

## ***Interactive comment on “Global risk of radioactive fallout after nuclear reactor accidents” by J. Lelieveld et al.***

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We thank Dr. Kovalets for the encouraging and helpful comments.

The risk maps are in principle the same as the deposition maps, however after applying a scaling to include the threshold of contamination and the probability of a major accident. Therefore, it will not add much information if we would also include the deposition maps. To explain this more clearly and to include the suggestion of giving formulas, the following text is added to the revised manuscript on p. 31215, l.5: “Here we define  $\geq 40$  kBq/m<sup>2</sup> as “contaminated”, following the definition by IAEA (2005). Subsequently, the risk of contamination has been calculated based on the modelled (total deposition (kBq m<sup>-2</sup> yr<sup>-1</sup>) / 40 kBq m<sup>-2</sup>) × probability of a major accident. Hence the presented risk maps correspond directly to the model calculated <sup>137</sup>Cs deposition distributions.”

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Meanwhile we have performed sensitivity calculations to investigate the interannual variability of the tracer deposition, and found that it is indeed very small so that we can indeed assume that the simulated year 2005 is representative of the factors c and d.

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