

Interactive comment on “Comment on “Global risk of radioactive fallout after major nuclear reactor accidents” by J. Lelieveld et al. (2012)” by J. Lelieveld et al.

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Quite regrettable that no more independent comments have been submitted.

The published manuscript is about 'major accidents' comparable to Tschernobyl and Fukushima; in consequence, it is not relevant to point to the fact that not enough reliable data are available for events below INES-7.

Correct, I overlooked that 60 m is about the lowest layer of the atmosphere and not about the soil.

The criticism about statistically independent events does not relate to the fact that the

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six reactor blocks are separate units and three of them resulted in the catastrophic failure. The problem is whether the events were independent or a single one resulting in three manifestations.

It is not relevant for this study whether NRC (1990) assumed that any reactors are independent. The real situation at Fukushima was that the failing reactors were in reality not independent.

'it will be important to establish independent safety provisions' as a result from Lelieveld's study would only be relevant for reactors lacking such provisions. Any NPPs in Europe have since long such independent safety provisions which are presently even strengthened in the light of the Fukushima event.

No comment on Pareto-approach which is outside my expertise. It is recommended to explain to the common reader how from the frequency distribution of non-INES-7 failures of NPPs the probability of future INES-7 accidents can be estimated.

With regard to Q8, it is false to refer to core-melts; the problem for insurance companies is to calculate the risk (probability times costs) of future nuclear catastrophes. For this reason in several countries there is the discussion to impose by law minimum insurance conditions. The study by Lelieveld et al. might contribute in future to a better and more reliable estimation valid also for insurance considerations.

Interactive comment on Atmos. Chem. Phys. Discuss., 12, 19303, 2012.

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