

Interactive comment on “Atmospheric Mercury Concentrations observed at ground-based monitoring sites globally distributed in the framework of the GMOS network” by Francesca Sprovieri et al.

J. Pacyna (Referee)

jp@nilu.no

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This is a very important paper presenting the unique set of data from the GMOS project. The unique character of the data relates to geographical location of more 40 stations of which the data are reported, as well as the various topography of the stations and different climatic zones. The GMOS station network should be seen as the basis for a major monitoring network needed for the assessment of the implementation of the UN Minamata Convention on mercury. The reported set of data forms also a unique information for validation of regional and global modeling of mercury within air masses.

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The major achievements of the GMOS project reported in the reviewed paper include: - establishment of SOG (Standard Operating Procedures) for measuring concentrations of Hg in air samples. This is an important result in the context of the Minamata Convention monitoring network that would need to be established soon, - elaboration of Qa/QC procedures to be further used in the above mentioned monitoring network, - contribution of the GMOS project results to GEOSS, - confirmation of the Northern to Southern Hemispheric gradient of Hg concentrations in the air, indicating an important contribution of anthropogenic emissions to the measured concentrations, - confirmation of seasonal changes of Hg concentrations worldwide. Conclusions presented in the reviewed paper are very important for improvement of our understanding of Hg behavior after its emission to the air. These conclusions are fully supported by data presented in the paper. In conclusion, the reviewed paper is a very important contribution to the development of monitoring network needed for the Minamata Convention.

[Interactive comment on Atmos. Chem. Phys. Discuss.](#), doi:10.5194/acp-2016-466, 2016.

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