Author’s response to reviews

Title: Associations of greenness, greyness and air pollution exposure with children’s health: a cross-sectional study in Southern Italy

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Manuscript Number: ENHE-D-18-00280R1

Manuscript Title: “Associations of greenness, greyness and air pollution exposure on with children’s health: a cross-sectional study in Southern Italy”.

Journal: Environmental Health.

We thank the Editor and the Reviewer. We have revised the manuscript according to the last suggestions, which have strengthened the message conveyed by the manuscript. We have also
corrected minor mistakes or inaccuracies. Please, find enclosed our point-by-point responses and the revised manuscript (version with changes marked in yellow).

Reviewer reports:

In general you have responded well to the review comments and your paper is improved. There are a few improvements you need to make:

Comment: The title is now The effects on, which strongly suggests causality. Please replace with "Associations of .... with .... "

Reply: We thank the Reviewer for the useful suggestion which we have followed by modifying the title accordingly.

Comment: The LUR needs to be better documented, you added especially model identification. Please add specifically how many surveys were made (on single, two repeats). Further add the exact variables in the model and based on that discuss overlap with the other urban stressors. If the LUR contains DUF or CUF as a predictor or HTR exacttl, the reader should know that.

Reply: Thanks to the Reviewer for the observation. A detailed description of the LUR model has been included in the “Methods” section. With regard to the overlap with other urban stressors, models were built using different variables: meters of High Traffic Roads in a 300 meter buffer and meters of all streets within 100 meters; population density (high density and low density within 5000 and 500 meters, respectively); presence of industries in 1-km buffer and of green areas (seminalnatural) within 300 meters, derived from CLC data. Therefore, despite using the same data sources, the predictors included in the two models (LUR and ridge regression models) were different.

Comment: In abstract replace pollution with air pollution.

Reply: we have replaced “pollution” with “air pollution”

Comment: In abstract / conclusion you should note you actually find no Association with your definition of greyness. The added tekst in conclusion is actually not well supported by your data, please reword. The suggestion that green reduces air pollution is controversial.

Reply: We thank the Reviewer for this observation. Accordingly, we have modified both the abstract and the conclusions sections in order to better define and comment the study results.

Comment: On page 19 you did not replace accounted for
Reply: Thanks for indicating our omission; we have now replaced “accounted for” with “are associated with”.