

Corrigendum to “Endosulfan, pentachlorobenzene and short-chain chlorinated paraffins in background soils from Western Europe”. *Environmental pollution* 196 (2015), 21-28.

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The authors regret that there is a unit conversion error in the publication above in which the concentrations reported were wrong whenever normalized on a soil organic matter (SOM) basis (Halse et al., 2015). While the interpretation of results and conclusions of this paper remain unchanged, we want to make the readers aware of the following revisions. Corrected versions of Table 1 and Figure 2 are included herein, and a corrected version of the Supplementary data (SD) to this article has additionally been prepared. For the text of the main manuscript, the following corrections are listed:

In the abstract, it is written: “SCCPs were detected with the highest average concentrations (35±100 ng/g soil organic matter (SOM)), followed by Σ endosulfans (3±3 ng/g SOM) and PeCB (1±1 ng/g SOM)”. It now read as follows; “SCCPs were detected with the highest average concentrations (24±72 ng/g soil organic matter (SOM)), followed by Σ endosulfans (2±4 ng/g SOM) and PeCB (0.6±0.5 ng/g SOM).”

In chapter 3.1 second column, p. 23, it is written: “The average concentration of SCCPs analysed (n=58) was by far the highest among the “new” POPs with 35 ng/g SOM (SD±100 ng/g SOM), ranging from < MDL (0.6 ng/g SOM) to 570 ng/g SOM. The average concentration of Σ endosulfans in all background soil samples (n=57) was 3 ng/g SOM (SD±3 ng/g SOM), and ranged from < MDL (0.02 ng/g SOM) to 20 ng/g SOM. The average concentration of PeCB for all sites studied (n=53) was 1 ng/g SOM (SD±1 ng/g SOM), ranging from < MDL (0.08 ng/g SOM) to 6 ng/g SOM.” It now read as follows: “The average concentration of SCCPs analysed (n=58) was by far the highest among the “new” POPs with 24 ng/g SOM (SD±72 ng/g SOM), ranging from < MDL (0.8 ng/g SOM) to 417 ng/g SOM. The average concentration of Σ endosulfans in all background soil samples (n=57) was 2 ng/g SOM (SD±4 ng/g SOM),

and ranged from < MDL (0.02 ng/g SOM) to 26 ng/g SOM. The average concentration of PeCB for all sites studied (n=53) was 0.6 ng/g SOM (SD±0.5 ng/g SOM), ranging from < MDL (0.03 ng/g SOM) to 3 ng/g SOM.”

In chapter 3.1 first column, p. 24, it is written: “ΣEndosulfans came out third for all soils combined (3±3 ng/g SOM) including the Norwegian and WL sub-sets, while PeCB exceeded Σendosulfans in the UK and GL soils. For all soils combined, HCB (1±1 ng/g SOM) was more or less at the same level as PeCB (1±1 ng/g SOM) which in turn exceeded that of Σ₅PBDEs (0.6±0.8 ng/g SOM). The same pattern was evident for Norwegian and WL soils, but not for UK and GL soils. PeCB exceeded both HCB and Σ₅PBDEs in UK and GL soils (Table 1)”, but now reads: “ΣEndosulfans came out third for all soils combined (2±4 ng/g SOM) including the Norwegian, UK and WL sub-sets. Concentrations of HCB (1±1 ng/g SOM) were approximately twice that of PeCB (0.6±0.5 ng/g SOM) and Σ₅PBDEs (0.6±0.8 ng/g SOM) for all soils combined. The same pattern was evident for Norwegian together with WL and GL soils, but not for UK soils. Here PeCB was found at the same level as HCB and Σ₅PBDEs (Table 1).”

In chapter 3.3 second column, p. 25, it is written: “The average endosulfan concentration in WL soil was higher than in GL soil with 4 ng/SOM and 1 ng/g SOM, respectively (Table 1).”It should now read as follows: “The average endosulfan concentration in WL soil was higher than in GL soil with 3 ng/g SOM and 0.7 ng/g SOM, respectively (Table 1).”

In chapter 3.3 first column, p. 26, it is written: “The average concentration of Σendosulfans for the Norwegian sites (n=32) was also higher than for the UK sites (n=24), with 3 and 2 ng/g SOM, respectively (Table 1)”. It now read as follows: “The average concentration of Σendosulfans for the Norwegian sites (n=32) was also higher than for the UK sites (n=24), with 3 and 1 ng/g SOM, respectively (Table 1).”

In chapter 3.4 first column, p. 26, it is written: “The average concentration of PeCB in UK soils (n=21) was about twice the average concentration for the Norwegian soils (n=31) with 2 ng/g SOM and 1 ng/g SOM, respectively (Table 1).” It should now read as follows: “The average concentration of PeCB in UK soils (n=21) was somewhat higher than the average concentration for the Norwegian soils (n=31) with 0.8 ng/g SOM and 0.5 ng/g SOM, respectively (Table 1).”

In chapter 3.4 first column, p. 26, it is written: “The average concentration of PeCB in GL soils (n=19) was at more or less at the same level as WL soils (n=33), i.e. 1 ng/g SOM (Table 1).” It now read as follows: “The average concentration of PeCB in GL soils (n=19) was more or less at the same level as WL soils (n=33), i.e. 0.6 ng/g SOM (Table 1).”

In chapter 3.4 second column, p.26, it is written: “Concentrations of PeCB based on ng/g SOM for both WL and GL soil were generally somewhat higher between ~ 50 and 55°N (>1.5 ng/g SOM in most samples), compared to higher latitudes (typically less than 1.0 ng/g SOM) (Fig. 2b).” It now read as follows: “Concentrations of PeCB based on ng/g SOM for both WL and GL soil were generally somewhat higher between ~ 50-55°N (>0.8 ng/g SOM in most samples), compared to higher latitudes (typically less than 0.5 ng/g SOM) (Fig. 2b).”

In chapter 3.4 second column, p. 26, it is written: “...with exception from two sites (Fig. 2b).”It now reads: “...with exception of one site (Fig. 2b).”

In chapter 3.5, p. 26, it is written: "The average concentration of SCCPs for the UK sites was approximately twice the average concentration for the Norwegian sites, with 50 ng/g SOM and 22 ng/g SOM, respectively (Table 1)." It now reads: "The average concentration of SCCPs for the UK sites was almost twice the average concentration for the Norwegian sites, with 31 ng/g SOM and 18 ng/g SOM, respectively (Table 1)."

In chapter 3.5, p. 26, it is written: "No sign of a forest filter effect could be observed as the average SCCP concentration in GL soils was 59 ng/g SOM, which is more than 3 times higher than the average concentration in WL soils (17 ng/g SOM) (Table 1)." It now reads: "No sign of a forest filter effect could be observed as the average SCCP concentration in GL soils was 38 ng/g SOM, which is close to 3 times higher than the average concentration in WL soils (14 ng/g SOM) (Table 1)."

Table 1: Average soil concentrations \pm standard deviation and ranges, for Σ endosulfans and its constituents, PeCB and SCCPs for all soils combined (ng/g SOM). Samples which failed to meet the specified QA/QC criteria were excluded (see 3.1). The table also includes Σ_{31} PCBs, Σ_5 PBDEs and HCB (Schuster et al., 2011).

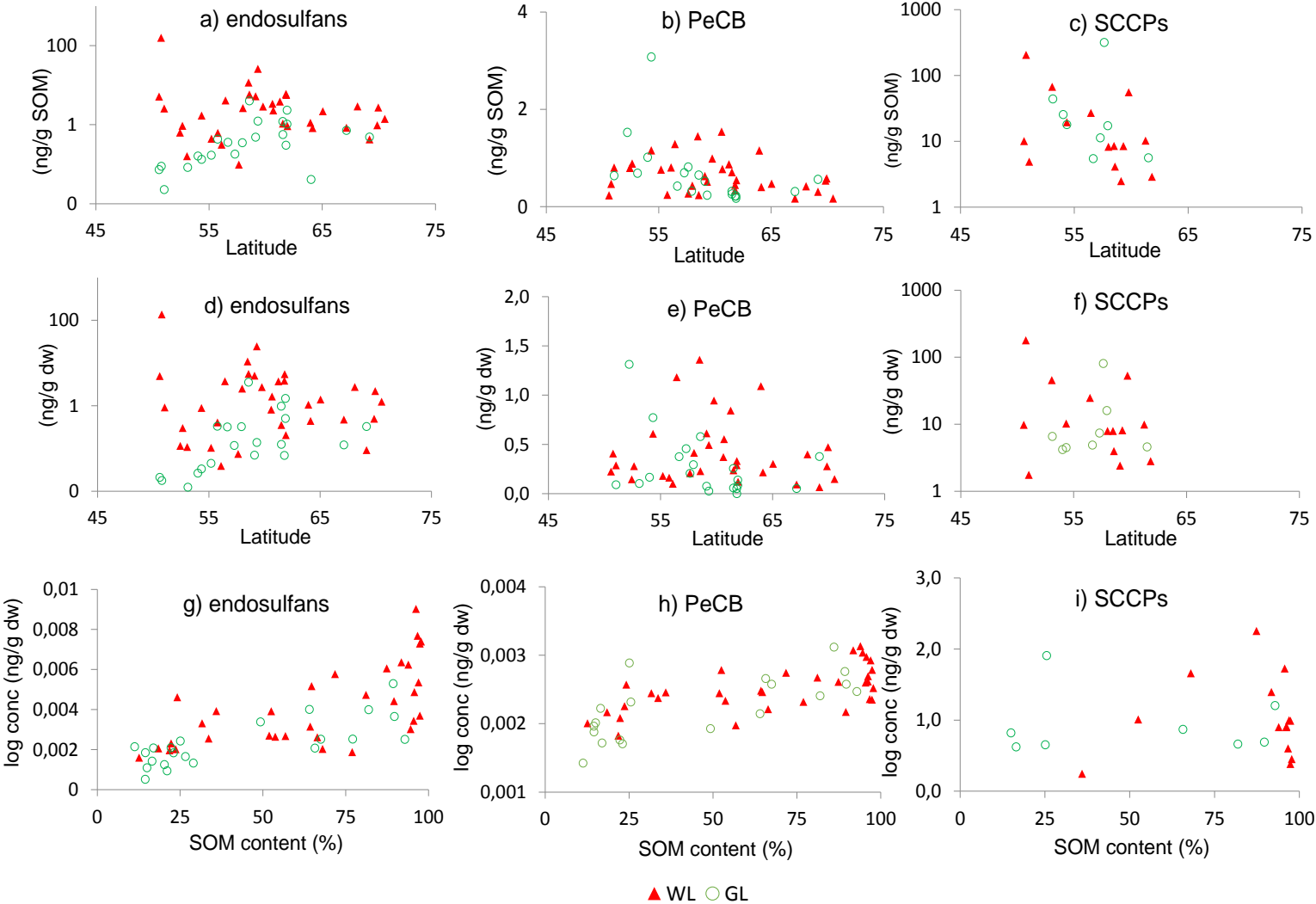
Aritmetric average \pm standard deviation											
Range (min-max)											
	>MDL	Σ endosulfans	endosulfan sulfate	α -endosulfan	β -endosulfan	PeCB	SCCPs		Σ_{31} PCBs	Σ_5 PBDEs	HCB
All 2008	All 2008	2 \pm 4	2 \pm 4	0.02 \pm 0.02	0.04 \pm 0.1	0.6 \pm 0.5	24 \pm 72	All 2008	6 \pm 5	0.6 \pm 0.8	1 \pm 1
n = 57/53/58	n = 56/52/23	<0.02 ²⁾ -26	<0.003 ²⁾ -25	<0.005 ²⁾ -0.08	<0.003 ²⁾ -0.7	<0.03 ²⁾ -3	<0.8 ²⁾ -417	n = 70	0.2-27	0.01-4	0.04-7
Norway	Norway	3 \pm 5	3 \pm 5	0.02 \pm 0.02	0.06 \pm 0.1	0.5 \pm 0.4	18 \pm 73	Norway	8 \pm 6	0.3 \pm 0.4	1 \pm 1
n= 32/32/32	n= 32/31/9	0.08-26	0.04-25	<0.005 ²⁾ -0.07	<0.003 ²⁾ -0.7	<0.03 ²⁾ -2	<0.8 ²⁾ -417	n= 40	0.2-27	0.01-2	0.2-5
UK	UK	1 \pm 2	1 \pm 2	0.02 \pm 0.02	0.02 \pm 0.03	0.8 \pm 0.6	31 \pm 71	UK	5 \pm 3	1 \pm 1	0.8 \pm 1
n= 25/21/26	n= 24/21/14	<0.02 ²⁾ -10	<0.003 ²⁾ -10	<0.005 ²⁾ -0.08	<0.003 ²⁾ -0.1	0.2-3	<0.9 ²⁾ -317	n= 30	0.5-10	0.1-4	0.04-7
GL	GL	0.7 \pm 0.9	0.6 \pm 0.9	0.02 \pm 0.02	0.01 \pm 0.01	0.6 \pm 0.7	38 \pm 103	GL	5 \pm 5	0.5 \pm 0.8	1 \pm 1
n= 23/20/24	n= 22/19/9	<0.02 ²⁾ -4	<0.003 ²⁾ -4	<0.005 ²⁾ -0.08	<0.003 ²⁾ -0.06	<0.03 ²⁾ -3	<0.9 ²⁾ -417	n= 30	0.2-23	0.02-4	0.06-7
WL	WL	3 \pm 5	3 \pm 5	0.02 \pm 0.02	0.06 \pm 0.1	0.6 \pm 0.4	14 \pm 37	WL	8 \pm 6	0.7 \pm 0.7	1 \pm 1
n= 34/33/34	n= 34/33/14	0.1-26	0.1-25	<0.005 ²⁾ -0.07	<0.003 ²⁾ -0.7	0.2-2	<0.8 ²⁾ -205	n= 40	0.6-27	0.01-3	0.04-5

¹⁾ Number (n) of sites for which Σ endosulfans, PeCB and SCCPs were determined, respectively.

²⁾ One or more samples were below MDL ($\frac{1}{2}$ MDL used for statistical summaries).

³⁾ Data from (Schuster et al., 2011)

Figure 2 (a-i): Latitudinal distribution for Σ endosulfans, PeCB and SCCPs on ng/g SOM (a, b, c) and dry weight basis (d, e, f). Also included is the log concentration (ng g⁻¹ dw) versus SOM (g, h, i). Woodland (WL, ▲) and grassland (GL, ○) soil samples are plotted separately. One outlier for each compound was omitted (2.8.1).



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References

- Halse, A. K., Schlabach, M., Schuster, J. K., Jones, K. C., Steinnes, E., and Breivik, K. (2015). Endosulfan, pentachlorobenzene and short-chain chlorinated paraffins in background soils from Western Europe. *Environmental Pollution* **196**, 21-28.
- Schuster, J. K., Gioia, R., Moeckel, C., Agarwal, T., Bucheli, T. D., Breivik, K., Steinnes, E., and Jones, K. C. (2011). Has the Burden and Distribution of PCBs and PBDEs Changed in European Background Soils between 1998 and 2008? Implications for Sources and Processes. *Environmental Science & Technology* **45**, 7291-7297.