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Interactive comment on “The global impact of the transport sectors on atmospheric aerosol in 2030 – Part 1: Land transport and shipping” by M. Righi et al.

Anonymous Referee #1

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This article has investigated the global impact of the emission changes on transport sectors in 2030 using coupled EMAC-MADE model and quantified the aerosol feedback on global radiative forcing. It is a very interesting paper and covered a range of future scenarios. I did also review the first paper by the same authors regarding the simulations for year 2000 (Righi et al., 2013 ACP). This paper should be added value for the further analysis on the impact of emission and climate change specific for the transport sectors.

However, one thing is puzzled me throughout reading the second paper. The first paper for 2000 simulations including all the transport sector: land transport, shipping

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and aviation. Why this paper for 2030 simulations does not include aviation sector. In the end, the author pointed out there should be a third paper for the aviation analysis. I think for the consistency and more logical way, the aviation results should be included into this paper. Are there any specific reasons for the authors to decide a separate paper for the aviation as the third paper in the series?

Apart from the point that I mentioned above, this paper is well written and good structured. In section 2 - model and simulations, page 22991 and line 25-30, the statement is not very clear. Whether the future period for 2030 using the same meteorology as the present period for 2000 in order to investigate the emission changes effects? If so, it should be state more clearly.

Interactive comment on Atmos. Chem. Phys. Discuss., 14, 22985, 2014.

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