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Supplement of

Total atmospheric mercury deposition in forested areas in South Korea

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QA/QC

Dry deposition for GOM and PBM

Relative percent difference (RPD) analyses for replicate GOM and PBM measurements were 19.4% and 22.9%, respectively. Relative Standard Deviation (RSD) measured by injecting mercury vapor standards at the same concentration seven times averaged 2 ~ 5%, within EPA Method 1631 requirements (± 25%). Field blank for GOM (n = 51) and PBM (n = 46) were 0.21 and 0.19 ng m^{-2} hr^{-1} respectively.

TM in wet deposition and throughfall

Initial (IPR) and on-going (OPR) precision and recovery measured every 15 samples at the start of the analysis ranged from 80 ~ 107% (92.2 ± 7.0 % in average) and 81 ~ 117% (96.9 ± 13.7 % in average), respectively with an RPD of 3 ~ 13%. Field blanks were collected monthly from September to December and yielded Hg concentrations of 0.36 ± 0.05 ng L^{-1}. The average lab blank (n = 44) concentration was 0.2 ng L^{-1}.

Table S1. Monthly dry deposition of GOM (μg m^{-2} yr^{-1}) under forest

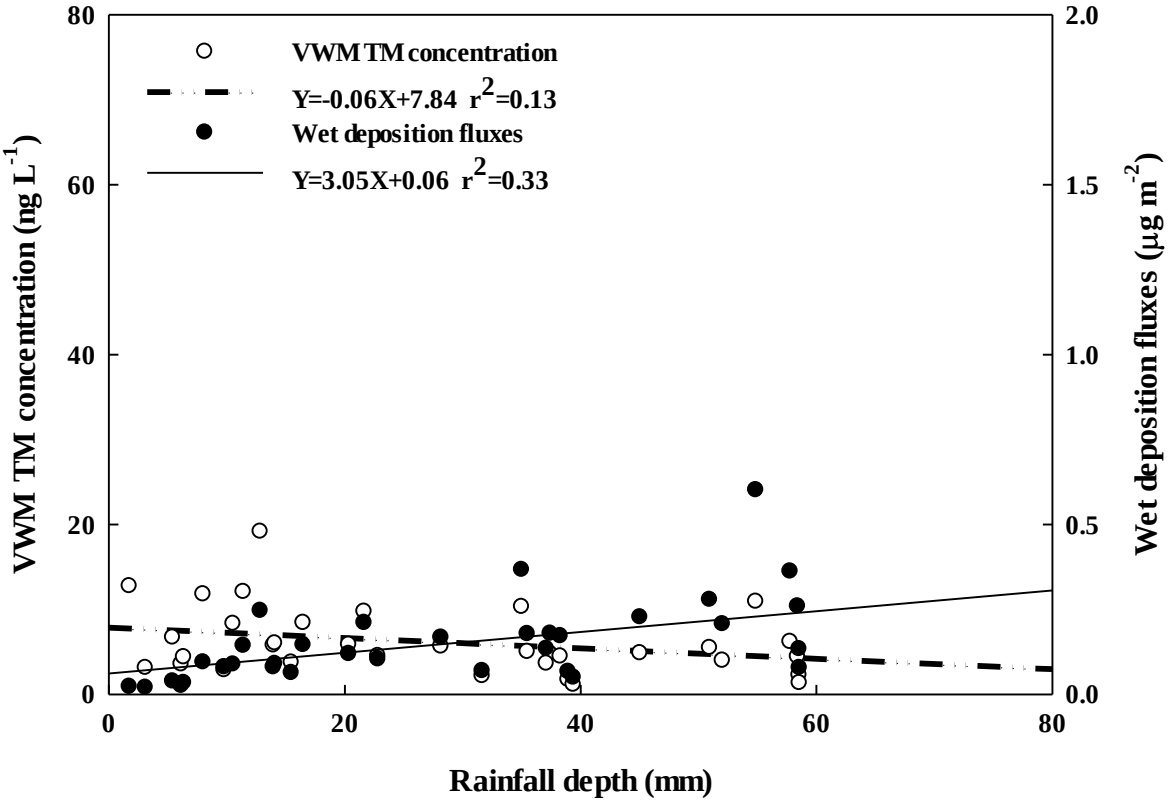
08-Sep	08-Oct	08-Nov	08-Dec	09-Jan	09-Feb	09-Mar	09-Apr	09-May
3.08	1.43	1.26	1.70	2.84	10.86	8.41	13.43	8.24
09-Jun	**09-Jul**	**09-Aug**	**09-Sep**	**09-Sep**	**09-Nov**	**09-Dec**	**10-Jan**	**10-Feb**
9.39	6.83	1.22	0.42	2.74	0.35	1.01	11.19	1.70

Table S2. Monthly dry deposition of PBM (μg m^{-2} yr^{-1}) under forest

08-Sep	08-Oct	08-Nov	08-Dec	09-Jan	09-Feb	09-Mar	09-Apr	09-May
4.91	1.91	2.13	2.19	3.30	6.02	6.25	1.85	1.79
09-Jun	**09-Jul**	**09-Aug**	**09-Sep**	**09-Sep**	**09-Nov**	**09-Dec**	**10-Jan**	**10-Feb**
7.98	19.38	1.54	1.60	0.79	1.10	1.76	12.15	2.08

Table S3. Monthly average temperature (℃) in Yangpyung, Korea

08-Sep	08-Oct	08-Nov	08-Dec	09-Jan	09-Feb	09-Mar	09-Apr	09-May
20.7	14.2	5.7	-0.5	-4.4	1.7	6.0	12.1	18.5
09-Jun	**09-Jul**	**09-Aug**	**09-Sep**	**09-Sep**	**09-Nov**	**09-Dec**	**10-Jan**	**10-Feb**
22.3	23.9	24.7	20.1	13.7	5.9	-2.1	-6.1	0.6



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58 **Figure S1. Relationship between rainfall depth and VWM TM concentration and fluxes**
59 **in precipitation.**

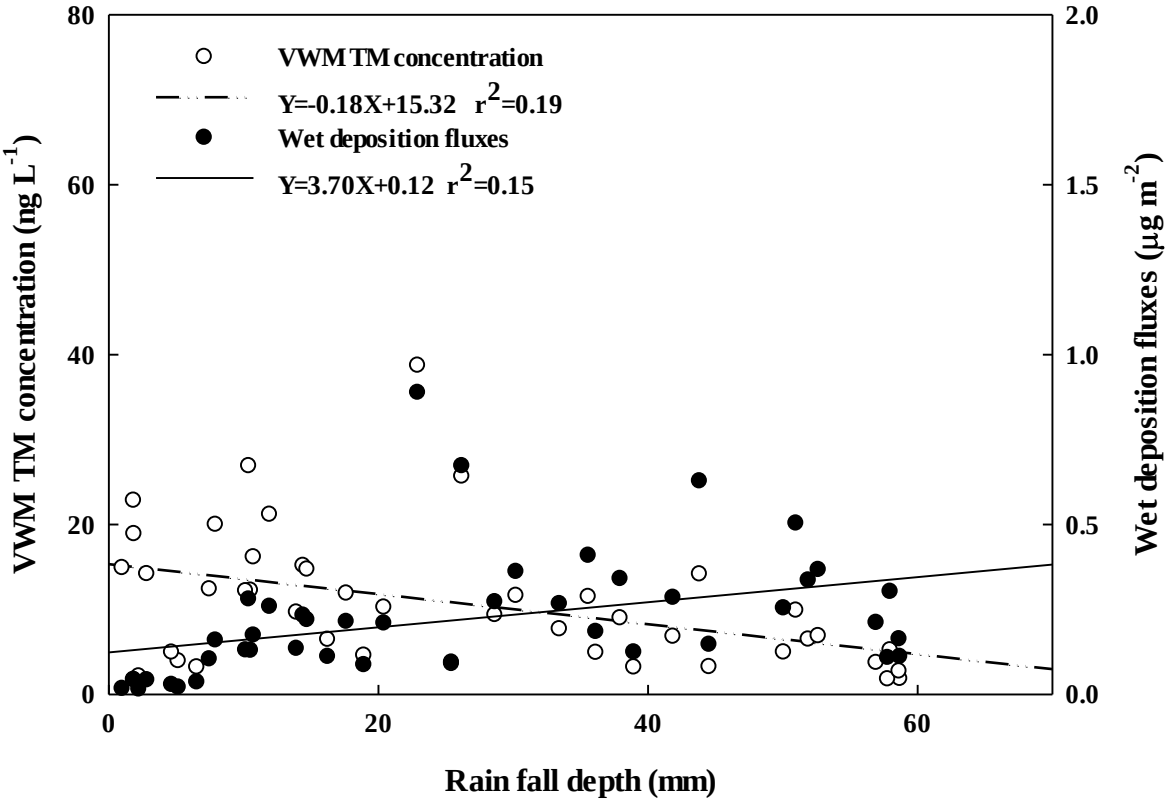

Figure S2. Relationship between rainfall depth and VWM TM concentration and fluxes in throughfall.