



# ***Interactive comment on “Rainfall erosivity in subtropical catchments and implications for erosion and particle-bound contaminant transfer: a case-study of the Fukushima region” by J. P. Laceby et al.***

## **Anonymous Referee #2**

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Dear Authors, First of all, I believe that the topic you are dealing with is a very important one and much demanded by the earth system science community. The authors have worked intensively on the interesting and relevant subject of rainfall erosivity and particle-bound contaminant transfer in Fukushima region. However, the basic idea to improve understanding of radiocesium transfers in the soil only with the contribution of rainfall is too simple for drawing general conclusions. The methodologies applied for the reflections, however, are modest and should be better improved. In particular, the main objective of the work was not achieved: the methodology used is not suitable to

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explain the loss of soil and does not consider the transfer of soil contaminants. The authors are limited to aggregate precipitation data without carry out a quality control and homogenization of the series, especially vital to correctly calculate trends over time. The slope and statistical significance of the trend are not calculated. However, It is not possible to calculate a trend considering different periods of availability of the series: it's indispensable to select a common period to all stations to detect the temporal evolution and in order to permit a correct comparison of the amount of rainfall per year. It would be better to use the SAI (Standardized Anomaly Index) that expresses the anomaly of the precipitation in respect to the mean value of the 30 years reference period. Consequently it is necessary to change the figures 3, 4 and 6. Both the Results and Discussion chapters are very descriptive and unfocused. An extensive discussion of the involved factors (Pmm and R), processes and interactions should be provided with adequate references to the corresponding scientific literature. The results of your work are important and must be disseminated, but because these comments may mean some substantial reworking of the text and more modeling/data analysis, the revisions have been classed as major.

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