

## ***Interactive comment on “4D dispersion of total gaseous mercury derived from a mining source: identification of criteria to assess risks related with high concentrations of atmospheric mercury” by José M. Esbrí et al.***

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The manuscript studies the alternatives that exist to make monitoring works in an area contaminated with anthropogenic gaseous mercury. It recommends measurements at different heights, over significant transects and the repetition of these measurements over time. Although the results seem to be appropriate for a complex area such as the one they have chosen as study area, the effort involved in obtaining this minimum number of data is great and perhaps could be simplified if a previous study were made of the most important factors involved in the local cycle of mercury, in a short period.

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In any case, the manuscript presents a monitoring option that seems to offer very significant data and that could be applicable to any contaminated area. Lines 44-47. Definition of TGM include wrongly particle-bound mercury fraction. Revise it. Lines 51-52. If water is included in this transfer pathways, what about sediments? Line 61. Again sediments are missing. . . Line 100. Explain what are the sources of medium importance, polluted wastes? Ore outcrops? Lines 128-131. Then there is no soil data, why? Line 147. Add a comma in 3,650 and unifies the way the figures are represented throughout the manuscript Lines 181-183. Add a reference to support this sentence. Line 210. There is no reference in the methodology section to soil temperature measurements, explain this. Line 250. Something is missed in the top of the figure, in the scale bars Line 287. In Figure 7, is it possible to separate transitional populations in the spring charts of profiles 1 and 3? Lines 307-312. The topographic profile is not enough to understand this, how are the river valleys? open or narrow? what is the difference in heights from the nearby mountains? and the slopes? Line 375. Indicate in the figure the inhabited area where risk from chronic exposure may occur Line 515. Unify the decimals in the numbers

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