

Forestry practices increase mercury and methyl mercury output from boreal forest catchments

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Table 1. Concentrations of TotHg and MeHg in bulk deposition in the treatment catchment and concentrations of TotHg and MeHg in the soil of the catchment and southern Finland.

Site	Concentration in bulk deposition 1995-1999		Concentration in soil	
			Humus	B-horizon
	TotHg ng l ⁻¹	MeHg ng l ⁻¹	ng g ⁻¹ (d.w.)	ng g ⁻¹ (d.w.)
Treatment catchment	9.6-14	0.14-0.31	330 (N=5) ^a	1.46 (N=5) ^a
Southern Finland	-	-	350 ± 0.05 (N=26) ^a	-

^aUnpublished data

Table 2. Summary of statistically significant differences^a in discharge, concentrations and output loads of TOC, TotHg and MeHg between the period before/after treatments, years, seasons in different years and months in different years.^b

Comparison	Discharge	Concentration			Load		
		TOC	TotHg	MeHg	TOC	TotHg	MeHg
Before/after treatments	-	-	***	**	n.s.	-	-
Annual	-	1. c vs.. 1. t *** 2. c vs.. 1. t ***	1. c vs.. 1. t *** 1. c vs.. 2. t ***	1. t vs.. 3. t **	1. c vs. 1. t *** 2. c vs. 1. t *** 3. c vs 1. t ***	1. c vs.. 1., 2., 3. t 2. c vs.. 1., 2., 3. t 2. c vs. 1., 2., 3. t	1. c vs. 1., 2., 3. t 2. c vs. 1., 2., 3. t 2. c vs. 1., 2., 3. t
Seasonal	-	-	n.s.	spring: 2. c vs.. 2. t ** autumn: 2. c vs.. 3. t **	-	-	-
Monthly	*	-	-	-	**	*	*

^a*, p<0.05; **, p<0.01; ***, p<0.001; n.s., not significant; -, not tested. ^b In annual and seasonal comparisons the years before treatments (calibration period) are abbreviated as "c" and the years after treatments are abbreviated as "t". E.g. the comparison between first calibration year and first year after treatment is written "1. c vs.. 1. t".

Figure 1. Comparison of runoffs and loads of TOC, TotHg and MeHg between the reference and treatment catchments during the calibration period 6/1994 – 8/1997.

