

Interactive comment on “Assessment of atmospheric trace element concentrations by lichen-bag near an oil/gas pre-treatment plant in the Agri Valley (southern Italy)” by R. Caggiano et al.

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Received and published: 28 January 2015

On behalf of all co-Authors, I wish to thank the Reviewer for the interesting remarks and the suggesting issues aiming at improving the proposed study. The revised version of the manuscript will be corrected following all the specific comments and suggestions. Responses to the Reviewer's comments, along with the acceptance of the proposed changes, are detailed below:

General comments

C3227

The paper "Assessment of atmospheric trace element concentrations by lichen-bag near an oil/gas pre-treatment plant in the Agri Valley" presents an experimental study on the air pollution due to trace elements, using the well known lichen-bag technique applied in a new design. Moreover, the PCA technique was applied to study the contribution of the different sources (natural, anthropogenic and transported) of atmospheric trace elements measured. The paper is well-written, with an appropriate length, showing interesting results and conclusions. I recommend the publication on NHESS, with the following suggestion:

Specific comments

Describe the reasons of the composition in species of Lichen samples Authors' response: We have followed the Reviewer's suggestion and we have added the description of the reasons of the composition in Lichen species at page 5, lines 1-5 of the revised paper.

Specify the composition of the sample in percentage for each species. Authors' response: Done

Could the composition in species alter the efficiency of accumulation of the different trace elements? Authors' response: The dissimilar composition in species could determine a different accumulation of the trace elements analysed. Therefore, the "exposed to control ratio" - EC ratio of the concentrations of each trace element in exposed samples with respect to control samples was used to explore if the combination of the used lichen species was suitable for the biomonitoring investigation.

Specify if the samples are homogeneous in species composition Authors' response: Done.

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 2, 6531, 2014.

C3228