewers
22 July 2019

Reviewer 1

- Page 3 Line 104, please, specify and justify the population classification. It is suitable consider two groups of population: child (<5 years old) and adults >65 years old. It would be better to include an additional class (children <5 years old).

>>> The authors did not do the population distribution survey. The information was extracted from the Statistics South Africa website. Statistics South Africa collect information on age grouping to address the following:
- To project the school age, working class, and elderly.
- The provision of social services and life expectancy.
Therefore, there is a need for Environmental Department to engage with the Statistics Department to include the vulnerable groups (<5 years old) in future surveys.

Page 3 Line 111. Indicate the source of the database of parameters like soil properties, topography and deep soil.

>>> We have added the source of the database to the manuscript in tracked changes.

In Figure 3, in the map of spatial variation for PM10 concentrations, it would be better to put a degraded scale in colours (instead of the numbers in the concentrations isopleths) so that the concentrations are better visualized, since the numbers are not displayed well. Apply this comment to all the spatial distribution maps.

>>> The maps were improved to include concentration scales. This has proved to be useful as the isopleths were hiding some information on the spatial variation.

In page 5, Line 141 (Figure 3b), indicate the used software to construct the wind roses.

>>> We have added the software name to the manuscript in tracked changes.

In 3.1 Section, it is necessary to include a health risk assessment (considering the population classification that you made at the beginning of the paper) to know the non-cancer and cancer risk that could represent the found concentrations of PM10 in the study site.

>>> We changed the title of the manuscript and section 3.1.

In general, it is necessary to include other impacts:
The health risk assessment could cover health impacts since the exposure to PM section is very poor and does not provide additional information on the health impacts of exposure to particles (only consider the exceedances to the air quality standards).

>>> We have improved the wording in the section.

If the authors, only are going to consider impacts on health, I suggest changing the title "Health impacts of point sources in an industrialized rural area in Limpopo, South Africa" but only if the author include an improved section about health impacts (health risk assessment).

On the contrary, I suggest changing the title "Spatial and temporal variation of PM10 in an industrialized rural area in Limpopo, South Africa" due to authors only considered the relation of PM10 concentration with meteorological parameters.

>>> We thank the reviewer and we have amended the title to the second proposal.